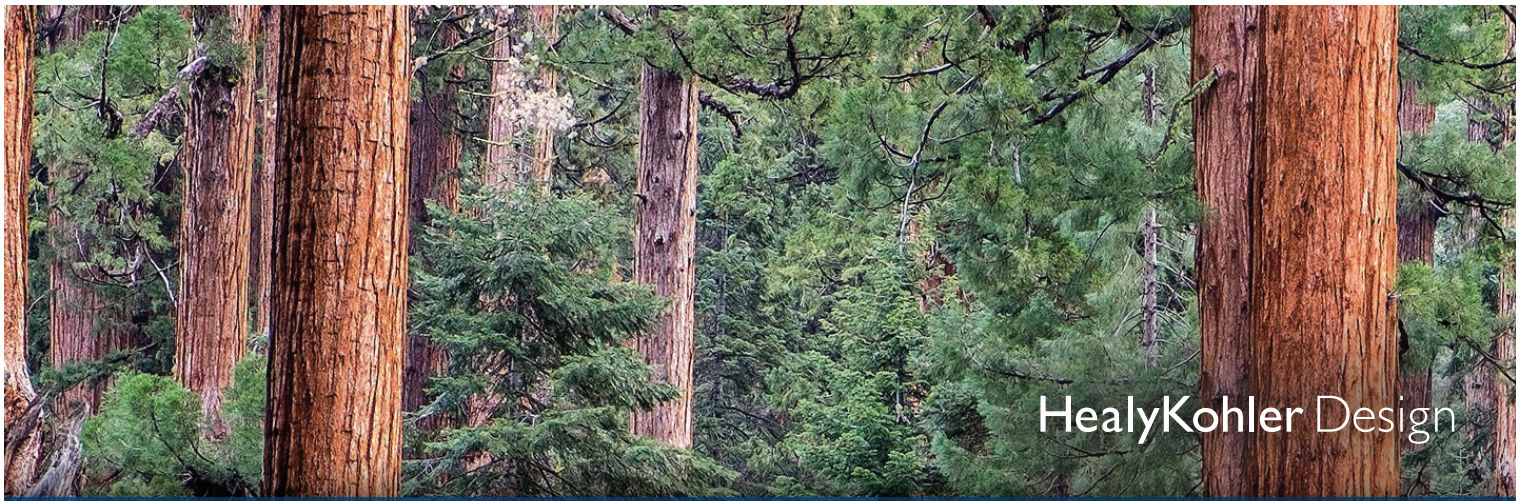




HealyKohler Design

LODGEPOLE VISITOR CENTER

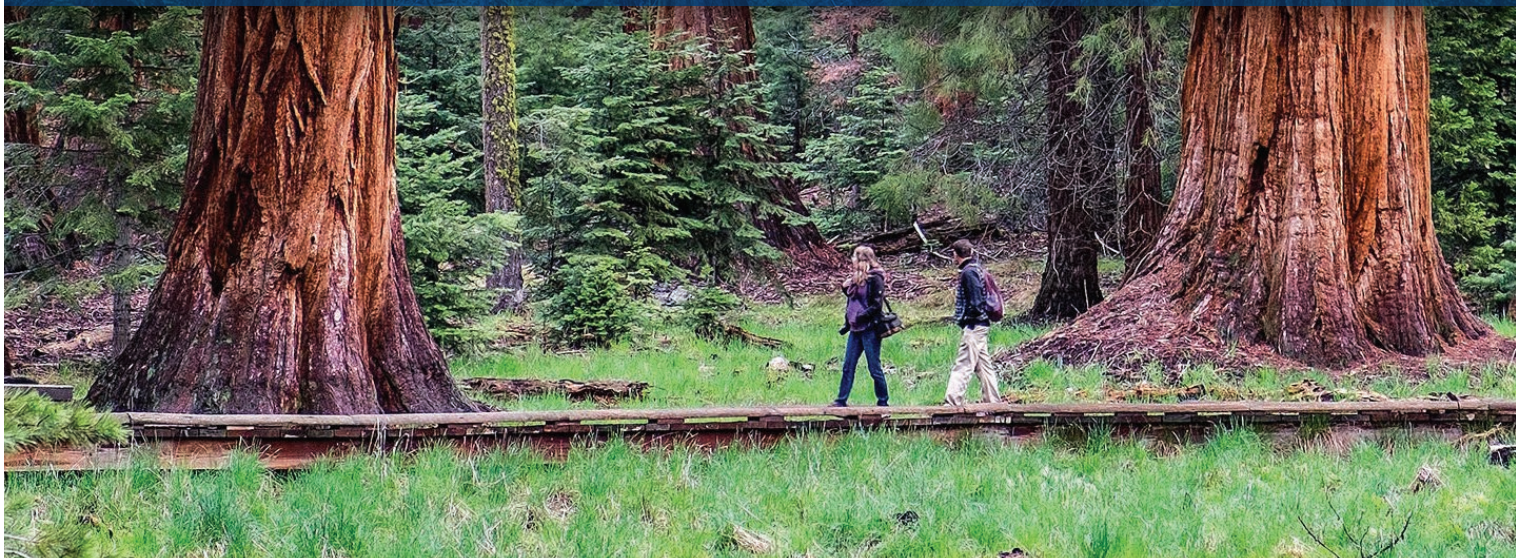
SEQUOIA NATIONAL PARK

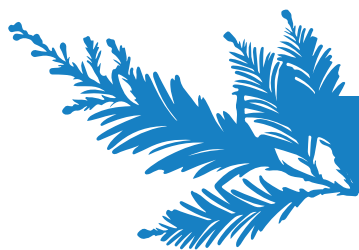


LIGHTING, AV, AND SALES AREA SPECIFICATIONS

PRODUCTION DOCUMENTS I

FEBRUARY 11, 2019





LIGHTING SCHEDULE & CUT SHEETS

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

Qty	Type	Manufacturer Catalog	Luminaire Description	Lamp Code	Lamp Lumens	Lamps/ Unit	Volts	Lamp(s) Wattage	Notes
	PA	Existing Pendant mounted indirect/direct lamps and 4 adjustable "eyeball" accent lights. Located in the Retail.	Contractor to remove existing pendant to clean and relamp with LEDs. Contractor to confirm existing lamps prior to final retrofit specification. A-lamp assumed to be direct/indirect source. Contractor to provide specification for the adjustable "eyeball" accent lights.	Soraa: SA19-11-OMNI-927-0 + TBD adjustable accent lamps.	800	18/4	120	11	
2	RA	Prescolite: D2LED-2D9LED-12L-30K-8-WFL45-WT-SL or accepted alternate per specification	2" aperture recess mounted 3000K LED downlight with 0-10v dimming. Finish to be specular clear alzak reflector with white flange.	LED by Manufacturer	1200	1	120	16	
7	RB	Prescolite: A2LED-2A9LED-12L-30K-8-FL35-WT or accepted alternate per specification	2" aperture recess mounted 3000K LED adjustable downlight with 0-10v dimming. Finish to be specular clear alzak reflector with white flange. Provide with regressed solite lens.	LED by Manufacturer	1200	1	120	20	
8	SA-6 Add Alt.	Elliptipar: S316-S-R06M-S-00-M-00-0-830-TD or accepted alternate per specification	Cove mounted linear 3000K LED asymmetrical uplight, 6' in length, with 0-10v dimming to 1%. Finish to be stainless steel.	LED by Manufacturer	11032	1	120-277	82	
8	SA-9 Add Alt.	Elliptipar: S316-S-R09M-S-00-M-00-0-830-TD or accepted alternate per specification	Cove mounted linear 3000K LED asymmetrical uplight, 9' in length, with 0-10v dimming to 1%. Finish to be stainless steel.	LED by Manufacturer	16548	1	120-277	122	
90 Inft	SB Add Alt.	Bartco Lighting: BSS110-X-30-DM-R-F or accepted alternate per specification	Cove mounted linear 3000K adjustable linear LED with 0-10v dimming to 1%. Finish to be semi-gloss white with frosted lens. Final Finish to be confirmed by Exhibit Designer and Owner. Exact Bill of Materials to be coordinated by Electrical Contractor with Manufacturer.	LED by Manufacturer	2362	1	120-277	31	

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

Qty	Type	Manufacturer Catalog	Luminaire Description	Lamp Code	Lamp Lumens	Lamps/ Unit	Volts	Lamp(s) Wattage	Notes
287	T	Lighting Services Inc.: 312XX-Series-B or accepted alternate per specification	Surface mounted single circuit electrified track. Exact Bill of Materials to be coordinated by Electrical Contractor with Manufacturer. Finish to be black.	N/A	N/A	N/A	120	N/A	
	<i>Inft</i>								
9	T-1	WAC Lighting: WT-XX-BK or accepted alternate per specification	Surface mounted two circuit electrified track. Exact Bill of Materials to be coordinated by Electrical Contractor with Manufacturer. Finish to be black.	N/A	N/A	N/A	120	N/A	
	<i>Inft</i>								
140	TA	Lighting Services Inc.: SSL230-NXB-00-120B + LOUVER AB + BACKER RING AB or accepted alternate per specification	Track mounted 3000K small format LED general purpose spotlight with 9 degree beam and integral dimming to 10%. Finish to be black.	Lamp by Soraa: SP30L-18-09D-830-03	1000	1	120 Prim / 12v Sec	18.5	
		70% Lens Spread Accessories TBD							
		25% Lens Color Accessories TBD							
6	TB	WAC Lighting: WTK-6010-N-830-BK or accepted alternate per specification	Track mounted 3000K low profile LED general purpose spotlight with 25 degree beam and ELV dimming to 5%. Finish to be black.	LED by Manufacturer	2180	1	120	30	
		6 LENS-16-HCM							
8	WA	Indy: LC6W-13LM-30K-120-B-G4-80CRI-FDL-HM-CS-PF or accepted alternate per specification	Bracket mounted to beam 3000K LED area downlight with forward phase lutron dimming. Finish to be matched to the beam. Provide with clear specular reflector and white trim.	LED by Manufacturer	1300	1	120	12	
4	WB Add Alt.	Elliptipar: S104-L224-Z-99-M-V0-0-830-TD or accepted alternate per specification	Bracket mounted to beam 3000K LED area uplight with 0-10v dimming to 1%. Finish to be matched to the beam. Exact finish TBD during shop drawing review. Final finish to be approved by Exhibit Designer and Owner.	LED by Manufacturer	6156	1	120-277	54	

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

General Notes

- 1** Contractor shall be responsible for final lighting fixture count.
- 2** Contractor shall be responsible for verifying mounting compatibility and plenum clearance of all lighting fixtures.
- 3** Contractor shall notify Owner and Architect of any conflicts with structure, HVAC, or plumbing prior to the ordering of the equipment in question.
- 4** Contractor shall verify that all lighting equipment specified, in its intended application on this project, complies with all applicable national & local codes, ordinances, regulations, and jurisdictions prior to ordering any equipment.
- 5** Unless otherwise noted, all recessed downlights, adjustable downlights, and wall washers shall be supplied by the same manufacturer.
- 6** All junction boxes and conduit used to wire fixtures and that is open to view shall be painted to match adjacent structure, unless otherwise noted.
- 7** All fixtures to be supplied with specified lamp(s). Contractor will provide to the Owner an additional 25% of all specified lamp types, to be used as replacement lamps, upon completion of the job. Minimum two [2] of each lamp type specified.
- 8** Substitutions of Lighting Designer specified products are strictly prohibited, unless approved in writing, by the Lighting Designer &/or Architect. Lighting fixture, ballast, lamp &/or accessory substitutions shall be formally presented to the Lighting Designer no later than ten (10) working days prior to bid due date. Contractor shall be responsible for all costs associated with the Lighting Designer's review of potential luminaire substitutions.

The submittal material shall include the following items:
 - 1) A complete & operating sample wired for 120v operation.
 - 2) A complete photometric report for the proposed substitute product using the Lighting Designer specified lamp type and wattage, including tabulated candlepower values, coefficient of utilization, and an ISO foot-candle diagram. The photometric report must be done in accordance with published I.E.S. testing procedures and certified by a registered electrical engineer.
 - 3) A current original catalog data sheet with luminaire catalog numbers. Modified data sheets will not be accepted.
 - 4) The Contractor must submit a signed document stating that if the proposed substitution is accepted, the project schedule will not be negatively affected. If the completion of the project is delayed due to the approved substitution, the Contractor will be responsible for payment of any established liquidated damages.
 - 5) The Contractor will be responsible for ALL costs (Engineer's time, Manufacturer's, Distributor's, etc.) incurred to replace all NON approved (in writing, by the Lighting Designer &/or Architect) substitutions made by the Distributor, Manufacturer's Representative, Manufacturer, Sub-Contractor, General Contractor or any other group or individual.
- 9** Do not scale electrical drawings for exact location of the lighting fixtures. In general, the architectural reflected ceiling plans indicate the proper locations of lighting fixtures.

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

- 10** Prior to final aiming and programming, all broken luminaire parts shall have been replaced and all luminaires shall be operative and programmable.
- 11** At the time of acceptance by the Owner, all lighting fixtures shall have been thoroughly cleaned with materials and methods recommended by the Manufacturers.
- 12** The accompanying drawings and all the ideas, arrangements, designs, and plans indicated thereon or represented thereby, are owned by and remain the property of HealeyKohler Design, and have been created and developed for use on, and in connection with, the specified project.
- Neither this drawing, nor any such ideas, arrangements, designs, or plans, shall be appropriated by or disclosed to any person, firm, or corporation, for any use or purpose whatsoever, except by the specific and written permission of HealeyKohler Design.
- 13** Written dimensions on drawings shall take precedent over scaled measurements. Contractors and Manufacturers shall verify and be responsible for all dimensions and conditions on the job and inform Designer of all variations from drawings prior to performing the work.
- 14** Lighting drawings represent visual concepts and suggestions only. Lighting Designer is unqualified to determine their structural or electrical appropriateness and will NOT assume responsibility or liability for improper engineering, construction, installation, or handling, of these design concepts.
- 15** Distributor Net Pricing has been secured for all products specified and is used in the preparation of preliminary opinions of probable cost. A record of specific unit costs has been shared confidentially with the Owner to assist him in analysis of bid submittals.
- 16** Contractor shall supply "contractor net" unit pricing for each lighting product specified. Unit price shall be for equipment only and not include installation or miscellaneous electrical costs. The unit price supplied shall be guaranteed for the project and valid for additions and deletions of product throughout the duration of the project.
- 17** Within twenty (20) business days of contract award, successful Contractor shall submit a complete list of lighting products he intends on furnishing with manufacturer and catalog designations, along with currently quoted lead times for delivery of the same. Should the Contractor anticipate that the delivery schedule of any specified product may adversely impact the construction schedule, he shall bring it to the attention of the Owner at this time.

System's Integrator Notes

AA The "System's Integrator" ("SI") shall be the Contractor responsible for terminating, testing, and certifying all lighting control signals on this project. These signals may include, but are not limited to, DMX-512, 0-10v analog control, RS-232, RS-485, Ethernet, SMPTE, MIDI, and Dry Contact Closures.

SI shall be responsible for addressing all appropriate luminaires according to the Lighting Design paperwork.

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

SI shall be responsible for testing the operation of all luminaires requiring control signal from the Lighting Control System to ensure proper Electrical and Mechanical operation.

SI shall be responsible for ensuring the compatibility of all specified lighting control components. SI shall inform the Exhibit Designer and Lighting Designer if any control components are incapable of achieving the Design Intent or are unable to communicate with other components as per the design intent.

SI shall be responsible for all miscellaneous hardware and/or connections required to form a complete working lighting control system from the luminaire to the lighting controller.

SI shall be responsible for any mapping or pre-programming required to ensure the proper operation and ease of on-site programming of the LED products specified on this project.

SI services may include site visits or coordination meetings with Designers and/or Contractors.

SI shall provide a minimum of one Technician/Engineer who shall be present during aiming and programming to ensure the proper functioning of the complete lighting system and troubleshoot on-site problems as needed.

SI shall provide a Programmer to set up and program all lighting control components during the aiming and programming of the project. Programmer selection is subject to approval by the Exhibit Designer and Lighting Designer.

Specific Notes

Recessed Lighting Notes

Light leaks between ceiling trims of recessed lighting equipment and the ceiling plane will NOT be tolerated. If fixture is used in partially transparent ceiling, light leaks above the ceiling line will NOT be tolerated.

Fixture shall have clear Alzak, self-flanging reflector trim.

Reflectors, reflector cones and visible trim of all lighting fixtures shall not be installed until completion of plastering, ceiling tile work, painting and general cleanup.

Reflectors, reflector cones and visible trims shall be carefully handled to avoid scratching or fingerprinting and shall be, at the time of acceptance by the Owner, completely clean and without visible damage.

Pendant Notes

Contractor shall be responsible for all materials required to insure a safe and proper pendant installation.

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

Contractor to verify lengths of pendants with Architect prior to final order. See drawings for mounting height information.

Fixture supplied with XX inch swivel pendant for attachment to sloped ceiling. Fixture housing, stem, swivel assembly, canopy, and miscellaneous mounting hardware to be factory painted to match chip supplied by Architect.

Track Lighting

Track shall be mounted to the ceiling in a manner recommended by the Manufacturer and so as not to compromise the integrity of the ceiling or its support structure.

Track lengths shall be as shown on architectural reflected ceiling plans. Contractor shall be responsible for all miscellaneous mounting and electrical hardware necessary for proper installation and operation of the track.

Electrical Contractor, in coordination with Manufacturer or Manufacturer's representative, shall coordinate final inventory of all appropriate elements to insure that installation of flexible lighting track does not deviate from how it is shown on the architectural drawings.

This luminaire shall not be installed to track until aiming and adjustment takes place, just prior to the Project's completion.

Locate track so that no part of the lamp or track head shall be visible above the top edge of case molding from anywhere within the room.

Unit to be supplied with the proper track fitting. Contractor to coordinate with Manufacturer.

Fluorescent Lighting Notes

Ballasts for T5, T4 and T2 fluorescent lamps shall contain end-of-life sensing and shutdown circuitry.

Fixture shall use an energy conserving ballast.

Exterior Lighting Notes

Fixture mounted directly to ground flush junction box supplied by fixture Manufacturer.

Fixture mounted directly to Manufacturer's standard tree mount junction box at a height just below primary branching point of tree. This location shall be verified by tree variety in the field with Owner, Lighting Designer and Landscape Planner.

Fixture shall be mounted to structure in a manner recommended by the Manufacturer and so as not to compromise the integrity of the structure.

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

Transformers / Remote Ballasts

Transformer remoted in an adjacent location w/ Manufacturer's recommended ventilation, concealed-from-view, and accessible from below. Contractor shall supply Manufacturer's standard transformer of appropriate size and capacity as determined from information shown on drawings & verified in the field.

Transformer remoted in a nearby accessible, concealed-from-view location w/ Manufacturer's recommended ventilation. Contractor shall supply Manufacturer's standard transformer of appropriate size and capacity as determined from information shown on drawings & verified in the field.

Remote lamp ballasts / transformers to be remoted in nearest electrical closet with required ventilation made available.

Coordination Notes

Exact track or fixture location to be verified with field conditions and confirmed with Architect and Owner prior to final installation.

Final finish of fixture to be approved in writing by The Government, Exhibit Designer, and Lighting Designer.

All wiring & electrical hardware, including J-boxes, shall be concealed above ceiling line unless otherwise approved by Owner.

Junction boxes and conduit that is used to wire fixtures and that is open to view shall be painted to match adjacent structure.

After shop drawing review, and prior to release for manufacturing, the Contractor shall furnish one sample of specified luminaire for evaluation. Samples must be an actual working example of luminaire to be supplied, and be provided with all specified lamps, accessories, parts, and pieces. Sample must be wired for 120v operation.

Mounting Notes

Contractor shall supply all above ceiling line bracing necessary to insure a proper and safe installation.

All C-clamp mounted light fixtures will employ safety cables supplied by the appropriate fixture Manufacturer unless otherwise noted.

All 1 1/2" schedule 40 pipe must be permanently secured so that no deflection or rotation occurs when fixtures are mounted at varying angles.

Refer to architectural details for further mounting data.

Contractor shall be responsible for maintaining structural integrity of roof adding any miscellaneous support materials necessary to do so.

Contractor shall be responsible for maintaining waterproof roof membrane integrity throughout work. Any modification, patching, or other change to the roof made necessary by this lighting work shall be the responsibility of the Contractor.

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

Lamps

This luminaire shall not be operated for work light at any time during construction, nor shall it be illuminated for any other reason. Failure to comply with this requirement will make necessary the relamping of this luminaire with the project specified lamp, by the Contractor, at no additional cost to the Owner.

Accessories

Contractor will provide 20% replacement colors to the OWNER, for all color types, upon completion of job.

Color to be chosen during the shop drawing submittal phase.

Fixture supplied with Manufacturer's standard black cube cell louver.

Lamp fitted with screw-on accessory holder and a maximum of two (2) accessories.

Lamp fitted with clip-on linear spread lens.

Fixture shall be equipped with Manufacturer's standard accessory support clips.

Contractor to supply Rosco T8 color sleeves. Exact color to be determined by Lighting Designer during shop drawing review.

Unit supplied with standard length cord and NEMA 5-15P plug.

Cove Lighting

See architectural drawings for mounting details. Exact lengths required to be determined by the Contractor from field measurement of cove.

Contractor is responsible for supplying all miscellaneous mounting and electrical equipment necessary for proper installation. Lamps shall be installed on XX" centers. Maximum power consumptions at XX watts per foot.

See architectural drawings for details. Contractor is responsible for ordering lengths and quantities required to maximize the extent of lighted cove using only three and four foot lamps.

Luminous tubing mounted in continuous fashion, end-to-end within cove. Shop drawings shall show lengths, tube configurations, and transformer sizes for each location. All tubing lengths to be verified prior to fabrication.

Lamps supplied with right angle electrodes mounted end-to-end with minimum gap recommended by Manufacturer. Lamps supplied with clip-on reflectors notched to allow use with curved sections with final orientation to be determined at time of installation.

• Lodgepole Visitor Center • Sequoia and Kings Canyon National Parks •
Lighting Fixture Schedule

Date: 01/14/19
Rev.: 02/11/2018

No part of the lamp or fixture shall be visible above the top edge of cove return. Fixtures shall be mounted end-to-end with no gaps.

Fixtures shall be mounted continuously end-to-end within cove with no gaps and centered within cove length. Contractor shall submit dimensioned drawing of each cove type showing intended fixture configuration for approval.

Lengths and configurations to be determined by Electrical Contractor in coordination with Manufacturer.

Manufacturer, in coordination with Architect and Lighting Designer, will supply fixture configuration for proper spacing and distribution within lighting cove to maximize light output.

Data and Control Notes

All DMX runs must be terminated. Contractor responsible for termination as per Manufacturer's specifications.

Electrical Contractor to supply all low voltage data lines in order to properly connect all fixtures together as per Manufacturers' specifications.

UL Notes

Fixture shall be approved and stamped for "Wet Location."

Fixture shall be approved and stamped for "Damp Location."

On Site & Focusing Notes

Contractor shall be responsible for final targeting of luminaires under the observation, and according to the recommendations of, the Lighting Designer. The Lighting Designer shall recommend the number of crews required. All aiming and adjusting shall be carried out at the direction of the Lighting Designer. As aiming and adjusting is completed, crews are responsible for tightening all locking set screws, handles, bolts, etc. to insure that luminaire focus is permanently maintained. Contractor shall focus and adjust designated luminaire(s) after dark in spaces with daylight contribution. In spaces without daylight considerations, focus shall be at a time mutually agreeable to the Contractor, Lighting Designer and Owner. Adjustments shall be made in accordance with the Lighting Designer's stated intent and under his/her observation. The aiming and adjustment of the luminaires must take place after the Project's amenities have been completely installed. These amenities shall include, but are not necessarily limited to, plantings, furniture, artwork, graphics and signage. All ladders, scaffolds, lifts, and all other materials required for fixture aiming and adjusting shall be furnished by the Contractor. All costs associated with aiming and focusing shall be included in the base bid.

SORAA vivid™



OUR LIGHT IS PERFECT BECAUSE WE INVENTED IT TO BE
We design the smallest sources and pair them with our unique full spectrum technology, for perfect color and light distribution in a range of lamp form factors.

SORAA VIVID COLOR™

Soraa lamps provide beautiful and accurate color rendering across the entire visible spectrum, with CRI/95, R9/95, Rf/90, Rg/100

SORAA NATURAL WHITE™

Soraa lamps clearly differentiate infinite shades of white; whiteness rendering matches or exceeds halogen and incandescent sources at 2700K and 3000K.

FLICKER

Soraa lamps demonstrate low levels of flicker, achieving <30% flicker in both dimmed and undimmed states.

THERMALLY COMPATIBLE

Suitable for use in fully enclosed fixtures, subject to the maximum heatsink temperature limits stated in this data sheet. A list of qualified enclosed fixtures can be found at www.soraa.com/resources. Soraa lamps are designed to safely turn down in any thermal environment not conducive to minimum airflow or proper ventilation.

ELECTRICALLY COMPATIBLE

Works with trailing edge and leading edge phase cut dimmers. A list of compatible dimmers and transformers can be found at www.soraa.com/resources/compatibility.

LOCATION RATING

Suitable for damp locations
Not rated for use in wet locations, should not be exposed to liquid water (including condensation).

A19 11W

HIGH COLOR QUALITY, ENCLOSED FIXTURE COMPATIBLE LED LAMP FOR USE IN A19 COMPATIBLE FIXTURES AND OTHER INDOOR AND OUTDOOR APPLICATIONS

OUTPUT RANGE 800 lumen

BEAM ANGLE Omnidirectional

COLOR METRICS
CCT: 2700K
Color Rendering
CIE Metrics: CRI 95, R9 95
TM30 Metrics: Rf 90, Rfh 90
Whiteness Index: Rw 100

APPLICATION Incandescent replacement for indoor and outdoor applications



vivid color



whites



flicker



dimmable



120V AC

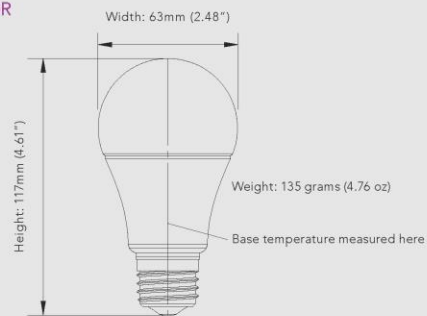


E26

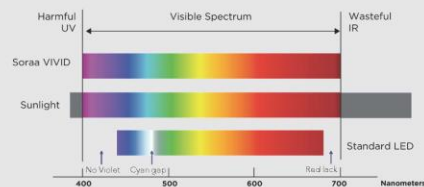


damp rated

FORM FACTOR



COLOR RENDERING



LIFETIME AND WARRANTY

Rated lifetime to L70: 25,000 hours
Warranty: 3 years or 25,000 hours whichever comes first
Detailed warranty information available at:
soraa.com/resources/legal

SORAA®
SIMPLY PERFECT LIGHT

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

PA

page 1 of 2

OPERATING TEMPERATURE

Minimum: -40° C (ambient)
Typical: 80° C - 95° C (lamp base)
Maximum: 100° C (lamp base)

ELECTRICAL SPECIFICATIONS

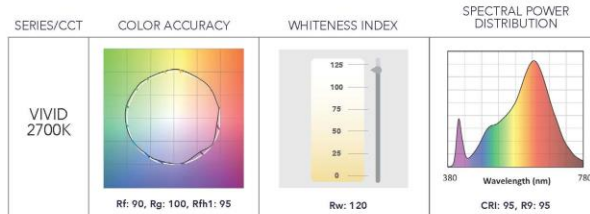
Wattage: 11W
Voltage: 120V +/- 12V
Frequency: 50/60 Hz
Power Factor: 0.95
Dimmability: <20%
Flicker Index: <0.08
Percent Flicker: <30%

CERTIFICATIONS

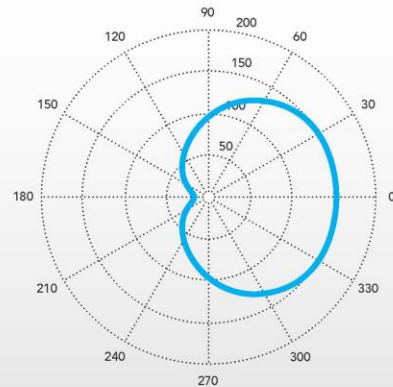
UL/CUL
FCC Title 47 Part 15B
RoHS



Lamp Catalogue #: SA19-11-OMNI-927-01



POLAR DIAGRAM



Model Number	Product Code	CCT (K)	Total Flux (Lm)	Beam Angle (°)	Halogen Equiv (W)**	Efficacy (Lm/W)	CRI/R9	Rf	White Point (McA)
VIVID SERIES									
SA19-11-OMNI-927-01	04214	2700	800	OMNI	60	73	95 / 95	90	3

*Specifications are at stable warm operating conditions (25°C ambient) **Energy Star Minimum
CCT = Correlated Color Temperature CRI = Color Rendering Index (Ra-8) White Point = White Point Accuracy in McA step



Information and specifications subject to change. A19 11W 4.3.18
Soraa Inc. 6500 Kaiser Drive, Suite 110, Fremont, CA 94555 www.soraa.com

SORAA
SIMPLY PERFECT LIGHT

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

PA

page 2 of 2



2" LED Lens Downlight D2LED LENS

120V or 277V

APPLICATIONS:

Architektür D2LED Series is a 2" specification grade LED lensed downlight that combines superior brightness control with energy savings and low maintenance costs. Suitable for a variety of commercial, retail, and institutional indoor and outdoor applications with ambient temperatures up to 35°C (95°F) or 25°C (77°F) during operation with free airflow around the fixture.

J-TUBE ASSEMBLY:

Utilizing Prescolite's revolutionary J-Tube design and optimal thermal management, the D2LED eliminates the need for a traditional downlight housing. The J-Tube assembly combines the traditional J-Box and driver electronics into a compact form that can be installed and accessed from below the ceiling plane.

REFLECTOR:

High purity spun aluminum self-flanged reflector with iridescence suppressed Alzak anodized finishes. Also available with Prescolite's American Matte™ (MFC) or Kurt Versen finishes. Painted reflectors are also available. Standard with 45° nominal beam distribution and available with 1" regressed lens and hexcell louver options or diffuse flush mount option.

LED LIGHT ENGINE:

Xicato LED Module has a fixture to fixture color consistency of less than 2 SDCM. Secured to an extruded aluminum heat sink for excellent thermal management providing optimal life and lumen maintenance (minimum 50,000 hours at 70% lumen maintenance).

LED DRIVER:

Energy efficient electronic constant current driver with 50,000 hour minimum anticipated life. Meets UL Class 2, FCC 47CFR Part 15, Class B compliant, inherent short-circuit protection, self limited, overload protected.

DIMMING:

Comes standard with 0-10V dimming capability. Flicker-free dimming to 10%. For sizing control systems, the 0-10V control circuit will draw up to 1 mA. Also available with 0-10V to below 1% or Lutron Ecosystem to 1%.

CERTIFICATIONS:

CSA C/US certified to UL1598. Suitable for wet locations. Non-IC rated and 2IN/2OUT through branch wiring. For connection to flexible conduit only.

WARRANTY:

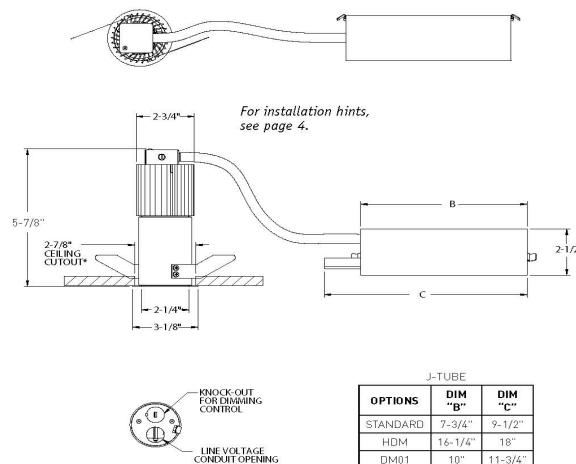
5 Year Warranty. Go to www.prescolite.com for full details.

DATE: _____ TYPE: _____
FIRM NAME: _____
PROJECT: _____

Architektür



Ceiling Cutout: 2 7/8"
Ceiling Thickness 1/2" - 1 1/4"
Not to Scale



CATALOG NUMBER:

EXAMPLE: D2LEDHDM-D29LED9L30K8WFL45SL

Order accessories separately

J-TUBE ASSEMBLY	VOLTAGE	LIGHT ENGINE	OUTPUT	LED COLOR	CRI	BEAM ANGLE	REFLECTOR FINISH	REFLECTOR COLOR	FLANGE OPTIONS*	ACCESSORIES
☒ D2LED J-Tube Assembly with Standard 0-10V 10% Dimming	☒ Standard 120V/277V	☒ 2D9LED 2" Open Reflector/Light Engine Assembly with Xicato module	☒ 9L 900 Delivered Lumens ☒ 12L 1200 Delivered Lumens	☒ 27K 2700 Kelvin ☒ 30K 3000 Kelvin ☒ 35K 3500 Kelvin ☒ 40K 4000 Kelvin	☒ 8 Nominal 80+ CRI ☒ 9 Nominal 95+ CRI	☒ WFL45 Nominal 45° cutoff	☒ Standard Specular	☒ Standard Clear Alzak	☒ Standard, Anodized ☒ WT White Trim Flange ☒ BT Flat Black Trim Flange	☒ FMR2 2" Flush Mount Ring ☒ D2FRM Mounting Frame ☒ D2ICAT³ IC Rated, Air Tight housing ☒ D2CP³ CCEA compliant housing ☒ LiteGear⁴ Inverter, single phase central lighting, 125VA-250VA ☒ LPS Series⁴ LitePower micro-inverter, 20VA-55VA
OPTIONS ☒ HDM³ Hi-Lume 1% 3-wire/ EcoSystem LED Driver ☒ DM01³ eLoLED 0-10V dimming to less than 1%										LENS ☒ CL Clear, Regressed ☒ DL Diffuse, Regressed ☒ HB Hexcell Black, Regressed ☒ FLU Diffuse, Flush ☒ PL Prismatic, Regressed ☒ SL Solite, Regressed

1 95+ CRI not available on 15L
2 For FLU option, no reflector color section is required. Either WT or BT flange must be selected
3 HDM, DM01, and 15L models are not compatible with D2ICAT or D2CP. See additional notes on page 4 for important product life/warranty information when using D2ICAT or D2CP with 12L 95 CRI
4 See Central Inverter compatibility note and web links on page 4

prescolite
A Division of Hubbell Lighting, Inc.

In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.
Web: www.prescolite.com • Tech Support: (888) 777-4832

ARCH-LED-021

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 01/21/00

type

RA

page 1 of 2

PHOTOMETRIC DATA

Architektūr - 2" D2LED Lens Downlight

ELECTRICAL DATA	9L		12L		15L
	80+ CRI	95 CRI	80+ CRI	95 CRI	80+ CRI
Input Voltage	120 or 277V	120 or 277V	120 or 277V	120 or 277V	120 or 277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input Power (Watts)	12.6 W	19.0 W	15.7 W	23.4 W	21.1 W
Input Current (@120V)	0.106 A	0.160 A	0.132 A	0.190 A	0.180 A
Input Current (@277V)	0.046 A	0.069 A	0.057 A	0.085 A	0.077 A
Constant Current Output	610 mA	560 mA	500 mA	700 mA	700 mA
Power Factor	≥0.90	≥0.90	≥0.90	≥0.90	≥0.90
EMI Filtering (FCC 47CFR, Part 15)	Class B	Class B	Class B	Class B	Class B
Operating Temp	-30°C to 35°C	-30°C to 35°C	-30°C to 25°C	30°C to 25°C	-30°C to 25°C

Lumen Multipliers For Various Alzak Colors	
Clear Specular	1.00
Pewter Specular	0.94
Champagne Gold Specular	0.96
Gold Specular	0.86
Wheat Specular	0.86
Light Wheat Specular	0.84
Black Specular	0.62

Note: These values are based upon the WFL45 Reflectors.

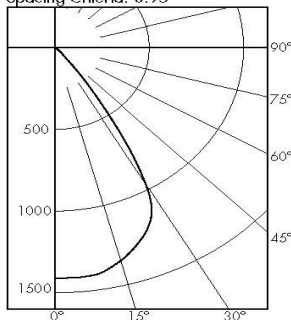
*Data for standard 0-10V 10% dimming models. Electrical and photometric data may vary slightly with other dimming options. **Short circuit, over-voltage, over-current protection.

PERFORMANCE SUMMARY

Model	Output	Lens/ Louver	Delivered Lumens	Input Watts	Lumens Per Watt	Full Catalog Number
D2LED	9L	Regressed Clear	824	12.6	65.4	D2LED-2D9LED9L30K8WFL45CL
		Regressed Solite	824	12.6	65.4	D2LED-2D9LED9L30K8WFL45SL
		Regressed Diffuse	726	12.6	57.6	D2LED-2D9LED9L30K8WFL45DL
		Regressed Prismatic	709	12.6	56.3	D2LED-2D9LED9L30K8WFL45PL
		Flush Diffuse	690	12.6	54.8	D2LED-2D9LED9L30K8WFL45FLU
		Regressed Hexcell	334	12.6	26.5	D2LED-2D9LED9L30K8WFL45HB
	12L	Regressed Clear	1097	15.7	69.9	D2LED-2D9LED12L30K8WFL45CL
		Regressed Solite	1098	15.7	69.9	D2LED-2D9LED12L30K8WFL45SL
		Regressed Diffuse	967	15.7	61.6	D2LED-2D9LED12L30K8WFL45DL
		Regressed Prismatic	645	15.7	60.2	D2LED-2D9LED12L30K8WFL45PL
		Flush Diffuse	919	15.7	58.5	D2LED-2D9LED12L30K8WFL45FLU
		Regressed Hexcell	445	15.7	28.3	D2LED-2D9LED12L30K8WFL45HB
	15L	Regressed Clear	1459	21.1	69.1	D2LED-2D9LED15L30K8WFL45CL
		Regressed Solite	1460	21.1	69.2	D2LED-2D9LED15L30K8WFL45SL
		Regressed Diffuse	1286	21.1	60.9	D2LED-2D9LED15L30K8WFL45DL
		Regressed Prismatic	1256	21.1	59.5	D2LED-2D9LED15L30K8WFL45PL
		Flush Diffuse	1222	21.1	57.9	D2LED-2D9LED15L30K8WFL45FLU
		Regressed Hexcell	592	21.1	28.1	D2LED-2D9LED15L30K8WFL45HB

D2LED-2D9LED15L30K8WFL45CL

LED Light Engine: 3000K, 80 CRI
System Wattage: 21.1
Fixture delivered lumens: 1549
Fixture Efficacy: 69.1
Spacing Criteria: 0.95



CANDELA DISTRIBUTION

DEG	CANDELA
0	1412
5	1412
15	1350
25	1188
35	491
45	64
55	18
65	6
75	0
85	0
90	0

Test No. 17.02647

Tested at 25°C Ambient in accordance to IESNA LM-79-2008



Web: www.prescolite.com • Tech Support: (888) 777-4832
701 Millennium Blvd., Greenville, SC 29607 U.S.A. • Phone (864) 678-1000
Copyright ©2017 Prescolite, Inc., a division of Hubbell Lighting, Inc. All Rights Reserved
Specifications subject to change without notice. • Printed in U.S.A. • ARCH-LED-021 • 2/9/18

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1050	71.9
0-40	1371	94.0
0-60	1453	99.6
0-90	1459	100.0
0-180	1459	100.0

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average
45°	31667
55°	10980
65°	4967
75°	0
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance									
	80%	70%	60%	50%	40%	30%	20%	10%	0%	0%
1	113	111	108	106	111	109	106	104	105	103
2	108	106	103	101	106	104	101	98	94	90
3	102	99	97	95	100	96	93	89	84	80
4	97	94	91	88	95	91	87	82	77	72
5	92	88	84	80	89	84	79	74	69	64
6	87	82	78	74	84	79	74	69	64	59
7	83	78	74	70	80	75	70	65	60	55
8	79	74	70	66	76	71	66	61	56	51
9	75	70	66	62	72	67	62	57	52	47
10	71	66	62	58	68	63	58	53	48	43

D2LED-2D9LED15L30K8WFL45CL

Test No. 17.02647

Catalogue #: D2LED-2D9LED-12L-30K-8-WFL45-_-_-WT-SL

Lamp: LED by Manufacturer



HUBBELL Lighting, Inc.

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 01/21/00

type

RA



2" LED Adjustable A2LED 120V or 277V

APPLICATIONS:

Architektür A2LED Series is a 2" specification grade LED adjustable luminaire that combines superior brightness control with energy savings and low maintenance costs. Suitable for a variety of commercial, retail, and institutional applications with ambient temperatures up to 35°C (7L) 25°C (9L, 12L) during operation with free airflow around the fixture.

J-TUBE ASSEMBLY:

Utilizing Prescolite's revolutionary J-Tube design and optimal thermal management, the A2LED eliminates the need for a traditional downlight housing. The J-Tube assembly combines the traditional J-Box and driver electronics into a compact form that can be installed and accessed from below the ceiling plane.

REFLECTOR & OPTICS:

High purity spun aluminum self-flanged reflector with iridescence suppressed Alzak anodized finishes. Also available with Prescolite's American Matte™ finish (MFC) or Kurt Versen finishes. Painted reflectors are also available. A smooth 35° optical pattern is adjustable up to 30° from vertical. The vertical aiming must be adjusted and locked before installation. Prescolite's spring loaded retention allows 360° horizontal aiming during installation.

LED LIGHT ENGINE:

Xicato LED Module has a fixture to fixture color consistency of less than 2 SDCM. Secured to an extruded aluminum heat sink for excellent thermal management providing optimal life and lumen maintenance (minimum 50,000 hours at 70% lumen maintenance).

LED DRIVER:

Energy efficient electronic constant current driver with 50,000 hour minimum anticipated life. Meets UL Class 2, FCC 47CFR Part 15, Class B compliant, inherent short-circuit protection, self limited, overload protected.

DIMMING:

Comes standard with 0-10V standard dimming capability. Flicker-free dimming to 10%. For sizing control systems, the 0-10V control circuit will draw up to 1 mA. Also available with 0-10V to below 1% or Lutron Ecosystem to 1%.

CERTIFICATIONS:

CSA C/US certified to UL1598. Suitable for damp locations. Non-IC rated and 2IN/2OUT through branch wiring. For connection to flexible conduit only.

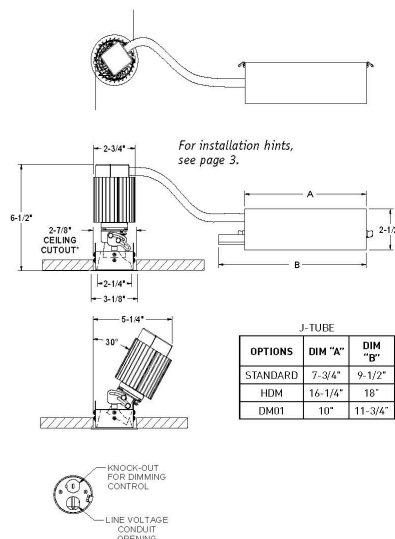
WARRANTY:

5 Year Warranty. Go to www.prescolite.com for full details.

DATE: _____ TYPE: _____
FIRM NAME: _____
PROJECT: _____

Architektür

Ceiling Cutout: 2 7/8"
Ceiling Thickness 1/2"-1 1/4"
Not to Scale



CATALOG NUMBER:

Order accessories separately

EXAMPLE: A2LED-2A9LED9L30K8FL35WCWT

J-TUBE ASSEMBLY	VOLTAGE	LIGHT ENGINE	OUTPUT	LED COLOR	CRI	BEAM ANGLE	LOWER REF. FINISH ²	LOWER REF. COLORS ³	FLANGE OPTIONS ^{3,4}	ACCESSORIES
☐ A2LED J-Tube Assembly with Standard 0-10V 10% Dimming	Standard 120V 277V	☐ 2A9LED 2" Open Reflector/Light Engine Assembly with Xicato module	☐ 7L 700 Delivered Lumens ☐ 9L 900 Delivered Lumens ☐ 12L 1200 Delivered Lumens	☐ 27K 2700 Kelvin ☐ 30K 3000 Kelvin ☐ 35K 3500 Kelvin ☐ 40K 4000 Kelvin	☐ 8 Nominal 80+ CRI ☐ 9L Nominal 95+ CRI	☐ FL35 Nominal 35° cutoff	☐ SS Semi-Specular ☐ MFC American Matte™ ☐ V Kurt Versen Specular ☐ VS Kurt Versen Softglow® ☐ VSS Kurt Versen SoftSheen™	☐ CG Champagne Gold Alzak ☐ GD Gold Alzak ☐ BL Black Alzak ☐ WE Wheat Alzak ☐ LW Light Wheat Alzak ☐ PW Pewter Alzak ☐ BC Painted Flat Black Cone ☐ WC Painted White Cone	☐ WT White Trim Flange ☐ BT Flat Black Trim Flange ☐ CT Clear Trim Flange	☐ FMR2 2" Flush Mount Ring ☐ D2FRM Mounting Frame ☐ D2ICAT ^{4,5} IC Rated, Air Tight housing ☐ D2CP ^{4,5} CCEA compliant housing ☐ LiteGear ⁶ Inverter, single phase central lighting, 125VA-250VA ☐ LPS Series ⁶ LitePower micro-inverter, 20VA-55VA

Standard 0-10V 10% Dimming

HDM⁵ HiLume 1% 3-wire/EcoSystem LED Driver

DM01⁵ eLdoLED 0-10V dimming to less than 1%

¹ 95+ CRI not available on 12L

² Upper reflector is always Specular

³ With Alzak colors, flange will match lower reflector finish unless WT or BT is specified. CT is only applicable for painted cones (WC or BC) and WT, BT, or CT must be specified

⁴ Available with 7L 80+ CRI only

⁵ HDM or DM01 not compatible with D2ICAT or D2CP

⁶ See Central Inverter compatibility note and web links on page 3

prescolite
A Division of Hubbell Lighting, Inc.

In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.
Web: www.prescolite.com • Tech Support: (888) 777-4832

ARCH-LED-012

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 01/21/00

type

RB

page 1 of 2

PHOTOMETRIC DATA

Architektür - 2" A2LED Adjustable

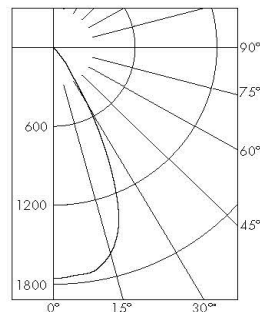
ELECTRICAL DATA	7L		9L		12L
	80+ CRI	95 CRI	80+ CRI	95 CRI	80+ CRI
Input Voltage	120 or 277V	120 or 277V	120 or 277V	120 or 277V	120 or 277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
Input Power (Watts)	11.6 W	17.2 W	14.3 W	22.7 W	19.2 W
Input Current (@120V)	0.098 A	0.140 A	0.120 A	0.190 A	0.162 A
Input Current (@277V)	0.042 A	0.062 A	0.052 A	0.082 A	0.070 A
Constant Current Output	550 mA	500 mA	450 mA	680 mA	700 mA
Power Factor	≥0.90	≥0.90	≥0.90	≥0.90	≥0.90
EMI Filtering (FCC 47CFR, Part 15)	Class B	Class B	Class B	Class B	Class B
Operating Temp	-30°C to 35°C	-30°C to 35°C	-30°C to 25°C	-30°C to 25°C	-30°C to 25°C

*Data for standard 0-10V 10% dimming models. Electrical and photometric data may vary slightly with other dimming options.
 **Short circuit, over-voltage, over-current protection.

PERFORMANCE SUMMARY

Model	Output	Beam Distribution	Delivered Lumens	Input Watts	Lumens Per Watt	Full Catalog Number
A2LED	7L	FL35	702	11.6	60.5	A2LED-2A9LED7L30K8FL35
	9L	FL35	905	14.3	63.3	A2LED-2A9LED9L30K8FL35
	12L	FL35	1218	19.2	63.4	A2LED-2A9LED12L30K8FL35

A2LED-2A9LED12L30K8FL35
 LED Light Engine: 3000K, 80 CRI
 System Wattage: 19.2
 Fixture delivered lumens: 1218
 Fixture Efficacy: 63.4
 Spacing Criteria: 0.77



Test No. 17.02856

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

CANDELA DISTRIBUTION

DEG	CANDELA
0	1755
5	1741
15	1624
25	980
35	197
45	16
55	4
65	1
75	0
85	0
90	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1054	86.5
0-40	1198	98.3
0-60	1218	99.9
0-90	1218	100.0
0-180	1218	100.0

LUMINANCE DATA IN CANDELA/ SQ. METER

Angle in Vertical	Average
45°	7917
55°	2440
65°	828
75°	0
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance					20% Effective Floor Cavity Reflectance					% Wall Reflectance				
	80%	70%	60%	30%	10%	80%	70%	60%	30%	10%	80%	70%	60%	30%	10%
1	114	112	109	107	105	105	104	102	102	100	99	98	97	96	95
2	109	105	101	98	95	107	100	100	97	95	97	95	93	94	93
3	105	99	94	91	88	103	97	93	90	86	91	89	86	87	86
4	100	95	88	85	82	98	92	88	84	80	86	83	80	81	80
5	96	88	83	79	76	94	87	83	79	76	81	78	76	77	76
6	92	84	78	75	72	90	83	78	74	71	77	74	72	73	72
7	88	79	74	70	68	86	79	74	70	67	73	70	68	69	68
8	84	76	70	67	65	82	75	70	66	64	69	66	64	65	64
9	81	72	67	63	61	80	72	67	63	61	66	63	61	62	61
10	77	69	63	60	58	76	68	63	60	58	63	60	58	59	58

A2LED-2A9LED12L30K8FL35

Test No. 17.02856

Catalogue #: A2LED-2A9LED-12L-30K-8-FL35-_-_-WT

Lamp: LED by Manufacturer



Web: www.prescolite.com • Tech Support: (888) 777-4832
 701 Millennium Blvd., • Greenville, SC 29607 U.S.A. • Phone (864) 678-1000
 Copyright ©2017 Prescolite, Inc., a division of Hubbell Lighting, Inc. All Rights Reserved
 Specifications subject to change without notice. • Printed in U.S.A. • ARCH-LED-012 • 9/27/18



project: Lodgepole Visitor Center
 Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
 Rev. Date: 01/21/00

type

RB

To form a Catalog Number

S 3 1 6 - R - S - - - - -
1 2 3 4 5 6 7 8 9 10

Type:

Example

S316-R06L-S-00-L-00-0-835-ZX

Small concealed LED, 8 foot long (1.82m) luminaire driven at 350mA. Anodized aluminum housing, mill finish integral driver enclosure, 120-277V input, 0-10V analog dimming controls by others. UL listed or CSA certified for U.S., damp location, 3500K/80+ CRI.

Catalogue #: S316-R06M-S-00-M-00-0-830-TD

Lamp: by Manufacturer

6 Voltage

M = 120-277V Universal voltage input
K = 347V input

7 Option

(See Accessories Section for specifications)

00 = No options

UK = Modular through-wire harness with quick connectors

OP = Natarorium use, side arms, driver box pretreated and painted semigloss white

PK = Natarorium use with through-wire harness

8 Destination Requirement

0 = UL listed or CSA certified for U.S.
J = UL listed or CSA certified for Canada

9 Color Temperature

830 = 3000K, 80+ CRI 927 = 2700K, 90+ CRI
835 = 3500K, 80+ CRI 930 = 3000K, 80+ CRI
840 = 4000K, 80+ CRI 935 = 3500K, 90+ CRI
940 = 4000K, 90+ CRI

Note: Additional CCT and CRI options are available, consult factory.

10 Dimming**

00 = Non-dimming

TD = ERP Tri-Dim forward phase, reverse phase or 0-10V dimming, 100-10% power on forward or reverse phase, 100%-1% on 0-10V, compatible controls by others

2X = 0-10V analog dimming, 120-277V or 347V input, dimming range 100%-5%, 0-10V controls by others

L2 = Lutron Hi-Lume LTE 120V input only, dimming range 100%-1%, compatible 2-wire dimming controls by others (see note*)

EL = eidoLED SOLOdrive 120-277V input, 0-10V analog dimming 100%-0.1% power (controls by others)

ED = eidoLED SOLOdrive 120-277V input, dimming range 100%-0.1%, DALI controls by others

**Dimming range refers to % power input, % light output will vary. Refer to Driver Information document MA-1303

elliptipar

The Lighting Quotient
114 Boston Post Road, West Haven, Connecticut 06516, USA
Voice 203.931.4455 • Fax 203.931.4464 • thelightingquotient.com

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

type

Issue Date: 01/14/19
Rev. Date: 00/00/00

SA-6

page 1 of 2

1 Source

S = Solid state (LED)

2 Style

316 = Small linear concealed LED with integral driver

3 Length / Light Output / Power

ORDER CODE	LENGTH	LUMENS	INPUT WATTS	NUMBER OF LEDs	DRIVE CURRENT
R02G	2FT	1024	7	72	175mA
R02L	2FT	1897	14	72	350mA
R02M	2FT	3677	27	72	700mA
R03G	3FT	1536	10	108	175mA
R03L	3FT	2831	20	108	350mA
R03M	3FT	5516	41	108	700mA
R04G	4FT	2049	14	144	175mA
R04L	4FT	3775	27	144	350mA
R04M	4FT	7355	54	144	700mA
R05G	5FT	2561	17	180	175mA
R05L	5FT	4718	34	180	350mA
R05M	5FT	9193	68	180	700mA
R06G	6FT	3073	20	216	175mA
R06L	6FT	5692	41	216	350mA
R06M	6FT	11032	82	216	700mA
R07G	7FT	3369	24	252	175mA
R07L	7FT	6006	48	252	350mA
R07M	7FT	12671	95	252	700mA
R08G	8FT	4037	27	288	175mA
R08L	8FT	7549	54	288	350mA
R08M	8FT	14709	109	288	700mA
R09G	9FT	4609	31	324	175mA
R09L	9FT	8493	61	324	350mA
R09M	9FT	16548	122	324	700mA

Based on 3500K/80+ CRI. Click here for scaled performance table

Note: Other drive currents are available, consult factory.

4 Mounting

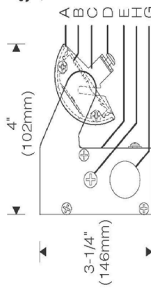
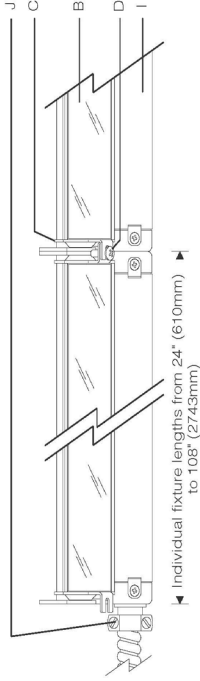
S = Sidearms with mounting tabs

5 Finish

00 = Anodized optical housing/heat sink, mill finish brackets and remote driver enclosure, stainless steel luminaire hardware (natarorium use option, is painted)

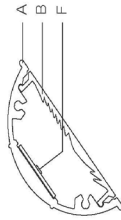
02 = Driver enclosure and mounting brackets finished semi-gloss white, optical housing/heat sink are bright anodized



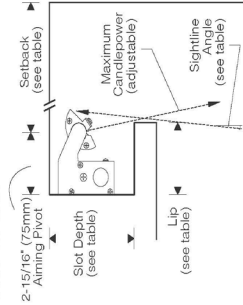
**Style S316**

Optical Assembly

Assembly 1:2 Scale



Slot

Slot 1:8 Scale

Slot Dimensions

Spot Dimensions
(maximum candlepower aimed 15° above horizontal)

	0°	5°	10°
Sightline	(horiz. outloft)		
Width <i>(inside)</i>	5-1/8" (130mm)	4-1/4** (108mm)	4-1/4** (108mm)
Lip <i>(inside)</i>	4" (102mm)	3-5/8" (92mm)	3-1/4" (83mm)
Setback	12" (305mm) min. recommended for 175mA, 18" (457mm) for 350mA; 24" (610mm) for 700mA.		

Note: Finish interior of cove matte white for best results.

Specifications

- A** Serviceable extruded aluminum heat sink/housing
B Extruded acrylic beam shaping lens
C Stainless steel end plates with interlocking tabs

- D** Rotation locking tab with locking set screw
- E** Aluminum side arm with adjustable mounting tab (fasteners by others)

- F** Constant current LED board
- G** Conduit entry (one each end of conduit and connectors by others)
- H** Driver/housing joiner screw (one per fixture)

- Extruded aluminum driver housing and drivers
Supply conduit and connections by others

Housing and Optic Assembly:

Extruded aluminum heat sink/optic housing. Exterior heat sink anodized for maximum emissivity. Stainless steel end plates. Extruded acrylic refractive semi-diffuse asymmetric beam shaping lens. Extruded aluminum driver housing and removable cover.

Finish:

Optic assembly – bright anodized aluminum.
Side arms and driver compartment – mill finish aluminum or painted semigloss white for natatorium option. Painted surfaces receive a 6-stage pretreatment process prior to electrostatically applied baked powder enamel.
All hardware – stainless steel.

Mounting:

Lay-in installation, side arms with mounting tabs can be base or wall mounted (fastened by others). Luminaires can be mounted individually or joined together to form a continuous row. Optical assembly aiming is adjustable and is fixed in position by rotation locking screws at each side arm. When mounted in a continuous row, assemblies lock together allowing all in the row to be aimed together.

1/19

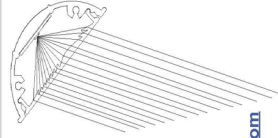


Features

- Proprietary refractive lens technology
- Asymmetric distribution – uniform surface illumination
- Wide lateral distribution – no socket shadows
- Fully adjustable and lockable optic assembly
- Integral driver with optional pre-wired harness
- Slim profile – ideal for tight slots

Performance

Precisely extruded acrylic lens produces an asymmetric distribution ideal for illuminating ceilings evenly.



For LM79 and photometric reports, visit thelightingquotient.com



elliptipar®



project: Lodgepole Visitor Center
Sequoia and Kings Canyon

type

Issue Date: 01/14/19
Rev. Date: 00/00/00

SA-6

page 2 of 2

To form a Catalog Number

S 3 1 6 - R - S - - - - -

1 2 3 4 5 6 7 8 9 10

Project:

Type:

1 Source

S = Solid state (LED)

2 Style

316 = Small linear concealed LED with integral driver

3 Length / Light Output / Power

ORDER CODE	LENGTH	LUMENS	INPUT WATTS	NUMBER OF LEDS	DRIVE CURRENT
R02G	2FT	1034	7	72	175mA
R02L	2FT	1037	14	72	350mA
R03G	3FT	1677	27	108	175mA
R03L	3FT	1676	54	108	350mA
R04G	4FT	2316	41	144	175mA
R04L	4FT	2315	82	144	350mA
R05G	5FT	2955	54	180	175mA
R05L	5FT	2954	109	180	350mA
R06G	6FT	3594	68	216	175mA
R06L	6FT	3593	136	216	350mA
R07G	7FT	4233	82	252	175mA
R07L	7FT	4232	164	252	350mA
R08G	8FT	4872	95	288	175mA
R08L	8FT	4871	190	288	350mA
R09G	9FT	5511	109	324	175mA
R09L	9FT	5510	218	324	350mA

Based on 3500K/80+CRI. Click here for scaled performance table.
Note: Other drive currents are available, consult factory.

4 Mounting

S = Sidearms with mounting tabs

5 Finish

00 = Anodized optical housing/heat sink; mill finish brackets and remote driver enclosure; stainless steel luminaire hardware (nataorium use option is painted)
02 = Driver enclosure and mounting brackets finished semi-gloss white, optical housing/heat sink are bright anodized



...there is no equal

6 Voltage

M = 120-277V Universal voltage input

K = 347V input

7 Option (See Accessories Section for specifications)

00 = No options

0K = Modular through-wire harness with quick connectors
0P = Nataorium use; side arms, driver box pretreated and painted semigloss white

PK = Nataorium use with through-wire harness

8 Destination Requirement

0 = UL listed or CSA certified for U.S.

J = UL listed or CSA certified for Canada

9 Color Temperature

830 = 3000K; 80+ CRI

835 = 3500K; 80+ CRI

840 = 4000K; 80+ CRI

927 = 2700K; 90+ CRI

930 = 3000K; 90+ CRI

935 = 3500K; 90+ CRI

940 = 4000K; 90+ CRI

Note: Additional CCT and CRI options are available; consult factory.

10 Dimming**

00 = Non-dimming

TD = ERP Tri-Dim forward phase, reverse phase or 0-10V dimming, 100-10% power on forward or reverse phase, 100%-1% on 0-10V, compatible controls by others
L2 = Lutron Hi-Lume LITE 120V input only, dimming range 100%-1%, compatible 2-wire dimming controls by others (see note*)

EL = eldLED SOLOdrive 120-277V input, 0-10V analog dimming 100%-0.1% power (controls by others)

ED = eldLED SOLOdrive 120-277V input, dimming range 100%-0.1%, DALI controls by others

**Dimming range refers to % power input. % light output will vary.

Refer to Driver Information document MA-1303

Example

S316-R06L-S-00-L-00-0-835-ZX

Small concealed LED, 6 foot long (1.82m) luminaire driven at 350mA. Anodized aluminum housing, mill finish integral driver enclosure. 120-277V input, 0-10V analog dimming controls by others. UL listed or CSA certified for U.S., damp location, 3500K/80+ CRI.

Catalogue #: S316-R09M-S-00-M-00-0-830-TD

Lamp: by Manufacturer

Certain products illustrated may be covered by applicable patents and patents pending. These specifications supersede all prior publications and are subject to change without notice. Copyright © 2016 Sylvan H. Shemitz Designs, LLC, all rights reserved.

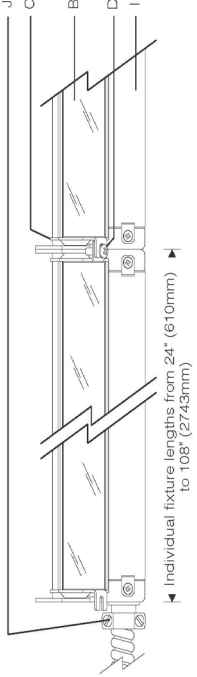
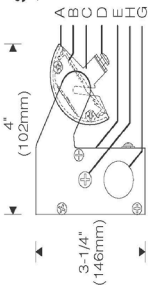
elliptipar from The Lighting Quotient
114 Boston Post Road, West Haven, Connecticut 06516, USA
Voice 203.931.4455 • Fax 203.931.4464 • thelightingquotient.com

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

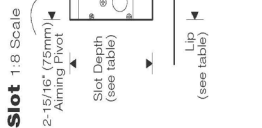
Issue Date: 01/14/19
Rev. Date: 00/00/00

type

SA-9



Optical Assembly



Slot Dimensions				
(maximum candlepower aimed 15° above horizontal)				
Sightline	Width (inside)	Lip (inside)	Setback	
0°	5-1/8" (130mm)	4" (102mm)	12" (305mm) min. recommended for 175mA, 18" (457mm) for 350mA, 24" (610mm) for 700mA.	10°
5°	4-1/4" (108mm)	3-5/8" (92mm)		
10°	4-1/4" (108mm)	3-1/4" (83mm)		

*Minimum for removal of wireway cover.
Note: Finish interior of cove matte white for best results.

Specifications

- A Serviceable extruded aluminum heat sink/housing
- B Extruded acrylic beam shaping lens
- C Stainless steel end plates with interlocking tabs
- D Rotation locking tab with locking set screw
- E Aluminum side arm with adjustable mounting tab (fasteners by others)
- F Constant current LED board
- G Conduit entry (one each end, others)
- H Driver/housing joiner screw (one per fixture)
- I Extruded aluminum driver housing and drivers
- J Supply conduit and connections by others

Housing and Optic Assembly:

Extruded aluminum heat sink/optic housing. Exterior heat sink anodized for maximum emissivity. Stainless steel end plates. Extruded acrylic refractive semi-diffuse asymmetric beam shaping lens. Extruded aluminum driver housing and removable cover.

Finish:

Optic assembly – bright anodized aluminum. Side arms and driver compartment – mill finish aluminum or painted semigloss white for natatorium option. Painted surfaces receive a 6-stage pretreatment process prior to electrostatically applied baked powder enamel. All hardware – stainless steel.

Mounting:

Lay-in installation, side arms with mounting tabs can be base or wall mounted (fasteners by others). Luminaires can be mounted individually or joined together to form a continuous row. Optical assembly aiming is adjustable and is fixed in position by rotation locking screws at each side arm. When mounted in a continuous row, assemblies lock together allowing all in the row to be aimed together.

1/19

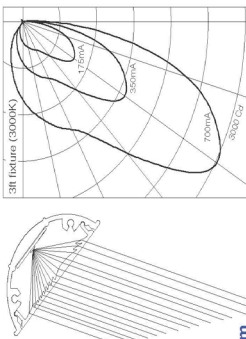


Features

- Proprietary refractive lens technology
- Asymmetric distribution – uniform surface illumination
- Wide lateral distribution – no socket shadows
- Fully adjustable and lockable optic assembly
- Integral driver with optional pre-wired harness
- Slim profile – ideal for tight slots

Performance

Precisely extruded acrylic lens produces an asymmetric distribution ideal for illuminating ceilings evenly.



For LM79 and photometric reports, visit thelightingquotient.com

L85(10K) > 60,000 hrs
@ 25°C per TM-21



elliptipar
...there is no equal

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

SA-9

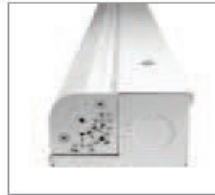
BSS110 | GENERAL INFORMATION

Adjustable linear LED cove mount fixture



Project: _____

Type: _____



FEATURES

The BSS110 is a small profile, linear LED fixture for cove mount applications. The sheet formed and extruded components combine to produce a rugged, functional and simple luminaire. The unique rotating element allows a wide range of adjustment and positive locking that is easily performed in the field. 90+ CRI LEDs are covered with a frosted acrylic lens to provide diffuse illumination on the cove surfaces.

SPECIFICATIONS

Fixture mounting/wiring channel is formed and welded 20 ga. steel chemically treated to resist corrosion and enhance paint adhesion.

LED housing is extruded aluminum with sheet aluminum end caps.

Standard fixture finish is semi-gloss white powder coat, applied post production.

Includes frosted acrylic lens for wide angle diffusion.

Available in nominal lengths of 2', 3', 4' and 5'.

LED housing rotates and locks in place without tools at -15°, 0°, 15°, 30°, 45°, 60°, 75°, 90° and 105°.

Knock outs on ends, and underside accept standard electrical fittings by others.

Standard integral 120V-277V driver offered with 0-10V dimming or non-dim (other dimming driver options available).

Integral 120-277V emergency battery backup available for 4' nominal non-dim or 0-10V (consult factory for all other lengths/drivers).

Standard outputs are 480 and 625 lumens per foot.

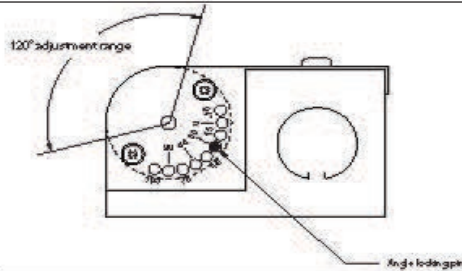
LEDs available in 2700K, 3000K, 3500K and 4000K, within a 3 step MacAdam ellipse, all with 90+ CRI typical.

LED life rated at 50,000 hours.

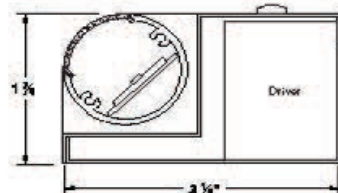
Limited five year warranty.

UL and C-UL listed for dry and damp locations.

PROFILE



SECTION



PERFORMANCE

NOMINAL LENGTH	OUTPUT	LUMENS/FT	WATTS/FT	LUMINAIRE LUMENS	EFFICIENCY (LPW)
4'	L: low	480	5.6	1819	87
	R: regular	625	7.7	2362	81

*Note: All data reflects fixtures with 3500K LEDs.



BSS110 +

X

FIXTURE LENGTH
2: 23-3/32"
3: 34-9/32"
4: 45-15/32"
5: 56-23/32"

CORRELATED COLOR TEMPERATURE
27: 2700K-90+ CRI
30: 3000K-90+ CRI
35: 3500K-90+ CRI
40: 4000K-90+ CRI

DRIVER
(Non-Dimming)
leave blank for 120-277V non-dimming
347: 347V non-dimming
(Dimming)
DM: 0-10V, 1%

LIGHT OUTPUT (lumens per foot)
L: low - 480
R: regular - 625
CF: consult factory for custom output

LENS
F: frosted

OPTIONS
ED: emergency driver (4' nom. non-dim or 0-10V only)

©2018 Bartco Lighting, Inc. These products are protected by patents and patents pending. Unauthorized use or reproduction of illustrations, photographs or text is prohibited. Bartco Lighting reserves the right to discontinue products or to change the technical and/or design specifications at any time.

pg. 1 11 2018

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

SB

page 1 of 1

SURFACE TRACK (120/250V) • SPECIFICATIONS

GENERAL Lighting Track shall allow fixtures to be located anywhere along the track length. Fixtures shall be easily focused, switched, dimmed, accessorized and removed as desired. Track system shall have a twelve year warranty from date of shipment.

MECHANICAL Lighting Track shall be constructed of .070 (2mm) extruded aluminum with overall height of 1.42 (36mm) and overall width of 1.812 (46mm). Track shall have same overall dimensions and physical appearance for both one and two circuit models.

Track shall be available in nominal 4 foot (1.2m), 8 foot (2.4m), and 12 foot (3.7m) lengths, in Silver, Black, and White high temperature baked paint finish. Track shall be field cuttable to any length with a single cut.

Track system shall be available with End Feed, End Cap, Straight Mini-Joiner, Straight Joiner/Feeder, Flexible Joiner and L, T, and X Joiner/Feeders as standard components.

Track shall have the ability to be directly surface mounted. Track shall have pre-punched mounting slots for direct mounting to any surface. Track shall have the ability to: be mounted 1/2 inch (13mm) from a surface by extruded aluminum mounting clips, be suspended from a surface by a field cuttable stainless steel cable system, be suspended from a surface by a field cuttable steel stem system, and be mounted into UniTrack housing.

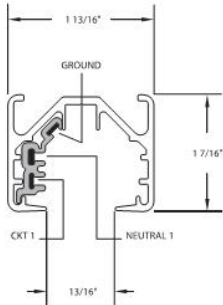
ELECTRICAL Lighting Track and components shall be UL and CUL listed, CE Certified, and comply with the National Electric Code standards for Lighting Track. One and two circuit Lighting Track shall be rated at 120/250 volt, 50/60 Hz. 2400 watts maximum each circuit. Each 20 amp/120 volt circuit shall be comprised of flat copper busbars and have a separate neutral busbar for each circuit busbar. The neutral busbar shall be oversized to be comparable to #10 gauge 30 amp wire to reduce the possibility of overheating due to non-linear loads and harmonics. **Track shall have integral wiring channels for six (6) additional #12 THHN wires to create three (3) additional 20 amp/120 volt circuits, which can be dropped into any Joiner/Feeder, for a total track power capacity of 100 amps.** A separate grounding busbar shall be integral in all track lengths. All busbars shall be insulated to prevent contact with aluminum extrusion.

Track shall have electric feed capability through all Joiner/Feeders (except Flexible Joiner and Straight Mini-Joiner) using either 1/2 or 3/4 U.S. trade size knock-outs (.875 diameter [22mm] or 1.125 diameter [29mm]). Joiner/Feeders can be electrically field modified by removing the Lexan™ cover and rerouting internal pre-wired jumpers. All Joiner/Feeders shall be available in Black, White, and Silver GE fiber reinforced Lexan™.

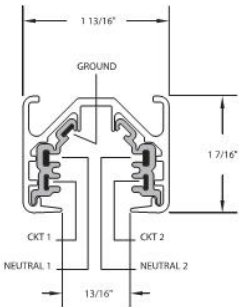
One and two circuit Lighting Track with separate neutral busbars shall have the ability to have each circuit separately dimmed as required when using standard voltage and low voltage fixtures with either magnetic or electronic transformers. Track shall have the ability to be dimmed or switched in selected sections in addition to dimming or switching an entire track configuration or track run.

FIXTURE FITTING INTERFACE Track shall accept GE fiber reinforced Lexan™ fixture fittings which positively lock into track and cannot be energized by the integral switch until safety interlock handle is in the closed position. Safety interlock shall also prevent fixture fitting removal from track unless the switch is in the "off" position. Upon insertion of fixture fitting into track, grounding connection from fixture fitting to track shall be automatically completed before any electrical contact is made with busbars. When removing fixture fitting from track, the grounding connection shall automatically be disconnected last. The fixture fitting shall recess into the track, creating a minimal profile below the track. Fixture fittings for magnetic low voltage fixtures shall be furnished with fuse of the correct ampere rating for integral transformer protection, and shall not be fused as a branch circuit.

One Ckt 120/250V Track



Two Ckt 120/250V Track



project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

T

SURFACE TRACK (120/250V) • COMPONENTS

Key Features / Applications

UL and CUL listed, CE Certified, Dry Location • IBEW union made at LSI plant in USA • Specification grade heavy duty .070 (2mm) extruded aluminum track • 4 foot (1.2m), 8 foot (2.4m) and 12 foot (3.7m) field cuttable lengths • One circuit 20 amp or two circuit 40 amp capacity/120/250 volt • 100 amp total capacity when using integral wireways • Copper busbars equivalent to #12 AWG wire used as circuit and ground track conductors • Oversized copper busbars equivalent to #10 AWG wire used as neutral track conductors • Separate neutral track conductor used for each circuit • Separate copper grounding busbar used throughout track system • Black, White, and Silver finishes • All Joiner/Feeders, Flexible Joiners, Mini-Joiners, End Feeds and End Caps are injection molded of GE fiber reinforced Lexan™ • All Joiner/Feeders and Flexible Joiners are prewired and simply couple into track • All Joiner/Feeder circuits can be easily field modified by changing internal jumper wires • Fixture fitting recesses into track for minimum profile • LSI surface track can be mounted directly to any surface 5'-0" above finished floor.

Surface Track Sections



120/250V Surface Track Sections are used in conjunction with an End Feed, End Cap and a variety of Joiner/Feeders to form track runs and configurations. Track Section lengths are nominal 4 foot (1.2m), 8 foot (2.4m) and 12 foot (3.7m) which are field cuttable.

Finish		Nominal Length		
		4 ft	8 ft	12 ft
Silver	One Ckt Two Ckt	31010 32010	31020 32020	31030 32030
Black	One Ckt Two Ckt	31210 32210	31220 32220	31230 32230
White	One Ckt Two Ckt	31310 32310	31320 32320	31330 32330

Bridge Track



120/250V Bridge Track is a complete, portable, field cuttable, surface UniTrack system that mechanically and electrically mounts to and spans parallel runs of LSI Track. Bridge Track provides an additional range of striking angles for track lighting fixtures or for centering a fixture over a target located between parallel runs of track up to 8 foot (2.4m) on center.

Finish		9 ft
Silver	One Ckt	31025
Black	One Ckt	31225
White	One Ckt	31325

Security/Worklight Track



120/250V Security/Worklight Track is a separately fed one circuit Track Section, suitable for most LSI track fixtures, that integrates into any LSI Track run or configuration at any location. Consult fixture cutsheet. LSI fixtures (add suffix EF) mechanically lock into Security/Worklight Track by means of special hardware and do not have on/off switches.

Finish	All One Ckt			
	18" Joiner Section	18" End Feed Section	18" End Cap Section	18" Conduit End Feed Section
Silver	31050	31051	31052	31053
Black	31250	31251	31252	31253
White	31350	31351	31352	31353

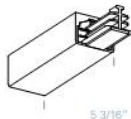
Unimount



120/250V Unimount is a compact canopy mount Track section which will accept most single LSI Track fixtures up to 500 watts.

Finish		
Silver	One Ckt	31161
Black	One Ckt	31261
White	One Ckt	31361

End Feed



120/250V End Feed is used in conjunction with a Canopy Kit for top feeding from a recessed outlet box and can also be top fed directly with cable.

Finish		
Silver	One Ckt Two Ckt	31100 32100
Black	One Ckt Two Ckt	31200 32200
White	One Ckt Two Ckt	31300 32300

End Feed for Conduit Connector



120/250V End Feed for Conduit Connector is used when feeding directly into the end of an End Feed. Connector supplied with 1/2" US trade size hole.

Finish		
Silver	One Ckt Two Ckt	31102 32102
Black	One Ckt Two Ckt	31202 32202
White	One Ckt Two Ckt	31302 32302

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

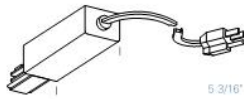
Issue Date: 01/14/09
Rev. Date: 00/00/00

type

T

SURFACE TRACK (120/250V) • COMPONENTS

Portable Feed



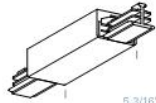
5 3/16"

120/250V Portable Feed is used when a portable or temporary track hookup is desired. Supplied with 15 foot #16 AWG-10 Amp/125 Volt 3 wire flexible cord with NEMA 5-15P grounding plug. Non-UL listed.

Finish

Silver	One Ckt	31101
Black	One Ckt	31201
White	One Ckt	31301

Straight Joiner/Feeder



5 3/16"

120/250V Straight Joiner/Feeder is used to mechanically and electrically couple any two lengths of track in a straight line. Straight Joiner/Feeder can also be top fed to energize the track from a recessed outlet box when used in conjunction with appropriate Canopy Kit or can be top fed directly with cable.

Finish

Silver	One Ckt	31104
	Two Ckt	32104
Black	One Ckt	31204
	Two Ckt	32204
White	One Ckt	31304
	Two Ckt	32304

Straight Mini-Joiner



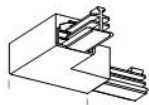
1/8"

120/250V Straight Mini-Joiner is used to mechanically and electrically couple any two lengths of track in a straight line. Add .125 (3mm) for Straight Mini-Joiner when calculating overall lengths of straight runs or configurations (overall lengths are not the same as when using Straight Joiner/Feeder). Not for use as feeder.

Finish

Silver	One Ckt	31111
	Two Ckt	32111
Black	One Ckt	31211
	Two Ckt	32211
White	One Ckt	31311
	Two Ckt	32311

L Joiner/Feeder



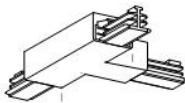
3 1/2"

120/250V L Joiner/Feeder is used to mechanically and electrically couple any two lengths of track in an L right angle configuration. This L Joiner/Feeder can also be top fed to energize the track from a recessed outlet box when used in conjunction with appropriate Canopy Kit or can be top fed directly with cable.

Finish

Silver	One Ckt	31105
	Two Ckt	32105
Black	One Ckt	31205
	Two Ckt	32205
White	One Ckt	31305
	Two Ckt	32305

T Joiner/Feeder



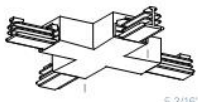
5 3/16"

120/250V T Joiner/Feeder is used to mechanically and electrically couple any three lengths of track in a T configuration. This T Joiner/Feeder can also be top fed to energize the track from a recessed outlet box when used in conjunction with appropriate Canopy Kit or can be top fed directly with cable. Internal Joiner wiring can be field modified. Note that in the one circuit version, a right or a left T must be ordered and must be used directly opposite each other when used in a configuration so that busbar continuity is maintained. For two circuit track, a left and right T is not necessary.

Finish

Finish		Left Joiner	Right Joiner
Silver	One Ckt	31106	31107
	Two Ckt	32106	32107
Black	One Ckt	31206	31207
	Two Ckt	32206	32207
White	One Ckt	31306	31307
	Two Ckt	32306	32307

X Joiner/Feeder



5 3/16"

120/250V X Joiner/Feeder is used to mechanically and electrically couple any four lengths of surface track in an X configuration. This X Joiner/Feeder can also be top fed to energize the track from a recessed outlet box when used in conjunction with appropriate Canopy Kit or can be top fed directly with cable.

Finish

Silver	One Ckt	31109	Two Ckt	32109
Black	One Ckt	31209	Two Ckt	32209
White	One Ckt	31309	Two Ckt	32309

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

T

page 3 of 7

SURFACE TRACK (120/250V) • COMPONENTS

Flexible Joiner



120/250V Flexible Joiner is used to mechanically and electrically couple any two lengths of surface mount track to create obtuse angles from 90° through 270°. The Flexible Joiner can be flexed in either horizontal or vertical planes. Not for use as feeder.

Finish				
Silver	One Ckt	31112	Two Ckt	32112
Black	One Ckt	31212	Two Ckt	32212
White	One Ckt	31312	Two Ckt	32312

End Cap



120/250V End Cap is used for mechanically ending any straight run, individual Track Section, or open configuration Track Section.

Finish		
Silver	One & Two Ckt	30103
Black	One & Two Ckt	30203
White	One & Two Ckt	30303

Current Limiter



LSI Track Current Limiters integrate directly into 1 and 2 circuit track runs in Black, White and Silver finishes. Available amperage rating include: (0.5) amp (60 watts), (1) amp (120 watts), (1.5) amp (180 watts), (2) amp (240 watts), (2.5) amp (300 watts), (3) amp (360 watts), (5) amp (600 watts), (8) amp (960 watts) and (12) amp (1440 watts). Other amperages available, consult factory. California Energy Commission (CEC) approved and Title 24 compliant.

See spec sheet on LSI website for ordering information.

Adjustable Angle Bracket



The Adjustable Angle Bracket for Flex Joiner is designed to attach to cable mounted track. This assembly locks the set angle of a Flex Joiner when there is no rigid mounting means.

Finish		
Silver	One & Two Ckt	30116
Black	One & Two Ckt	30216
White	One & Two Ckt	30316

Raceway Cover



Field cuttable Raceway Covers are used to enclose additional lay-in circuit wiring in top section of track.

Finish	Nominal Length		
	4 Ft	8 Ft	12 Ft
Galvanized	30613	30614	30615

Power Receptacle Adapter



120/250V Power Receptacle Adapter provides a convenient switched and fused U-Ground receptacle for power and is rated at 5A-120V. ETL listed.

Finish		
Silver	One & Two Ckt	31160
Black	One & Two Ckt	31260
White	One & Two Ckt	31360

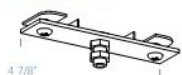
Display Hook



Display Hook is used to mechanically hang an item from the track without electrifying it. Do not exceed 20 lbs. at minimum spacing of two feet.

Finish		
Silver	One & Two Ckt	30761

Weight Support Bar



Weight Support Bar provides threaded nipple and nuts to mount an item to track without electrifying it. Do not exceed 20 lbs. at minimum spacing of two feet. Nipple size 1/8-27 NPS (.406 diameter).

Finish		
Silver	One & Two Ckt	30762

Track Closure Cover



Field cuttable Noryl Track Closure Covers are used to enclose the open face of the track, and simply snap into place.

Finish	Nominal Length		
	4 Ft	8 Ft	12 Ft
Silver	30165	30166	30167
Black	30265	30266	30267
White	30365	30366	30367

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

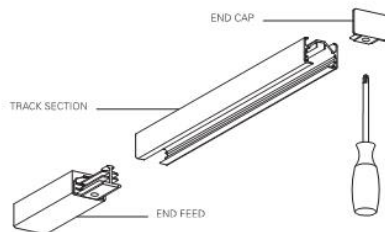
type

T

SURFACE TRACK (120/250V) • INSTALLATION

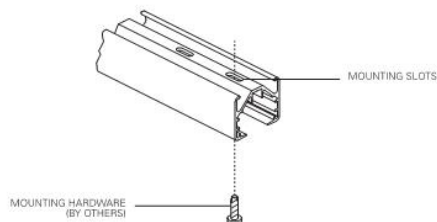
General Notes

When installing or using this track system, basic safety precautions should always be followed, including the following: Read all instructions. Do not install this track in damp or wet locations. Do not install any part of the track system less than five feet from floor. Do not install any fixture assembly closer than six inches from any curtain or similar combustible material. Disconnect electrical power before adding to or changing the configuration of the track. Check with a qualified electrician. Do not attempt to energize anything other than lighting track fixtures on the track. To reduce the risk of fire and electric shock, do not attempt to connect power tools, extension cords, appliances and the like to the track. Install per NEC and local codes. Save these instructions.



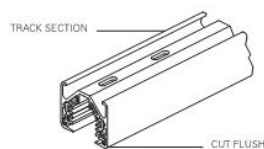
Assembling

Insert End Cap, End Feed or any other Joiner/Feeder completely into Track Section and tighten the recessed Phillips head screw. Do not use excessive force when inserting components into Track Section.



Mounting

Fasten track directly to surface through pre-punched mounting slots with hardware (by others) capable of withstanding a 50 lb. pull. Mount track in compliance with NEC Lighting Track Article #410-101 (Installation), #410-104 (Fastening) and any other applicable codes. To prevent distortion of the track opening which may prevent insertion of fixture fittings, do not over tighten mounting screws. LSI recommends a minimum of two mounting points per section of track. LSI track can be mounted on centers up to 6'-0".



Field Cutting

LSI track can be easily field cut using a sharp hacksaw or a chop saw with a blade for non-ferrous metals, such as Oldham commercial carbide series metal blade. Together, cut the aluminum track, Noryl™ insulation, and copper with one straight cut. All pieces must be exactly the same length. Be sure to remove any burrs on the aluminum or the copper as this may affect the electrical and mechanical interconnection of components to track. Do not cut track to less than one foot in length.

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

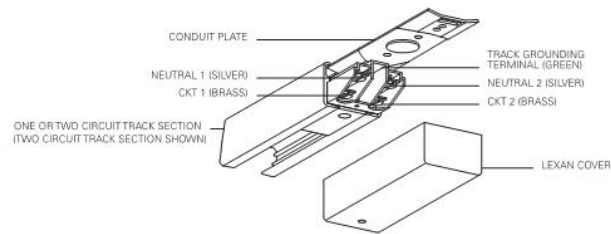
T

page 5 of 7

SURFACE TRACK (120/250V) • INSTALLATION

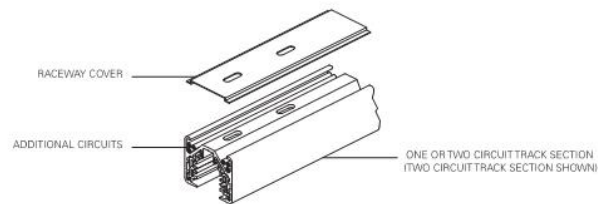
Electrical

Remove the Lexan™ cover from any End Feed or Joiner/Feeder, bring wires through combination 1/2, 3/4 U.S. trade size knock-out (.875 diameter [22mm], 1.125 diameter, [29mm]) in conduit plate and attach conductors to identified terminals. Joiner/Feeders can be electrically field modified after removal of Lexan™ cover by rerouting internal pre-wired jumpers.



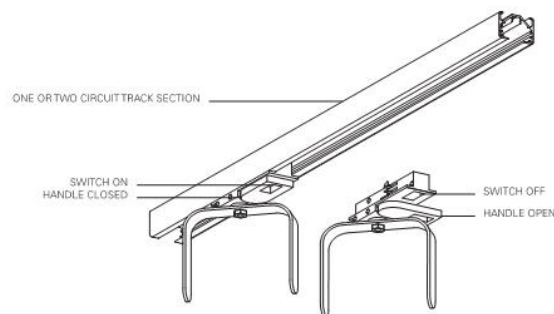
Additional Circuits

LSI Track has integral wiring channels for six additional #12 THHN wires to create three additional 20 amp circuits with separate neutrals. Place conductors in wiring channels and slide raceway covers into track prior to mounting.



Installing LSI Fixtures

To insert a fixture fitting into the track, the switch must be in the "off" position, with the handle open. Insert the fixture fitting straight up into the track until it seats evenly, close handle completely, switch on. If using one circuit track, make sure that the brass contacts which protrude from the side of the fixture fittings are inserted facing the copper busbars. If using two circuit track, inserting the fixture fitting in one direction will connect to circuit one. Removing and reversing the direction of the fitting will connect to circuit two.



project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

T

TYPICAL WIRING DIAGRAMS

Diagrams apply to 120V Surface Track, 277V Surface Track and Recessed Track Systems

Single Circuit

Straight Joiner/Feeder



Rotated 180°

L Joiner/Feeder



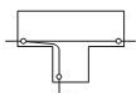
Field Modified

Notes:

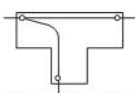
All diagrams shown are installed view, not RCP.

Except as noted, all modifications can be done simply and quickly on the job with a Philips and straight blade screwdriver

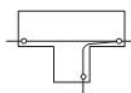
T Joiner/Feeder



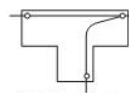
Right



Field Modified Right

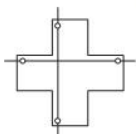
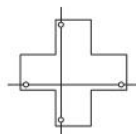


Left

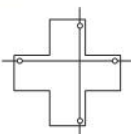


Field Modified Left

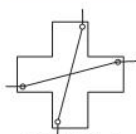
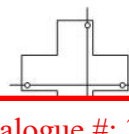
X Joiner/Feeder



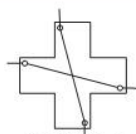
Rotated Clockwise 90°



Rotated Clockwise 180°



Field Modified

Field Modified
Rotated Clockwise 90°

Flexible Joiner

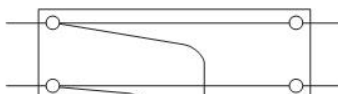
Catalogue #: 312XX -series

NOTE: Exact bill of materials to be coordinated by contractor with manufacturer prior to final order to ensure that all parts and pieces necessary for a complete and working system are accounted for.

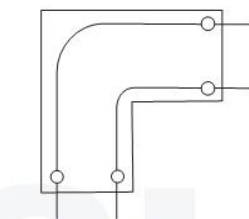
Two Circuit



Straight Joiner/Feeder



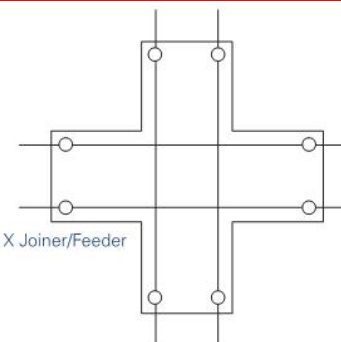
T Joiner/Feeder



L Joiner/Feeder



Flexible Joiner*



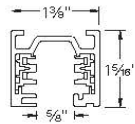
X Joiner/Feeder

* Prewired internal jumpers cannot be modified.

W Track System - Surface Mount

WAC LIGHTING

Responsible Lighting®



Fixture Type:

Catalog Number:

Project:

Location:

PRODUCT DESCRIPTION

Heavy duty architectural grade track with two independently controllable circuits. Stem or cable suspensions available.

FEATURES

- Power per Circuit: 1920W max (120V), 4432W max (277V)
- Operating Current: Each circuit is rated 20A (2 x 20A = 40A max)
- Extruded aluminum construction
- UL & CUL listed
- 5 year WAC Lighting product warranty

SPECIFICATIONS

Materials: Solid copper alloy bus bars in an extruded aluminum with a rectangular cross-sectional area of 4.2 mm²

Electrical: Electric feed capability through all jointers/feeders (except Power Connector and Flexible Connector) using standard 1/2 inch knock-outs

Mounting: Fixtures may be installed or removed anywhere along the track. Minimum fixture spacing is 1 foot. Track fixture has safety interlocks when installed/removed. Polarization is guaranteed throughout the system

Finish: Available in black powder coat (**BK**), white powder coat (**WT**), or platinum anodized (**PT**) finishes

Standards: UL & CUL listed

ORDER NUMBER

XX

Model	Length	Finish
WT 120V	4 4'	BK Black
WHT 277V	8 8'	PT Platinum
	12 12'	WT White

Each section includes two matching end caps.



Example: **WHT4-PT**

wacighting.com

Phone (800) 526.2588

Fax (800) 526.2585

Headquarters/Eastern Distribution Center

44 Harbor Park Drive

Port Washington, NY 11050

Central Distribution Center

1600 Distribution Ct

Lithia Springs, GA 30122

Western Distribution Center

1750 Archibald Avenue

Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. APR 2015

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

T-1

page 1 of 3

WTrack System - Surface Mount

Accessories	Model	Volt	Finish	Description	Suspension	Model	Length	Finish	Description
Live End Connector - Left Polarity	 WEDL WHEDL	120V 277V	BK PT WT	Direct wiring through ceiling. Polarity on left side of track.	Stem Kit With Power Feed	 WMSP	6 12 24 36 48 96	6" 12" 24" 36" 48" 96"	Power feed to connect with a Live End or any Joiner/Feeder. May be field cut.
Live End Connector - Right Polarity	 WEDR WHEDR	120V 277V	BK PT WT	Direct wiring through ceiling. Polarity on right side of track.	Flexible Power Feed	 WMFP	48 96	48" 96"	Flexible power feed to connect with a Live End or any Joiner/Feeder. Recommended for use with Cable Suspensions. May be field cut.
"I" Connector	 WPC WHPC	120V 277V	BK PT WT	Join two sections of track with electrical continuity.	Pendant Stem Kit	 WMT-X	6 12 24 36 48 96	6" 12" 24" 36" 48" 96"	Use to extend track from the ceiling. May be field cut.
"I" Power Connector	 WIC WHIC	120V 277V	BK PT WT	Power entry point at the connection of two tracks.	T-Bar Stem Kit	 WMT-TB	48 96	48" 96"	Extend track from drop ceilings. May be field cut.
Flexible Connector	 WFC WHFC	120V 277V	BK PT WT	Transition from wall-to-wall, wall-to-ceiling, or ceiling-to-ceiling. Power feedable.	Sloped Ceiling Stem Kit	 WMT	XS6 XS12 XS24 XS36 XS48 XS96	6" 12" 24" 36" 48" 96"	Use to extend track from a sloped ceiling. May be field cut.
Canopy Plate	 CP	120V 277V	BK PT WT	Covers a standard 4" octagonal box.	Sloped Ceiling Cable Kit	 WMST	XS48 XS96	48" 96"	Extend track from a sloped ceiling. May be field cut.
"L" Connector. Left Polarity	 WLLC WHLLC	120V 277V	BK PT WT	Join 2 track sections to make power feedable 90° left polarity turns.	Suspension Cable Kit	 WMST-X	48 96	48" 96"	Extend track from the ceiling. May be field cut.
"L" Connector. Right Polarity	 WRLC WHRLC	120V 277V	BK PT WT	Join 2 track sections to make power feedable 90° right polarity turns.	T-Bar Suspension Cable Kit	 WMST-TB			Extend track from drop ceilings. May be field cut.
"T" Connector - Left	 WLTC WHLTC	120V 277V	BK PT WT	Join 3 track sections. Power feedable. Polarity on outside edge.	Suspension Accessories				
"T" Connector - Right	 WRTC WHRTC	120V 277V	BK PT WT	Join 3 track sections. Power feedable. Polarity on inside edge.	Suspension Hanger Clip	 WMT		BK PT WT	
"X" Connector	 WXC WHXC	120V 277V	BK PT WT	Join 4 track sections. Power feedable.	"I" Power Connector Suspension Mount	 WMPC		BK PT WT	
Track Current Limiter					Live End Suspension Mount	 WMED		BK PT WT	
Live end-Left	 WEDL WHEDL	120V 277V	1A 2A 5A 7A 10A 12A	1 Amp 2.5 Amp 5 Amp 7.5 Amp 10 Amp 12 Amp	Power Feed Coupler Suspension Mount Use with "I" Power Connector	 WMIC		BK PT WT	
Live end-Right	 WEDR WHEDR	120V 277V	1A 2A 5A 7A 10A 12A	1 Amp 2.5 Amp 5 Amp 7.5 Amp 10 Amp 12 Amp	"L" Connector Suspension Mount	 WMLC		BK PT WT	
					"T" Connector Suspension Mount	 WMT-C		BK PT WT	
					"X" Connector Suspension Mount	 WMXC		BK PT WT	

wacighting.com
Phone (800) 526.2588
Fax (800) 526.2585

Headquarters/Eastern Distribution Center
44 Harbor Park Drive
Port Washington, NY 11050

Central Distribution Center
1600 Distribution Ct
Lithia Springs, GA 30122

Western Distribution Center
1750 Archibald Avenue
Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. APR 2015

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

type

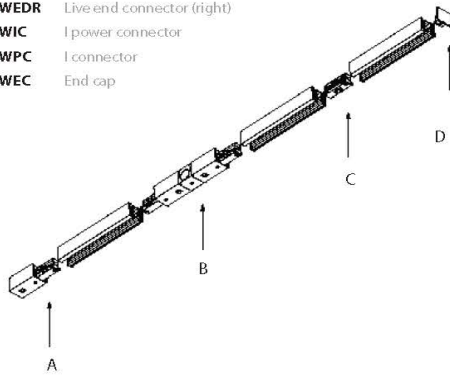
T-1

Issue Date: 01/14/09
Rev. Date: 00/00/00

page 2 of 3

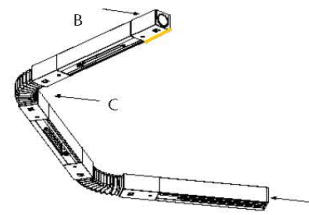
Straight Configuration

- A WEDR Live end connector (right)
- B WIC I power connector
- C WPC I connector
- D WEC End cap

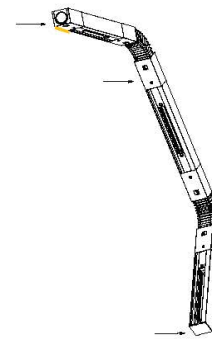


Flexible Configurations

- A WEDR Live end connector (right)
- B WEDL Live end connector (left)
- C WFC Flexible connector
- D WEC End cap



Horizontal Ceiling Mount

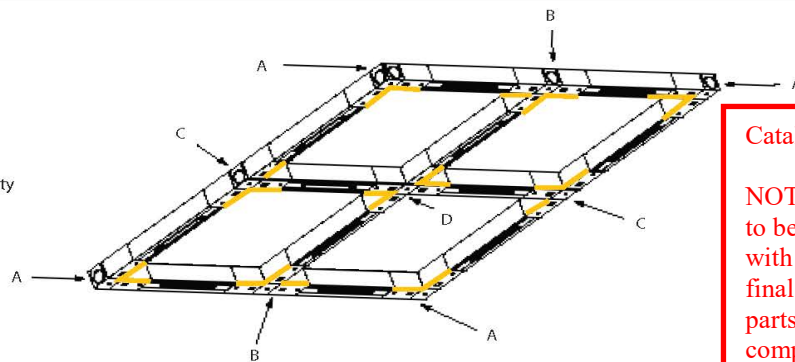


Vertical Wall-to-Ceiling Mount

Grid Configuration

- A WLLC L Connector Left
- B WLTC T Connector Left
- C WRTC T Connector Right
- D WXC X Connector

— = Indicates Electrical Continuity



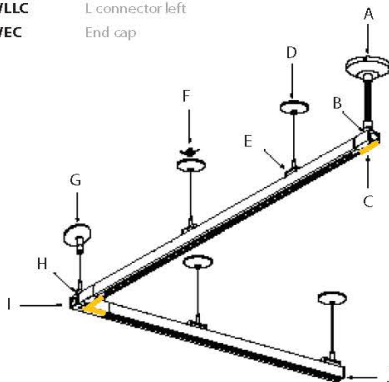
Catalogue #: WT-XX-BK

NOTE: Exact bill of materials to be coordinated by contractor with manufacturer prior to final order to ensure that all parts and pieces necessary for a complete and working system are accounted for.

Cable Suspension Mount

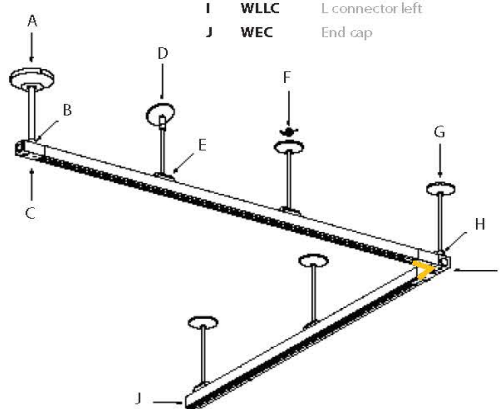
- A WMFP Flexible Stem kit with power feed
- B WMED Live end suspension mount
- C WEDL Live end connector (left)
- D WMST-X Cable suspension kit
- E WMT Suspension hanger clip
- F WMST-TB T bar cable suspension kit
- G WMST-XS Sloped ceiling cable kit
- H WMLC L connector suspension mount
- I WLLC L connector left
- J WEC End cap

Use one support for every 4 feet



Stem Suspension Mount

- A WMSP Stem kit with power feed
- B WMED Live end suspension mount
- C WEDR Live end connector (right)
- D WMT-XS Sloped ceiling stem kit
- E WMT Suspension hanger clip
- F WMT-TB T bar stem kit
- G WMT-X Stem kit
- H WMLC L connector suspension mount
- I WLLC L connector left
- J WEC End cap



WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. APR 2015

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

type

T-1

Issue Date: 01/14/09
Rev. Date: 00/00/00

page 3 of 3

SSL230 SERIES • 120/277V • LED PAR30

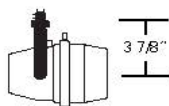
Shown with optional
cross baffle accessory

This medium and long throw unit is perfect for areas requiring visually quiet, high intensity light.

- Designed for all short-neck PAR30 medium screw base Solid State LED Retrofit lamps up to 20 watts and incandescent lamps up to 75 watts. Max length: 3.88", Max diameter: 3.75" (Short-neck lamps only)
- Venting for proper thermal management
- Sturdy aluminum housing
- Rugged steel self-locking yoke allows for horizontal and vertical focusing
- On/off safety switch (on most mounting types)
- Equipped with beam rotation and relamping handle for easy lamp changing
- Front rotation lock for alignment of directional accessories
- Has beam rotation lock for applications that require positive focus locking
- Internal accessory cartridge holds up to three size A LSI filters and accessories
- Optional Cross Baffle eliminates glare (45° cut-off)
- Finishes: LSI Black, White, and Silver
- Fixture weight: 1.5 lbs.

MOUNTING OPTIONS**SSL230-XXX-00-XXXX**

Lexan fitting for 1 and 2 circuit LSI Track. With On/Off switch.



3 7/8"

SSL230-XXX-2G-XXXX

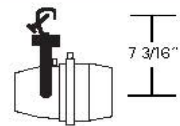
Universal fitting for Unistrut Systems and any screw or bolt-up applications. With switch, straight 6-foot 3-wire grounding cord and NEMA 5-15P plug.



4 11/16"

SSL230-XXX-3G-XXXX

C-clamp for pipes from 5/8" to 2" O.D. With switch, straight 6-foot 3-wire grounding cord and NEMA 5-15P plug.



7 3/16"

SSL230-XXX-5A-XXXX

Canopy for permanent mounting on standard 4" octagonal outlet boxes.



3 1/2"

Other Options (Consult Factory):

- Stems, specify length (4" - 48")
- Custom color, RAL palette
- Security/Worklight Fixture, use **—EF** as mounting option (track mount only)

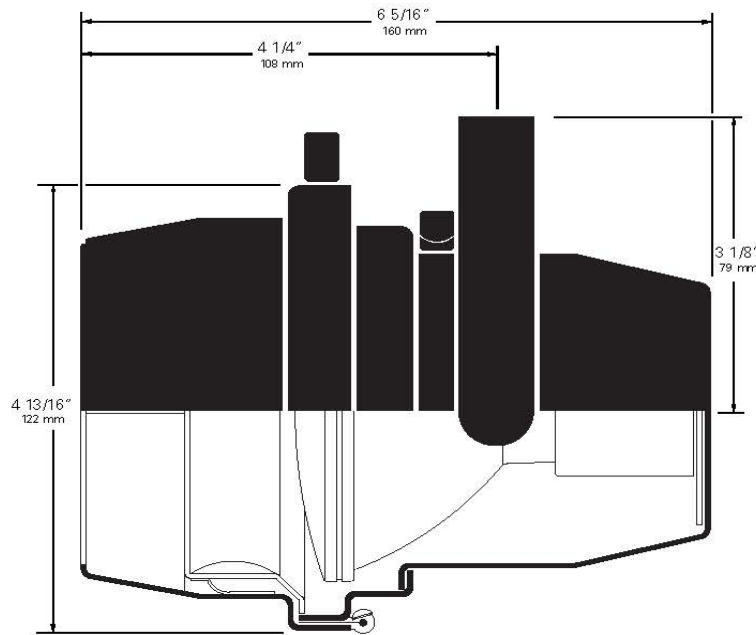
project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

TA

page 1 of 9

SSL230 SERIES • 120/277V • LED PAR30**ORDERING INFORMATION****1. Choose the Accessory Cartridge:**

(NXB) for No Cross Baffle
(WXB) for with Cross Baffle

2. Select your Mounting Option:

(00) for Track Fitting
(2G) for Unistrut Fitting
(3G) for C-clamp Fitting
(5A) for Canopy Fitting

3. Choose desired Voltage:

(120) for 120V **(277)** for 277V

4. Choose other fixture Options (add suffix):

Coiled Cord is available only with **2G** and **3G** mounting options. Change **2G** to **2C** and **3G** to **3C**. (When a coiled cord is not specified, a straight cord is provided.)

- For Wrench Locking, add **WL**

5. Choose a Finish for your fixture:

Black (B) White (W) Silver (S)

Example: **SSL230 - WXB - 2G WL - 120 B**
FIGURE ACCESSORY CARTRIDGE FITTING WRENCH LOCKING VOLTAGE FINISH

Blue fields are optional. Leave blank if not required.

6. Don't forget your Accessories!

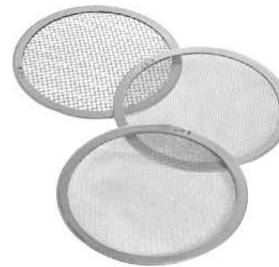
LSI features the widest range of accessories in the industry to help you modify the light's intensity, color, texture and pattern.

PAR30S LED LAMPS

Watts	Spread	CBCP	
18.5	9°	18500	SP30S-18-09D-930-03
18.5	25°	5400	SP30S-18-25D-930-03
18.5	36°	2500	SP30S-18-36D-930-03
18.5	60°	1100	SP30S-18-60D-930-03

PAR30 INCANDESCENT LAMPS

Watts	Spread	CBCP	
50	9°	13000	50PAR30/HIR/SP9
50	25°	2700	50PAR30/HIR/FL25
50	35°	1500	50PAR30/HIR/FL35
75	10°	13000	75PAR30/H/SP10
75	25°	3100	75PAR30/H/FL25
75	35°	2000	75PAR30/H/FL35

ACCESSORIES**Light Blocking Screens
A801S, A802S, A803S**

Stainless steel screens, used to reduce transmitted light without changing its color temperature.

Other accessories:**Louver A**

- Glass Color Filters A
- Cross Baffle SSL230
- Spread Lenses A990, A992, A995, A996
- Beam Softener A998
- **Backer Ring A**
- Color and Spread Gels A

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
 Rev. Date: 00/00/00

type

TA

page 2 of 9

SSL230 SERIES • LED PAR 30S PHOTOMETRIC DATA

SORAA LED SP30 Lamp

SP30S-18-09D-930-03

18.5 watt, 35000 hrs

Beam Spread to 50% of CBCP **9°**Center Beam Candlepower **18500**Color Temperature (Kelvin) **3000**

SORAA LED SP30 Lamp

SP30S-18-025D-930-03

18.5 watt, 35000 hrs

Beam Spread to 50% of CBCP **25°**Center Beam Candlepower **5400**Color Temperature (Kelvin) **3000**

SORAA LED SP30 Lamp

SP30S-18-36D-930-03

18.5 watt, 35000 hrs

Beam Spread to 50% of CBCP **36°**Center Beam Candlepower **2500**Color Temperature (Kelvin) **3000**

SORAA LED SP30 Lamp

SP30S-18-60D-930-03

18.5 watt, 35000 hrs

Beam Spread to 50% of CBCP **60°**Center Beam Candlepower **1100**Color Temperature (Kelvin) **3000**

Green Creative

4066 LED PAR30S

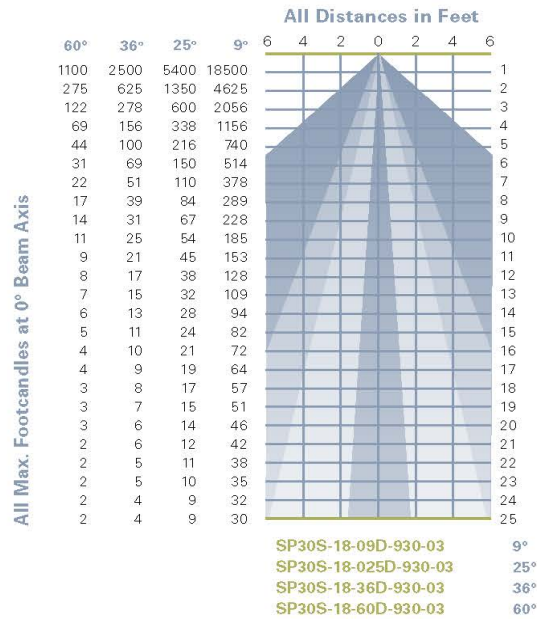
14.5 watt, 35000 hrs

Beam Spread to 50% of CBCP **25°**Center Beam Candlepower **2910**Color Temperature (Kelvin) **2700**

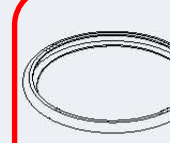
Green Creative

40661 LED PAR30S

14.5 watt, 35000 hrs

Beam Spread to 50% of CBCP **40°**Center Beam Candlepower **1400**Color Temperature (Kelvin) **2700**

SSL230 SERIES • ACCESSORIES

 SPREAD LENSES AND BEAM SOFTENER <table border="1"> <thead> <tr> <th>No.</th> <th>Description</th> <th>% of Light Transmission</th> </tr> </thead> <tbody> <tr> <td>A990</td> <td>Spread Lens/Clear</td> <td>83 (5°X 50°)</td> </tr> <tr> <td>A992</td> <td>Spread Lens/Clear</td> <td>85 (5°X 30°)</td> </tr> <tr> <td>A995</td> <td>Spread Lens/Clear</td> <td>83 (50°X 50°)</td> </tr> <tr> <td>A996</td> <td>Spread Lens/Clear</td> <td>86 (45°X 50°)</td> </tr> <tr> <td>A998</td> <td>Beam Softener/Clear</td> <td>80 (45°X 45°)</td> </tr> </tbody> </table>	No.	Description	% of Light Transmission	A990	Spread Lens/Clear	83 (5°X 50°)	A992	Spread Lens/Clear	85 (5°X 30°)	A995	Spread Lens/Clear	83 (50°X 50°)	A996	Spread Lens/Clear	86 (45°X 50°)	A998	Beam Softener/Clear	80 (45°X 45°)	 1' LIGHT BLOCKING SCREENS A Stainless steel mesh screens used alone or in combinations will block from approximately 20% to 90% of the transmitted light without changing color temperature of the light <table border="1"> <thead> <tr> <th>No.</th> <th>% of Light Blocked</th> </tr> </thead> <tbody> <tr> <td>A801S</td> <td>20</td> </tr> <tr> <td>A802S</td> <td>30</td> </tr> <tr> <td>A803S</td> <td>40</td> </tr> </tbody> </table>	No.	% of Light Blocked	A801S	20	A802S	30	A803S	40
No.	Description	% of Light Transmission																									
A990	Spread Lens/Clear	83 (5°X 50°)																									
A992	Spread Lens/Clear	85 (5°X 30°)																									
A995	Spread Lens/Clear	83 (50°X 50°)																									
A996	Spread Lens/Clear	86 (45°X 50°)																									
A998	Beam Softener/Clear	80 (45°X 45°)																									
No.	% of Light Blocked																										
A801S	20																										
A802S	30																										
A803S	40																										
 LOUVER HEX A 1/8" thick Hexcell black metal louver used for thin profile.	 BACKER RING A Stainless steel ring to hold gel when no other size A accessories is being used.																										

1. Figures vary based upon LED Module/Optic being used and relationship of screen(s) to LED Module/Optic and to each other.

SSL230 SERIES · GELS for LED Use Only

As the foremost innovator in accent lighting, LSI offers a complete range of pre-cut Gels to modify the color and distribution of light.



SPREAD GELS

Size: A (89 mm diameter)	Spread Gel
GELL1-A	1° Spread Gel
GELL5-A	5° Spread Gel
GELL10-A	10° Spread Gel
GELL20-A	20° Spread Gel
GELL30-A	30° Spread Gel
GELL40-A	40° Spread Gel
GELL60-A	60° Spread Gel
GELL80-A	80° Spread Gel
GELL30B5-A	30° by 5° Spread Gel
GELL40B2-A	40° by 0.2° Spread Gel
GELL60B1-A	60° by 1° Spread Gel
GELL60B10-A	60° by 10° Spread Gel
GELL75B45-A	5° by 45° Spread Gel
GELL90B60-A	90° by 60° Spread Gel
GELR101-A	Beam Softener

COLOR GELS

Size: A (89 mm diameter)	Gel Color	Size: A (89 mm diameter)	Gel Color
GELR7-A	Pale Yellow	GELR320-A	Half Blue
GELR12-A	Straw	GELR331-A	Shell Pink
GELR13-A	Straw Tint	GELR383-A	Sapphire Blue
GELR14-A	Medium Straw	GELR397-A	Pale Grey
GELR21-A	Golden Amber	GELR2001-A	Storaro Red
GELR25-A	Orange Red	GELR2004-A	Storaro Green
GELR26-A	Light Red	GELR2009-A	Storaro Violet
GELR27-A	Medium Red	GELR3202-A	Full Blue
GELR57-A	Lavender	GELR3206-A	Third Blue
GELR71-A	Sea Blue	GELR3216-A	Eighth Blue (Boosts 3200K to 3300K)
GELR72-A	Azure Blue	GELR3318-A	Tough 1/8 Minusgreen
GELR91-A	Primary Green	GELR3410-A	Roscosun (1/8 CTO) (Reduces 5600K to 4900K)
GELR97-A	Light Grey	GELR3441-A	Full Straw (CTS)
GELR98-A	Medium Grey	GELR3443-A	Quarter Straw (CTS)
GELR101-A	Light Frost	GELR4330-A	CalColor 30 Cyan
GELR104-A	Tough Silk	GELR4415-A	CalColor 15 Green
GELR119-A	Lt. Hamburg Frost	GELR4490-A	CalColor 90 Green
GELR121-A	Blue Diffusion	GELR4860-A	CalColor 60 Pink
GELR305-A	Rose Gold	GELR4890-A	CalColor 90 Pink
GELR312-A	Canary	GELR4930-A	CalColor 30 Lavender

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

TA

page 5 of 9

COLOR MEDIA

COLOR FILTERS

As the foremost innovator in accent lighting, LSI offers a complete range of permanent fade-free glass color filters, which are available in nine stock diameters. All glass color filters are rimmed in a seamless aluminum ring and are slotted for heat expansion.



Size	Diameter	LSI Fixture Series	Special Glass Color Filters	No.	Color	% of Light Transmission
AAA	2 3/8"	LumeLEX® 2020/2030/2031/2038, SSLCX16, SSL260, LumeLEX MAR-S	LSI will fabricate, on special order, glass color filters in most sizes and shapes.	902	Medium Pink	36
AA	3"	LumeLEX® 2024 (with LX2024-Holder or LX2024-Barndoor), LumeLEX® 2026, LumeLEX® 2044, LumeLEX 2048	FS4 — Color Filter Samples To facilitate selection of glass color filters, LSI supplies a complete set of 1 3/4" X 1 3/4" labeled glass and dichroic samples in a handy carrying case.	903	Deep Pink	37
A	3 1/2"	LumeLEX® 2060, SSL230, SSLCX30, SSLGR30CL, SSLGR36		904	Flesh Pink	73
B	4 1/4"	LumeLEX® MAR-L		906	Pale Lavender	14
C	4 3/4"	LumeLEX® 2084, LumeLEX® 2088, SSL238, SSLCX36, SSLCX38, SSLGR38CL		907	Surprise Pink	19
				908	Lilac	21
				910	Warm Red	10
				911	Strawberry	6
				912	Ruby	4
				913	Magenta	1
				914	Light Amethyst	25
				915	Medium Amethyst	16
				916	Deep Amethyst	4
				917	Olive	18
				918	Light Green	68
				920	Medium Green	25
				921	Deep Green	7
				922	Silver green	65
				923	Yellow Green	49
				924	Emerald Green	12
				925	Light Turquoise	68
				926	Medium Turquoise	40
				927	Deep Turquoise	17
				928	Light Blue	34
				930	Medium Blue	3
				932	Daylight	59
				933	Gene Moore Blue	18
				936	Grey	56
				937	Light Blue Green	17
				939	Light Amber	68
				940	Medium Amber	48
				941	Deep Amber	43
				942	Straw	78
				943	Gold	87
				944	Canary Yellow	84
				945	Lemon	81
				946	Pumpkin	32
				947	Tangerine	20
				948	Orange	23
				949	Pink Gold	54
				950	Bronze	48
				951	Brass	11
				952	Autumn Tan	11
				953	Leaf Brown	19
				954	Butter Pecan	3
				955	Toasted Almond	1

Notes:

1. Values given are approximate due to slight variations in glass color and thickness.

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

TA

page 6 of 9

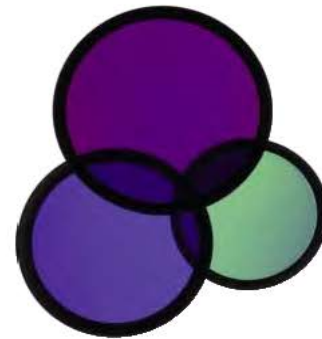
COLOR MEDIA

DICHROIC COLOR FILTERS

In addition to our complete line of glass color filters, LSI now offers dichroic glass color filters that achieve purer, more saturated, richer color by selective wavelength transmission. Since these filters reflect rather than absorb the unwanted color wavelengths, a higher intensity of colored light can be obtained with fewer or lower wattage fixtures. In addition, this selective transmission allows for very accurate color matching from filter to filter.

All standard LSI filter sizes are available in a wide palette of well chosen dichroic colors that can be used with all LSI fixtures that accept accessories.

LSI dichroic glass color filters have the added benefit of being rimmed for extra durability to allow for frequent usage without fear of breakage or edge chipping.



Size	Diameter	LSI Fixture Series	Technical Data	No.	Color	% of Light Transmission
AAA	2 3/8"	LumeLEX® 2020/2030/2031/2038, SSLCX16, SSL260, LumeLEX MAR-S	Dichroic color filters are created in a vacuum chamber by multi-layer vapor deposits of different minerals onto low expansion, chemically resistant Borosilicate glass.	2001	Light Pink	69
AA	3"	LumeLEX® 2024 (with LX2024 Holder or LX2024-Barndoor), LumeLEX® 2026, LumeLEX® 2044, LumeLEX 2048	Deposits are made in alternating layers of varying microscopic thickness which allow very narrow color wavelengths to be selectively transmitted and all other wavelengths to be reflected.	2002	Medium Pink	43
A	3 1/2"	LumeLEX® 2060, SSL230, SSLCX30, SSLGR30CL, SSLGR36	LSI does not recommend using dichroic color filters with lamps or fixtures that have beam spreads greater than 40° because a secondary color aura is created by the wide angular transmitted wavelengths that are different than the desired color wavelength.	2003	Hot Pink	11
B	4 1/4"	LumeLEX® MAR-L	Since there is mainly transmission and reflection of the color wavelengths by the dichroic filter and very little absorption, the dichroic filter can be used with many high temperature lights that normally would not accept color filters.	2004	Pale Pink	55
C	4 3/4"	LumeLEX® 2084, LumeLEX® 2088, SSLCX38, SSLGR38CL		2010	Deep Magenta	29
				2011	Lavender	24
				2012	Vivid Magenta	31
				2013	Lavender Accent	48
				2014	Lilac	37
				2015	Purple Fusion	12
				2020	Sky Blue	39
				2021	Sea Blue	39
				2022	Cyan	33
				2023	Light Blue Green	30
				2024	Primary Blue	24
				2025	Medium Red Blue	15
				2026	Deep Purple	16
				2027	Peacock Blue	53
				2028	Mediterranean Blue	20
				2029	Boost Blue	51
				2040	Light Yellow Green	64
				2041	Fern Green	47
				2042	Turquoise	35
				2043	Primary Green	31
				2044	Industrial Green	64
				2050	Yellow	80
				2051	Amber	71
				2052	Amber Blush	38
				2053	Bastard Amber	71
				2054	Goldenrod	63
				2055	Bright Straw	56
				2060	Medium Orange	51
				2061	Orange	44
				2070	Flame Red	27
				2071	Primary Red	25

Special Glass Color Filters

LSI will fabricate, on special order, dichroic glass color filters in most sizes and shapes not exceeding a 13" diameter circle overall.

FS4 — Color Filter Samples

To facilitate selection of glass color filters, LSI supplies a complete set of 1 3/4" X 1 3/4" labeled glass and dichroic samples in a handy carrying case.

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

TA

page 7 of 9



PAR30L 18.5W

OUTPUT RANGE: VIVID SERIES	930 - 1000 lumen
OUTPUT RANGE: BRILLIANT SERIES	1190 - 1280 lumen
BEAM ANGLE RANGE	9°, 25°, 36°, 60°
COLOR TEMPERATURE RANGE	2700K, 3000K
APPLICATION	Halogen replacement for indoor & outdoor applications



POINT SOURCE OPTICS

Exceptional beam control enables unique 9° narrow spot and smooth uniform beams

Single light source, single crisp shadow

VP₃ VIVID COLOR AND VP₃ NATURAL WHITE

VIVID series provides accurate color rendering across the visible spectrum from 400nm to 700nm, with CRI/95, R9/95, Rf/90, Rg/100

Whiteness rendering matches or exceeds that of halogen and incandescent sources at 2700K and 3000K

ENERGY EFFICIENCY AND LONG LIFE

85% more energy efficient than standard halogen lamps

Typical payback of one year or less

Rated lifetime to L70: 35,000hrs

Warranty: 3yrs or 25,000hrs whichever comes first

Detailed warranty information available at soraal.com/resources/legal

CERTIFICATIONS

RoHS, CE, UL/CUL, FCC Title 47 Part 15B



HIGHLY COMPATIBLE

Narrow spot compatible with Soraa SNAP System accessories

Thermally and geometrically compatible with standard fixtures and suitable for damp locations

Suitable for fully enclosed fixtures. Can be used with front glass cover

Works with trailing edge and leading edge phase cut dimmers (see www.soraal.com/resources)

INTENDED USE AND APPLICATIONS

Intended for use in PAR30L compatible recessed downlights, track lighting and other indoor and outdoor applications

Soraa lamps are designed to safely turn down in any thermal environment not conducive to minimum airflow or proper ventilation

GENERAL SPECIFICATIONS

Form Factor	Operating Temperature	Electrical	Dimming and Flicker
Width: 96mm (3.78")	Minimum: -40°C (ambient)	Wattage: 18.5W	Dimmable to <10%
Height: 113mm (4.45")	Typical: 70°C - 80°C (base)	Power factor: 0.95	Flicker Index: <0.1
Weight: 295g	Maximum: 90°C (base)	Voltage: 120V +/- 12V	Percent Flicker: 28%*
		Frequency: 50/60Hz	

* These Soraa lamps are certified to California's demanding JA8 standard, which requires <30% flicker

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

TA

page 8 of 9

SPECIFICATIONS BY MODEL NUMBER* SORAA LED PAR30L 18.5W

Model #	Product Code	CCT (K)	Beam Angle	Field Angle	CBCP (Cd)	Halogen Equivalent	Total Flux (Lm)	Efficacy (Lm/W)	McA	JA8-2016	SNAP
VIVID SERIES											
SP30L-18-09D-927-03	00763	2700	9	16	17200	100	930	50	3	YES	YES
SP30L-18-25D-927-03	00765	2700	25	40	5020	100	930	50	3	YES	-
SP30L-18-36D-927-03	00767	2700	36	60	2320	100	930	50	3	YES	-
SP30L-18-60D-927-03	00769	2700	60	90	1020	100	930	50	3	YES	-
SP30L-18-09D-930-03	00779	3000	9	16	18500	100	1000	54	3	YES	YES
SP30L-18-25D-930-03	00781	3000	25	40	5400	100	1000	54	3	YES	-
SP30L-18-36D-930-03	00783	3000	36	60	2500	100	1000	54	3	YES	-
SP30L-18-60D-930-03	00785	3000	60	90	1100	100	1000	54	3	YES	-
BRILLIANT SERIES											
SP30L-18-09D-827-03	00771	2700	9	16	22000	120	1190	64	3	NA	YES
SP30L-18-25D-827-03	00773	2700	25	40	6420	120	1190	64	3	NA	-
SP30L-18-36D-827-03	00775	2700	36	60	2960	120	1190	64	3	NA	-
SP30L-18-60D-827-03	00777	2700	60	90	1300	120	1190	64	3	NA	-
SP30L-18-09D-830-03	00787	3000	9	16	23680	120	1280	69	3	NA	YES
SP30L-18-25D-830-03	00789	3000	25	40	6900	120	1280	69	3	NA	-
SP30L-18-36D-830-03	00791	3000	36	60	3200	120	1280	69	3	NA	-
SP30L-18-60D-830-03	00793	3000	60	90	1400	120	1280	69	3	NA	-

CCT: Correlated Color Temperature **McA**: White Point Accuracy in McA step **SNAP**: SORAA SNAP System Compatible

*Specifications are at stable warm operating conditions (25°C ambient)

Catalogue #: SSL230-NXB-00-120B + LOUVER AB + BACKER RING AB

Accessories – Color (gels) and Spread lenses TBD during Shop drawing review

Lamp: Soraal: SP30L-18-09D-830-03

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/09
Rev. Date: 00/00/00

type

TA

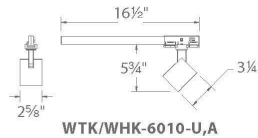
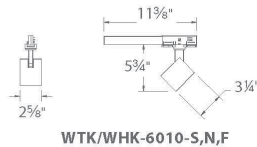
page 9 of 9

LUCIO – model: LED 6010

W Track System Luminaires

WAC LIGHTING

Responsible Lighting®



Fixture Type:

Catalog Number:

Project:

Location:

PRODUCT DESCRIPTION

Museum-quality LED luminaire with high performance optics.

FEATURES

- Recessed driver hidden in track
- Accommodates up to 1 lens and 1 glare control accessory
- 365° horizontal aiming and 90° indexed vertical aiming
- Integral selector to choose between independently controllable track circuits
- CBCP intensive ultra spot, 6010U
- Asymmetrical beam distribution, 6010A
- 50,000 rated life
- 5 year warranty

SPECIFICATIONS

Construction: Die-cast aluminum body with regressed driver.

Input: 120 VAC, 277VAC 50/60Hz

Power: 10W

Light Source: High output COB LED

Dimming: 100%-5% Electronic Low Voltage (ELV)

Standards: UL & cUL Dry Location Listed

Finish: Electrostatically powder coated White, Black, Platinum

Track	Model	Beam	Lumens @ 830	CBCP @ 830	Color Temp	CRI	Finish
		U 6°	620	37,915	827 2700K	85	
		S 18°	910	4,845	830 3000K	85	
		N 25°	890	3,445	835 3500K	85	BK Black
		F 35°	910	2,230	840 4000K	85	PT Platinum
		A ASY	555	N/A	927 2700K	90	WT White
					930 3000K	90	

WTK-6010 - - -

Example: WTK-6010N-930-WT

REPLACEMENT OPTICS

'U' and 'A' are dedicated optics

18°	REF-50BL10-S
25°	REF-50BL10-N
35°	REF-50BL10-F

Accommodates one lens and one glare control accessory. 'U' and 'A' beam fixtures accept one glare control accessory.

LENS ACCESSORIES

Amber	LENS-16-AMB	Yellow	LENS-16-YEL
Blue	LENS-16-BLU	Frosted	LENS-16-FR
Green	LENS-16-GRN	Spread	LENS-16-SPR
Red	LENS-16-RED	Beam Elongating	LENS-16-BEL

GLARE CONTROL ACCESSORIES

	LENS-16P-CRL-BK	
Cross Louver	LENS-16P-CRL-PT	
	LENS-16P-CRL-WT	
Honey Comb Louver	LENS-16-HCM	
		Snoot
		LENS-16-SNOOT-BK
		LENS-16-SNOOT-PT
		LENS-16-SNOOT-WT

waclighting.com
Phone (800) 526.2588
Fax (800) 526.2585

Headquarters/Eastern Distribution Center
44 Harbor Park Drive
Port Washington, NY 11050

Central Distribution Center
1600 Distribution Ct
Lithia Springs, GA 30122

Western Distribution Center
1750 Archibald Avenue
Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. JUN 2017

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

TB

page 1 of 2

WAC LIGHTING

Responsible Lighting®

FIXTURE PERFORMANCE

Model #	Beam	Color Temp	Lumens	CBCP	CRI
WTK-6010U-827 WHK-6010U-827	6°	2700K	550	35,165	85
WTK-6010U-830 WHK-6010U-830		3000K	620	37,915	85
WTK-6010U-835 WHK-6010U-835		3500K	610	38,970	85
WTK-6010U-840 WHK-6010U-840		4000K	620	39,695	85
WTK-6010U-927 WHK-6010U-927		2700K	485	31,045	90
WTK-6010U-930 WHK-6010U-930		3000K	495	31,850	90

Model #	Beam	Color Temp	Lumens	CBCP	CRI
WTK-6010S-827 WHK-6010S-827	18°	2700K	865	4,615	85
WTK-6010S-830 WHK-6010S-830		3000K	910	4,845	85
WTK-6010S-835 WHK-6010S-835		3500K	930	5,015	85
WTK-6010S-840 WHK-6010S-840		4000K	985	5,250	85
WTK-6010S-927 WHK-6010S-927		2700K	715	3,845	90
WTK-6010S-930 WHK-6010S-930		3000K	760	4,285	90

Model #	Beam	Color Temp	Lumens	CBCP	CRI
WTK-6010N-827 WHK-6010N-827	25°	2700K	845	3,285	85
WTK-6010N-830 WHK-6010N-830		3000K	890	3,445	85
WTK-6010N-835 WHK-6010N-835		3500K	900	3,525	85
WTK-6010N-840 WHK-6010N-840		4000K	960	3,760	85
WTK-6010N-927 WHK-6010N-927		2700K	700	2,720	90
WTK-6010N-930 WHK-6010N-930		3000K	735	2,945	90

Model #	Beam	Color Temp	Lumens	CBCP	CRI
WTK-6010F-827 WHK-6010F-827	35°	2700K	800	1,850	85
WTK-6010F-830 WHK-6010F-830		3000K	910	2,230	85
WTK-6010F-835 WHK-6010F-835		3500K	870	2,010	85
WTK-6010F-840 WHK-6010F-840		4000K	925	2,130	85
WTK-6010F-927 WHK-6010F-927		2700K	680	1,565	90
WTK-6010F-930 WHK-6010F-930		3000K	700	1,640	90

Model #	Beam	Color Temp	Lumens	CBCP	CRI
WTK-6010A-827 WHK-6010A-827	ASY	2700K	515	N/A	85
WTK-6010A-830 WHK-6010A-830		3000K	555		85
WTK-6010A-835 WHK-6010A-835		3500K	570		85
WTK-6010A-840 WHK-6010A-840		4000K	580		85
WTK-6010A-927 WHK-6010A-927		2700K	450		90
WTK-6010A-930 WHK-6010A-930		3000K	465		90

Catalogue #: WTK-6010-N-830-BK

Lens Accessories: TBD

Glare Accessories: LENS-16-HCM

Lamp: LED by Manufacturer

wacighting.com
Phone (800) 526.2588
Fax (800) 526.2585

Headquarters/Eastern Distribution Center
44 Harbor Park Drive
Port Washington, NY 11050

Central Distribution Center
1600 Distribution Ct
Lithia Springs, GA 30122

Western Distribution Center
1750 Archibald Avenue
Ontario, CA 91760

WAC Lighting retains the right to modify the design of our products at any time as part of the company's continuous improvement program. JUN 2017

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

TB

page 2 of 2

ENVIRONMENTALLY FRIENDLY, ENERGY EFFICIENT

- Lumen packages suitable for ceiling heights ranging from 8' to over 50'
- Efficacies up to 124 lm/w
- Superior-quality white LED light output using Chip on Board technology
- No harmful ultraviolet or infrared wavelengths • No lead or mercury

PRODUCT SPECIFICATIONS

Atrius™ - Ready Product: Select models of the L-series product line deliver valuable data and connectivity to the Atrius IoT location based platform services. For more information, please refer to www.acuitybrands.com/Atrius.

OPTICS

Hyperbolic Reflector: Unique hyperbolic shape optimized for small, directional LED source, maximizes fixture efficiency while reducing lamp image and aperture brightness

• Geometry of hyperbolic curve provides unique aperture appearance and smoother light distribution

Parabolic Cone/Lens: Computer-optimized parabolic cone with frosted convex lens regressed into cone provides uniform distribution with no striations

Baffle: White or black painted deep multi-groove aluminum baffle insert with integral white painted flange and frosted convex lens

Wallwash Cone/Lens: Computer-optimized trim with integral wall wash kicker and frosted convex lens regressed into cone provides uniform distribution with no striations

ELECTRICAL

LED Light Engine: Compact light source delivers uniform illumination without pixilation, enabling excellent beam control • 2SDCM (5000K within 3SDCM) • 80, 90 & 97 CRI

• Light engine mounts directly to heat sink and is easily replaceable

Passive Cooling: Cast aluminum heat sink integrated directly with housing provides superior thermal management to ensure the long life of LED

LED Driver: Power factor >0.9

Dimming: Dimmable via 0-10V protocol standard • Optional drivers available for use with eldoLED, Lutron EcoSystem, 2-wire dimmers, DMX, or DALI • For a list of compatible dimmers, see [LED-DIM](#).

J7.2.1 G4



800 TO 5500 LUMEN
6" LED CYLINDER

HYPERBOLIC / PARABOLIC / WALLWASH / OPEN APERTURE
LC6 SERIES

Type	Cat. No.
Project:	
Notes:	

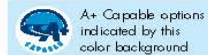
Life: Rated for 60,000 hours at 70% lumen maintenance
• Available with optional Lumen Depreciation Indicator, LDI option (U.S. Patent No. 9,119,269)

Emergency Battery Pack (Optional) output: Provides a minimum of 600 (BR), or 1000 (HBR) lumens for a minimum duration of 90 minutes • Remote mounted, field installed • BR option is CEC Title 20 compliant

Warranty: 5 years when used in accordance with manufacturing guidelines.

Specifications subject to change without notice.

Design2Ship Quick Ship Programs:
Options in green text qualify for Design2Ship
— 5 business days from order entry to ship. Refer to Design2Ship Brochure for complete program details.
Maximum Order Quantity: 50 units.



SURFACE MOUNT



PENDANT MOUNT



WALL MOUNT



CABLE MOUNT

ORDERING INFORMATION Complete Catalog # Example Includes (Rough-In, option, reflector, accessory) Ordering Example: LC6P 08UM 27K MVOLT B G4 80CRI ZT LDI HW CS PF

ROUGH-IN

Series	Mounting Options	Lumen Package	Color Temperature	Voltage	Cylinder Color	Generation	CRI	Driver	Rough-In Options
LC6 6" L-Series Cylinder	S Surface p Recessed	08LM 800 Lumens	27K 2700K	120	B Black	G4	80CRI	DALI	F ^{AS} LDI
	W Wall C Cable	13LM 1300 Lumens	30K 3000K	277	W White		90CRI	DMXR ²	BR ^{15,12}
		15LM 1500 Lumens	35K 3500K	347	S Silver		97CRI ¹	EDAB ^{3,7}	HBR ^{23,6}
		17LM 1700 Lumens	40K 4000K	MVOLT (120-277)				EDXB ^{2,4,6,10}	NL ¹¹
		23LM 2300 Lumens	50K 5000K					EDXB ^{2,4,6,10}	NLER ¹¹
		28LM 2800 Lumens						EZ10 ^{5,7}	NLTAIR2 ^{2,11,16}
		33LM 3300 Lumens						EZ10 ^{5,7}	NLTAIR2 ^{2,11,16}
		40LM 4000 Lumens						EZ10 ^{5,7}	AE1BN ^{17,18}
		45LM 4500 Lumens						EZ10 ^{5,7}	AE2CD ^{17,18}
		50LM 5000 Lumens						EZ10 ^{5,7}	
		55LM 5500 Lumens						EZ10 ^{5,7}	
								FD ^{4,9}	
								FDL ^{4,5,16}	
								PD ^{5,16}	
								ZT	
								GZ17	



1300 S. Wolf Road • Des Plaines, IL 60018 • Phone (847) 827-9880 • Fax (847) 827-2925 • Visit us at www.acuitybrands.com/indy
Printed in U.S.A. ©2017-2018 Acuity Brands Lighting, Inc. Rev 11/01/18

1 of 10

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

WA

REFLECTOR To order reflector separately, use "L6" prefix before reflector option values. Ex: L6 HW CS PF

Trim Style				Finish				Trim Options	
BAE13	Baffle	P	Parabolic	BD	Black Diffuse	CD	Clear Diffuse	PTD	Pewter Diffuse
HM	Hyperbolic Medium	WC	Corner Wall Wash	BL	Black, White Flange (Baffle only)	CS	Clear Specular	PTS	Pewter Specular
HN	Hyperbolic Narrow	WD	Double Wall Wash	BS	Black Specular	CSS	Clear Semi-Specular	WH	White, White Flange
HW	Hyperbolic Wide	WS	Single Wall Wash	GD	Gold Diffuse	GS	Gold Specular	WTD	Wheat Diffuse
HWS	Hyperbolic Single Wall Wash			BZD	Bronze Diffuse			WTS	Wheat Specular
				BZS	Bronze Specular				
									PF15 White Flange

MOUNTING HARDWARE Add mounting hardware to the end of the complete catalog #: EX: LC6P 08LM MVCLT B G4 80CRI BR ZT HW CS PF STEM 18IN BLPEN PBR

Pendant Mount	Length	Color	Options
PSTEM	18IN	WPN	PBR
Pendant Stem for use with LC6P only	18"	White	Battery Pack
	24IN	BLPEN	PHBR
	24"	Black	High Lumen Battery Pack
	36IN	SPEN	PDMXR
	36"	Silver	DMX/RDM Driver

Cable Mount	Length	Color
CSTEM	18IN	WCAB
Cable Stem for use with LC6C only	18"	White with White Cord
	48IN	BLCAB
	48"	Black with Black Cord
	120IN	SCAB
	120"	Silver with Black Cord

Ordering Notes

- 1 2700K & 3000K only.
- 2 Not available with 347V.
- 3 Not compatible with LDI.
- 4 120V only.
- 5 Specify voltage.
- 6 Not compatible with cable mount.
- 7 Not available for 4500 lumens and up.
- 8 Not available for 3300 lumens and up.
- 9 Not available for 5500 lumens.
- 10 Not available for 4000 lumens and up.
- 11 Only compatible with EZ1, GZ1, EZB, EZ10 drivers.
- 12 Can not be dimmed when used with cable mount (CSTEM).
- 13 Only available with BL or WH trim finish; white flange standard.
- 14 Not compatible with BR or HBR.
- 15 PF not required when specifying BL or WH finishes; white flange standard.
- 16 Not compatible with BR, HBR, or LDI.
- 17 See Atrius notes in following table for compatibility with other options.
- 18 NLTAIR2, NLTAIRER2, AE1BN, AE2CD not recommended for metal ceiling installations.

Atrius Notes

AE1BN

Available for Cable mount only.
Not available with 347.
Only compatible with ZT and GZ1 drivers.
BR, HBR, NL, NLER, NLTAIR2, NLTAIRER2 not compatible with AE1BN.
Recommended ceiling height of 30' and under; not intended for use on ceilings greater than 40' or metal ceiling installations.

AE2CD

Available for Pendant, Surface, and Wall mount, max 4000 lumens.
Not available with 347.
Only compatible with EZ1 driver.
BR, HBR, NL, NLER, NLTAIR2, NLTAIRER2 not compatible with AE2CD.
Recommended ceiling height of 30' and under; not intended for use on ceilings greater than 40' or metal ceiling installations.

The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by Acuity Brands Lighting is under license.



1300 S. Wolf Road • Des Plaines, IL 60018 • Phone (847) 827-9880 • Fax (847) 827-2925 • Visit us at www.acuitybrands.com/indy
Printed in U.S.A. ©2017-2018 Acuity Brands Lighting, Inc. Rev 11/01/18

2 of 10

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

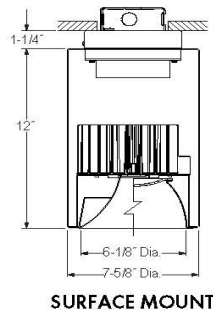
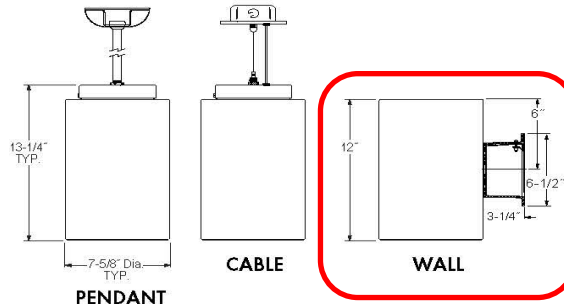
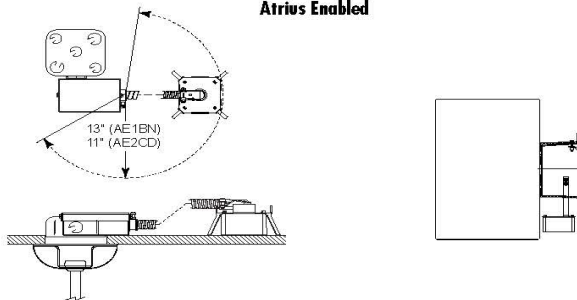
WA

page 2 of 4

PRODUCT SPECIFICATIONS (cont.)**MECHANICAL**

Housing: One piece heavy gauge aluminum with white, black or silver baked textured powder coat finish.

Mounting: Available for surface, pendant, cable or wall mounting • Pendant mounting features hang straight pendant mounting kits that allows for mounting on to sloped ceilings with an angle up to 35°

DIMENSIONS**MOUNTING DETAIL:****Atrius Enabled****ENERGY STAR® certified**

PRODUCT#	FIXTURE CONFIGURATIONS = ENERGY STAR
 MVOLT (120V-277V), 80 CRI LC6(M) (WW)LM (XX)K MVOLT G4 (YY)CRI (ZZ) (CC) ¹	Mounting Option: M = S, P, W, C Lumen Package: WW = 08 ¹ , 13 ¹ , 15, 17, 23, 28, 33, 40, 45, 50, 55 CCT: XX = 27, 30, 35, 40, 50 Voltage: MVOLT (120V-277V) CRI: YY = 80, 90, 97 Trim Type: ZZ = HN, HM, HW, P Trim Color/Finish: CC = CS, CSS, CD

¹ EDAB, EDXB, PD and FDL options are not ENERGY STAR® certified.

² Indicated lumen packages are not ENERGY STAR® certified with DMXK or DALL options when used with 277 volts.

LABELS AND LISTINGS

• UL & cUL listed for damp locations • RoHS compliant • EMI complies with FCC 47, Part 15, Class A • ENERGY STAR® certified, see table above for designated products • I.B.E.W. Union made • ARRA Compliant 



1300 S. Wolf Road • Des Plaines, IL 60018 • Phone (847) 827-9880 • Fax (847) 827-2925 • Visit us at www.acuitybrands.com/indy
 Printed in U.S.A. ©2017-2018 Acuity Brands Lighting, Inc. Rev 11/01/18

3 of 10

project: Lodgepole Visitor Center
 Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
 Rev. Date: 00/00/00

type

WA

page 3 of 4

ENGINEERING DATA											*Consult Factory
VOLTAGE											
120											
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500
CCT	2700K/3000K/3500K/4000K/5000K										
INPUT CURRENT	0.063	0.098	0.115	0.132	0.180	0.221	0.263	0.334	0.328	0.364	0.410
INPUT WATTAGE	7.53	11.74	13.66	15.82	21.52	26.46	31.62	40.14	39.41	43.54	49.08
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	6.42	5.19	4.61	3.86	5.09	5.46	4.43	4.53	6.03	6.03	6.23
POWER FACTOR	0.993	0.993	0.992	0.994	0.994	0.995	0.997	0.998	0.996	0.996	0.996
VOLTAGE											
277											
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500
CCT	2700K/3000K/3500K/4000K/5000K										
INPUT CURRENT	0.031	0.048	0.056	0.063	0.085	0.100	0.123	0.150	0.153	0.167	0.187
INPUT WATTAGE	7.87	11.84	13.81	15.89	21.65	26.19	31.83	39.68	39.74	43.80	49.02
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THD%	12.00	11.62	11.31	11.34	9.93	9.04	10.48	8.79	9.15	8.07	9.85
POWER FACTOR	0.904	0.885	0.887	0.907	0.918	0.943	0.932	0.953	0.934	0.943	0.944
VOLTAGE											
347											
LIGHT ENGINE LUMENS	800	1300	1500	1700	2300	2800	3300	4000	4500	5000	5500
CCT	2700K/3000K/3500K/4000K/5000K										
INPUT CURRENT	0.025	0.038	0.043	0.050	0.067	0.083	0.099	0.128	*	*	*
INPUT WATTAGE	8.59	12.99	14.91	17.15	23.20	28.54	34.05	44.12	*	*	*
INPUT FREQUENCY	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	*	*	*
THD%	13.05	11.53	10.41	9.69	7.79	7.26	6.54	5.77	*	*	*
POWER FACTOR	0.987	0.992	0.990	0.991	0.992	0.995	0.993	0.996	*	*	*

HYPERBOLIC																
DELIVERED LUMENS/LUMENS PER WATT (35K 80CRI)																
	800 35K		1300 35K		1500 35K		1700 35K		2300 35K		2800 35K		3300 35K		4000 35K	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
L6 HN CS	793	105.2	1322	112.6	1527	111.8	1739	109.9	2341	108.8	2822	106.7	3285	103.9	3994	99.5
L6 HN CSS	746	99.1	1244	106.0	1438	105.3	1637	103.5	2204	102.4	2657	100.4	3092	97.8	3759	93.7
L6 HN CD	685	91.0	1143	97.4	1321	96.7	1504	95.1	2024	94.1	2441	92.2	2841	89.8	3454	86.0
L6 HM CS	827	109.8	1379	117.4	1593	116.6	1814	114.6	2442	113.5	2944	111.3	3426	108.4	4166	103.8
L6 HM CSS	803	106.6	1339	114.1	1547	113.3	1762	111.4	2372	110.2	2859	108.1	3328	105.2	4046	100.8
L6 HM CD	710	94.3	1184	100.9	1368	100.2	1558	98.5	2097	97.5	2529	95.6	2943	93.1	3578	89.1
L6 HW CS	842	111.8	1404	119.6	1622	118.8	1847	116.8	2486	115.5	2998	113.3	3489	110.3	4242	105.7
L6 HW CSS	813	108.0	1356	115.5	1568	114.8	1785	112.8	2402	111.6	2897	109.5	3371	106.6	4099	102.1
L6 HW CD	745	99.0	1243	105.8	1436	105.1	1635	103.3	2201	102.3	2654	100.3	3088	97.7	3755	93.5

PARABOLIC																
DELIVERED LUMENS/LUMENS PER WATT (35K 80CRI)																
	800 35K		1300 35K		1500 35K		1700 35K		2300 35K		2800 35K		3300 35K		4000 35K	
TRIM	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW
L6 P CS	666	88.5	1111	94.7	1284	94.0	1462	92.4	1968	91.5	2373	89.7	2762	87.4	3358	83.7
L6 P CSS	643	85.4	1072	91.3	1239	90.7	1410	89.1	1898	88.2	2289	86.5	2664	84.2	3239	80.7
L6 P CD	585	77.7	975	83.1	1127	82.5	1283	81.1	1728	80.3	2083	78.7	2424	76.7	2947	73.4

BEAM SPREAD	
TRIM	DEGREE
L6 HN CS	16°
L6 HN CSS	19°
L6 HN CD	44°
L6 HM CS	53°
L6 HM CSS	53°
L6 HM CD	55°
L6 HW CS	71°
L6 HW CSS	71°
L6 HW CD	71°
L6 P CS	66°
L6 P CSS	63°
L6 P CD	72°
L6 BAF BL	72°

CCT MULTIPLIERS		
CCT	08LM-40LM	45LM-55LM
2700K	0.9	0.92
3000K	0.96	0.97
3500K	1	1
4000K	1.02	1.01
5000K	1.04	1.05

CRI MULTIPLIERS		
CRI	08LM-40LM	45LM-55LM
80CRI	1	1
90CRI	0.83	0.85
97CRI	0.80	0.77

Catalogue #: LC6-W-13LM-30K-120-B-G4-80CRI-FDL-HM-CS-PF

Lamp: by Manufacturer



1300 S. Wolf Road • Des Plaines, IL 60018 • Phone (847) 827-9880 • Fax (847) 827-2925 • Visit us at www.acuitybrands.com/indy
Printed in U.S.A. ©2017-2018 Acuity Brands Lighting, Inc. Rev 11/01/18

4 of 10

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

WA

page 4 of 4

To Order

To form a Catalog Number

S 104 - - - - -

1 2 3 4 5 6 7 8 9 10

Required Mounting Hangers

Required mounting hangers for X mount fixtures are ordered and priced separately. See installation sheets on website.

VCL, VCX, VDC, VDD or VDF required for mounting option X:

VC

36" = Cantilever, 36"

0 = U.S.

J = Canada

02 = Semigloss white

99 = Custom color

L = 12 and 17 inch fixtures

X = 24 inch fixtures

VD

2-1/4" (57mm)

0 = U.S.

J = Canada

02 = Semigloss white

99 = Custom color

C = 12 inch fixtures

D = 17 inch fixtures

F = 24 inch fixtures

VPC

Cluster pendant

1 9" O.D. alum. stem (17" & 24" fixtures only)

0 = No option

P = Nattatorium (pool)

F = Surface conduit feed

Q = Nattatorium w/ surface conduit feed

C = Canopy (±5°)

S = Pivot up to 45°

Length in inches (36" min. up to 120" max.)

02 = Semigloss white

99 = Custom color

1 = 1-way, 2 = 2-way

3 = 3-way, 4 = 4-way

Required Mounting Hangers

Required mounting hangers for X mount fixtures are ordered and priced separately. See installation sheets on website.

VCL, VCX, VDC, VDD or VDF required for mounting option X:

VC

36" = Cantilever, 36"

0 = U.S.

J = Canada

02 = Semigloss white

99 = Custom color

L = 12 and 17 inch fixtures

X = 24 inch fixtures

VD

2-1/4" (57mm)

0 = U.S.

J = Canada

02 = Semigloss white

99 = Custom color

C = 12 inch fixtures

D = 17 inch fixtures

F = 24 inch fixtures

VPC

Cluster pendant

1 9" O.D. alum. stem (17" & 24" fixtures only)

0 = No option

P = Nattatorium (pool)

F = Surface conduit feed

Q = Nattatorium w/ surface conduit feed

C = Canopy (±5°)

S = Pivot up to 45°

Length in inches (36" min. up to 120" max.)

02 = Semigloss white

99 = Custom color

1 = 1-way, 2 = 2-way

3 = 3-way, 4 = 4-way

7 Option (see Accessories Section for specifications)

V0 = Cutoff visor included, no other options

VX = Nattatorium (pool) visor

For modification not listed, include detailed description. Consult factory prior to specification.

Note: Cutoff visor included unless specified otherwise.

8 Destination Requirement

0 = UL listed or CSA certified for U.S.

J = UL listed or CSA certified for Canada

9 Color Temperature

830 = 3000K, 80+ CRI

927 = 2700K, 80+ CRI

930 = 3000K, 80+ CRI

935 = 3500K, 80+ CRI

936 = 3500K, 80+ CRI

940 = 4000K, 80+ CRI

Additional CCT and CRI options are available; consult factory.

10 Dimming**

00 = Non-dimming

TD = Tri-Dim forward phase, reverse phase or 0-10V dimming, 100-10% power on forward or reverse phase, 100%-1% on 0-10V, compatible controls by others

ZX = 0-10V analog dimming 120-277V input, dimming range 100%-5%, 0-10V controls by others

EL = eledLED SOLOdrive 120-277V input, dimming range 100%-0.1%, 0-10V controls by others.

**Dimming range refers to % power input, % light output will vary.

Refer to Driver Information document MA-1303

Accessories

Order separately. See Accessories Section for specifications.

AE V 000 = External vertical blade baffle, black

2 = 25° shielding

4 = 45°

C = 12 inch fixtures

D = 17 inch fixtures

F = 24 inch fixtures

elliptipar from The Lighting Quotient

114 Boston Post Road, West Haven, Connecticut 06516, USA

VOICE 203.931.4455 • FAX 203.931.4464 • thelightingquotient.com

1/19

...there is no equal

1 Source

S = Solid State (LED)

2 Style

104 = Large surface, integral driver

3 Length / Light Output / Power

ORDER CODE	LENGTH	LUMENS	INPUT WATTS	NUMBER OF LEDs	DRIVE CURRENT
L112	12"	3078	27	112	150mA
L224	17"	6156	54	224	150mA
M224	17"	11099	109	224	300mA
L336	24"	9236	81	336	150mA
M336	24"	17774	163	336	300mA

Based on 3500K, 80+CRI. [Click here](#) for scaled performance table.

4 Mounting

For use in nattatorium, consult factory.

Z = External yoke on wall plate

Y = External yoke with integral splice compartment

X = External yoke for use with cantilever or pendant (required mounting hangers for X mount ordered and priced separately)

Cluster pendant assemblies (each requires a VPC pendant, ordered and priced separately)

1 = One-way assembly, single housing

2 = Two-way assembly, two (2) housings at 180°

3 = Three-way assembly, three (3) housings at 120°

4 = Four-way assembly, four (4) housings at 90°

5 Finish

02 = Solid visor, semigloss white finish

99 = Custom RAL or computer matched color to be specified; consult sales representative

6 Voltage

M = 120-277V Universal voltage input

K = 347V input

project: Lodgepole Visitor Center

Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19

Rev. Date: 00/00/00

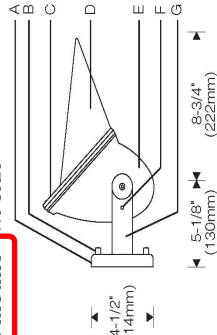
type

WB

page 1 of 2

Z Mount

1:10 Scale



Y Mount

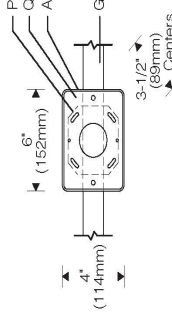
8" (203mm)



Catalogue #: S104-L224-Z1-99-M-V0-0-830-TD

Lamp: by Manufacturer

Mounting Plate (Z mount)



# of LEDs	Length	Mounting*
112	12-1/16" (306mm)	8-7/8" (225mm)
224	17-13/16" (452mm)	14-5/8" (370mm)
336	24-7/8" (632mm)	21-11/16" (550mm)

*Mounting dimensions shown for Y mount only.

Specifications

A Aluminum canopy (Z mount)	F Locking set screw	K Integral drivers	N Extruded aluminum housing
B Chrome cap nuts	G Aluminum yoke	L Integral splice compartment with conduit entry and removable cover (Y mount)	O Aluminum reveal plate (black)
C Milled extruded aluminum door frame w/ silicone gasket	H Conduit (by others)	M Micro-prismatic tempered glass lens	P Outlet box (by others)
D Solid cutoff visor (included)	J Field serviceable light engine with asymmetric optic aiming marks	Q Aluminum mounting plate	
E Die-cast end plates with aiming marks			

Optic Assembly:

Two-piece extruded aluminum heat sink housing and light engine. Exterior heat sink anodized for maximum emissivity. Precision extruded polymer refractive lens with optimized asymmetric distribution. Light engine may be removed for service or upgrade. Clear Tempered microprismatic glass lens. Stainless steel hardware.

Finish:

Painted surfaces – 6 stage pretreatment and electrostatically applied thermoset polyester powder coating for a durable abrasion, fade and corrosion resistant finish. Formed aluminum visor.

Extruded aluminum heat sink/housing, canopy, yoke, door frame and decorative end plates are finished in semigloss white. All luminaire hardware is stainless steel; mounting hardware is zinc or electroplated steel.

Mounting:

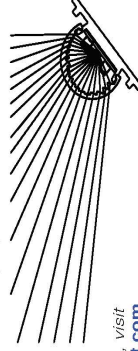
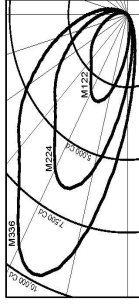
Z mount – wall plate mounts to recessed outlet box (by others). Canopy conceals mounting plate and hardware.

Y mount – surface mounted yoke attaches with 1/4-20 fasteners (by others) concealed under splice cover.

Performance

Precisely extruded acrylic lens produces an asymmetric distribution ideal for illuminating vertical surfaces evenly from top to bottom.

L85(10k) > 60,000 hrs @ 25°C per TM-21



For LM79 and photometric reports, visit thelightingquotient.com

elliptipar
...there is no equal

project: Lodgepole Visitor Center
Sequoia and Kings Canyon National Parks

Issue Date: 01/14/19
Rev. Date: 00/00/00

type

WB

page 2 of 2



ELECTRONIC EQUIPMENT & CUT SHEETS

Scene	EE Number	Associated EP	Components	Make	Model	Qty
All	EE-00.00-550	Audio Description	iBeacons	Kontakt	Double Battery Beacon	20
			Handheld Device	Apple	iPod Touch 128 GB	5
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
1	EE-01.02-500	EP-01.02-500 General Information Monitor	Media Player with Wifi module	Brightsign	HD1024	1
			40" Monitor	NEC	P404	1
			Wall Mounts	Chief	LSM1U	1
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
1	EE-01.04-505	EP-01.04-505 iNaturalist Monitor	Media Player with Wifi module	Brightsign	HD1024	1
			40" Monitor	NEC	P404	1
			Wall Mounts	Chief	LSM1U	2
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
2	EE-02.02-510	EP-02.02-510 Foothills Soundscape	Audio Player with Remote Volume control	Brightsign	HD1024	1
			Proximity Sensor	Museum Tech	BB200	1
			Speaker	JBL	Control 23-1L	1
			Amplification/Distribution	Altoona	AT-PA100-G2	
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
3	EE-03.01-515	EP-03.01-515 Montane Meadow Soundscape	Audio Player with Remote Volume control	Brightsign	HD1024	1
			Proximity Sensor	Museum Tech	BB200	1
			Speaker	JBL	Control 23-1L	1
			Amplification/Distribution	Altoona	AT-PA100-G2	
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
3	EE-03.02-520	EP-03.02-520 Bear Talk	Audio Player	Brightsign	HD1024	1
			Push Buttons	e-Switch	PV5-H24011	4
			Speaker	Peerless	PMT-	1

Scene	EE Number	Associated EP	Components	Make	Model	Qty
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
3	EE-03.04-525	EP-03.04-525 Cave Soundscape	Audio Player with Remote	Brightsign	HD1024	1
			Proximity Sensor	Museum Tech	BB200	1
			Speaker	JBL	Control 23-1L	1
			Amplification/Distribution	Altoona	AT-PA100-G2	
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
4	EE-04.01-530	EP-04.01-530 Subalpine Soundscape	Audio Player with Remote	Brightsign	HD1024	1
			Proximity Sensor	Museum Tech	BB200	1
			Speaker	JBL	Control 23-1L	1
			Amplification/Distribution	Altoona	AT-PA100-G2	
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
5	EE-05.01-535	EP-05.01-535 Alpine Soundscape	Audio Player with Remote	Brightsign	HD1024	1
			Proximity Sensor	Museum Tech	BB200	1
			Speaker	JBL	Control 23-1L	1
			Amplification/Distribution	Altoona	AT-PA100-G2	
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
5	EE-05.03-540	EP-05.03-540 Stories from the Summit	Audio Player	Brightsign	HD1024	1
			Push Buttons	e-Switch	PV5-H24011	4
			Speaker	Peerless	PMT-37N28AL01-04	1
			Wire and cabling as necessary for proper functionality of equipment	MISC		1

Scene	EE Number	Associated EP	Components	Make	Model	Qty
6	EE-06.02-545	EP-06.02-545 SPC Monitors	HD Media Player with Wifi	Brightsign	HD1024	1
			48" Monitor	NEC	P484	3
			Wall Mounts	Chief	LSM1U	3
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
6	EE-06.02-550	EP-06.02-550 Wilderness Videos	HD Media Player	Brightsign	HD1024	1
			40" Monitor	NEC	P404	1
			Wall Mount	Chief	LSM1U	1
			Soundbeam Directional Array	Dakota	MA-4	1
			Amplification/Distribution	Dakota	Focused Sound	1
			Wire and cabling as necessary for proper functionality of equipment	MISC		1
5	EE-06.03-555	EP-06.03-555 Wilderness Film Experience	HD Media Player	Brightsign	HD1024	1
			65" Monitor	Planar	SL6564K	1
			Wall Mount	Chief	LSM1U	1
			Soundbeam Directional Array	Brown Innovations	SB-40	6
			Push Buttons	e-Switch	PV5-H24011	6
			Amplification/Distribution	Brown Innovations	Myriad	1
			Wire and cabling as necessary for proper functionality of equipment	MISC		1

BRIGHTSIGN HD

AN UPDATED CLASSIC NOW WITH TRUE 4K. MAINSTREAM PERFORMANCE.

BrightSign HD models are ideal for mainstream 4Kp60, Full HD and HTML5 applications that require high reliability and ease of use. All models offer H.265 decoding, HTML5 rendering and Gigabit Ethernet. Robust interactive controls, live content features, BrightWall™ and Mosaic Mode make this set of players a perfect fit for a wide range of applications.



BrightSign HD224

Standard I/O Player

Enjoy flawless 4K and Full HD single video decoding, mainstream HTML5 performance and simultaneous playback from local, networked and streaming sources. Includes the standard I/O package of Gigabit Ethernet, GPIO, and analog/digital audio.

Price: \$350



BrightSign HD1024

Expanded I/O Player

All the features of the HD224 plus additional interactive options via USB 2.0 (type A), and serial ports to fully engage your audience.

Price: \$450

Features



4K60p single decode



1080p60 single decode



H.265



Mainstream HTML5



IP Streaming



BrightBeacon™



BrightWall™



AutoWall™



Zones



Interactive



Live Feeds



Geo-Fencing



Tagging



BrightSign App



Sign Preview



Remote Snapshot



B-Deploy



Digital Audio



Mosaic Mode

SPECIFICATIONS

MODEL	HD224	HD1024
VIDEO ENGINE DECODER		
True 4K@60p video decoding	X	X
Single 4K or 1080p60 video decoding	X	X
MEDIA FORMATS		
Video Codecs for 4K content: H.265/H.264	X	X
Video Containers for 4K H.265/H.264 content: .ts, .mov, .mp4	X	X
Video Codecs for Full HD: H.265, H.264(MPEG-4, Part 10), MPEG-2, MPEG-1	X	X
Video Containers for Full HD: .ts, .mpg, .vob, .mov, .mp4, .m2ts	X	X
Images: BMP, JPEG, PNG	X	X
Audio: MP2, MP3, AAC, and WAV (AC3 is passed through)	X	X
HTML5	X (Mainstream)	
DISPLAY RESOLUTIONS		
4K resolutions: 4096x2160, 3840x2160, 3840x600	X	X
Upscaling to: 3840x2160x24/25/29.97/30p	X	X
1920x1200, 1920x1080x24/25/29.97/30/50/59.94/60p, 1920x1080x50/59.94/60i, 1600x1200x60p, 1440x1050x60/75p, 1440x900x60/75p, 1360x768x60p, 1280x1024x60/75p, 1280x960x60p, 1280x800x60p/75p, 1280x768x60p, 1280x720x50/59.94/60p, 1024x768x60p, 800x600x60/75p, 720x576x50p/50i, 720x480x59.94/60p/60i, 640x480x60p	X	X
HARDWARE INTERFACES		
External micro SD Slot (SDHC and SDXC); SDHC storage up to 32GB SDXC storage up to 2TB	X	X
USB High Speed Host Port (also supports content updates)		X (Type A)
12-pin Phoenix GPIO port with 8 bi-directional GPIOs	X	X
3.5mm RS-232 Serial Port		X
3.5mm IR In/Out	X	X
3.5mm Audio Out (analog -or- SPDIF digital, non-simultaneous)	X	X
HDMI 2.0a Out	X	X
Ethernet	X (Gigabit)	
M.2 (E) Keyed Wi-Fi/Bluetooth Connector	X	X
Wi-Fi External Antenna Connector (optional)	X	X
Status LEDs	Power, Error, Busy, Update	
Reset and Service Buttons	X	X
Real Time Clock	X	X
FEATURES		
H.265 Decoding: smaller file sizes and lower bitrates than H.264	X	X
HTML5: hardware-accelerated engine that plays modular HTML assets flawlessly alongside high-bandwidth video	X (Mainstream)	
BrightBeacon™: 2-way Bluetooth/Beacon communication between mobile devices & signage (requires: wireless/Bluetooth module)	X	X

MODEL	HD224	HD1024
BrightWall™: synchronized playback across multiple displays	X	X
AutoWall™: embraces the power of HTML5 to create unique multimedia video walls	X	X
Zones: playback multiple content types on a single screen	X	X
Mosaic Mode: simultaneously play a multitude of smaller resolution videos that add up to the maximum video resolution of the player	X	X
IP Streaming: play streaming media	X	X
Interactivity: connect virtually any type of interactive device to a multitude of interactive ports	X (GPIO, UDP)	X (GPIO, USB, serial, UDP)
Live Feeds: Live Data, Live Text, MRSS, Twitter, Flickr, etc.	X	X
Tagging: BrightSign Network users can assign media and player tags for highly targeted content distribution	X	X
BrightSign App: update signs with an iOS device	X	X
Geo-Fencing: trigger playback based on location (requires USB dongle)		X
Sign Preview: preview presentation playback in BrightAuthor	X	X
Remote Snapshot: remotely view a snapshot image of the display's playback	X	X
Networking: update, manage and schedule your signage	X	X
B-deploy: A setup feature to deploy many players at once	X	X
Extended Thermal: supports ambient temperatures between 0° & 70° C at 90% max relative humidity, non-condensing	X	X
SOFTWARE		
Free BrightAuthor Software	X	X
BrightSign Networking Options	X	X
ACCESSORIES		
USB Button Pads		X
Wireless/Bluetooth Module	X	X
MicroSD Class 10 Cards (various capacities)	X	X
MISCELLANEOUS		
Dimensions (W x H x D)	159.9 x 22 x 144.2mm or 6.3 x 0.87 x 5.7 in	
Weight	12 oz	
Power	12V / 1.5A (18 Watts)	
Multi-Country Power & Regulatory Approvals	X	X
Built-in Wall Mounting Brackets	X	X
1 year warranty, parts and labor	X	X

Large Fusion Micro-Adjustable Fixed Wall Display Mount

LSM1U | Fusion Wall-Fixed Series (/products/chief/mounts/display/wall-fixed/fusion_wall-fixed)



Typically ships in
1 Day(s) (07/09/2018)

Login for Price

Chief upgraded fixed wall mounts based on installer feedback and direct observations of installers in the field. Many new features join Fusion favorites like Centerless shift, ControlZone leveling adjustment and ClickConnect Latching. New benefits included added stability, faster install, improved lateral shift, easier cable management and enhanced security.

Installer-inspired Fusion fixed mount solves top flat panel installation problems, offering flexible adjustments for large displays with a low-profile display mounting solution.

Features	
Specifications	
Certifications	UL Listed, OSHPD Approved, TÜV Certified
Color	Black
Lateral Shift	17.4" (441 mm)
Manual Height Adjustment	1" (25 mm)
Minimum Depth	2" (51 mm)
Mounting Pattern Compatibility (Universal Versions)	100 x 100 mm - 871 x 500 mm
Overall Dimensions (H x W x D)	18.25 x 34.75 x 2" (464 x 883 x 51 mm)
Shipping Weight	19.37 lbs (9 kg)
Solution Type	Universal
Typical Screen Sizes	37 - 63"
Wall Stud Compatibility In	16" - 32" (406 mm - 813 mm)
Weight Capacity	200 lbs (90.7 kg)
Orientation	Landscape



Orchestrating a brighter world

NEC

40", 48" and 55" Professional Displays Ideal for Digital Signage Applications

NEC Professional Large Format Displays

Gate **D2**

FlyUSA 

1:05PM
DD006
SEATTLE
Please Wait

Chicago Monday 7th
52° 

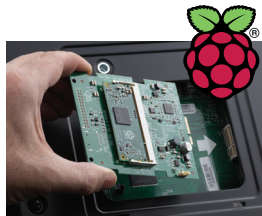
Brand new aesthetically-focused design allows for seamless integration into any digital signage environment while maintaining the professional ruggedness necessary for the transportation, restaurant and financial industries.

Beyond Standard Signage

Create maximum visual impact through seamless simplicity with the new professional NEC P series products. New contemporary and slim mechanical design with focused aesthetics allows for the smooth and stylistic integration into any type of environment. Their full metal chassis coupled with real-time temperature sensors and integrated cooling fans maintain the professional quality necessary for commercial environments. With a wide range of the latest connectivity interfaces including resolution support up to Ultra High Definition at 60Hz, these displays offer the future-proofing necessary for the investment. These displays also include expandability options such as the Open Pluggable Specification (OPS) and Raspberry Pi Compute Module slots for source integration directly into the display. The NEC P series boasts 700 cd/m² brightness along with a new anti-glare surface that allows for efficient readability in higher ambient light situations and is ideal for 24/7 signage in airports, quick-serve restaurants, financial institutions and command and control.

Scalable Computing Power

Integrated computing options allow for cable free signage for any type of situation. The on-board multimedia player can be utilized for simple signage applications by allowing auto-play off of USB or SD card and content transfer via LAN. For more advanced signage systems, these displays contain an industry first ability to integrate a Raspberry Pi Compute module for near limitless potential and application. Finally, each display adheres to the Open Pluggable Specification that gives the ability to seamlessly integrate a full PC, HDBaseT receiver or other options directly into the unit.

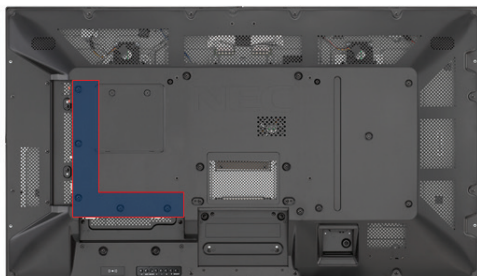


Advanced Heat Management

Monitoring and managing the temperature of each display is crucial to secure reliability and longevity. An industrial-strength, premium-grade panel with additional thermal protection, internal temperature sensors with self-diagnostics, and fan-based technology allows for 24/7 operation, and protects your display investment. Without thermal management, displays can be prone to damaging heat over time. This damaging heat will lower the picture quality and life expectancy of the product. Integrated cooling fans automatically turn on and stay on when high internal temperatures are detected. These will stay on until the heat is properly dissipated and the display remains under proper temperature thresholds.

L-Shaped Connectivity

Connectivity is located on both the bottom and side of the display to allow for easy access regardless of orientation



NEC

EE.8

Blue ON LED and Ambient Light Sensor

New mechanical structure allows for sleeker LED and ambient light sensor design. Auto dimming of the LED backlights can be utilized through the ambient light sensor allowing for the brightness to change depending on the external lux in the room of installation.



Proof of Play

This function provides accurate proof that displays are working as established when checking from an external location. Information regarding video source, time on, audio source and more can be pulled through the display when coupled with NaViSet Administrator 2.

SpectraView Engine

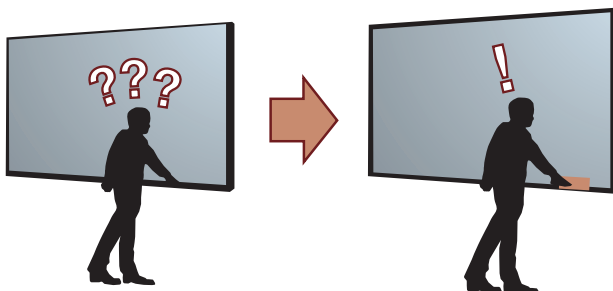
Enhanced imaging performance through advanced settings of all relevant parameters allow full control of brightness, color, gamma and uniformity via integrated color-critical chipset.

Auto TileMatrix, Auto ID and Auto IP Address Technologies

Auto IP Address simplifies control setup by setting the static IP address on the first display then initiating the feature so that the IP Addresses of consecutive displays follow the LAN daisy chain. These displays also have Auto TileMatrix and Auto ID that can, in the case of a video wall, automatically scale up to a UHD signal across the entirety of the wall through DisplayPort 1.2 while individually IDing each screen, saving time and overall cost of installation.

Key Guide

New Key Guide function allows for easier access to buttons when manually controlling the unit via the buttons on the back of the display by adding a graphic on the screen that directs the customer to the correct button layout in both landscape and portrait modes.



(EXIT) (▼) (▲) (—) (+) (SET) (MUTE) (|)

NaViSet Administrator 2

This software is an all-in-one remote support solution that runs from a central location and provides monitoring, asset management and control functionality of the majority of NEC display devices and Windows computers. It is ideal for multi-device installations over larger infrastructures.



Dedicated Color Calibration Software

As the brightness and color temperature of the LCD change with time, colors may not match across multiple screens. The NEC Display Wall Calibrator software ensures color uniformity and fidelity across multiple screens, creating a perfectly matched image in tiled environments.

NEC Display Wall Calibrator

Intelligent Wireless Data Function

The built-in near field communication (NFC) chip allows data to be read and written via a mobile phone or tablet PC. Users can significantly reduce installation costs as displays can be easily configured and serviced using the NEC NFC Android app. This is extremely useful for larger rollouts as it can be utilized even when the display is powered off.

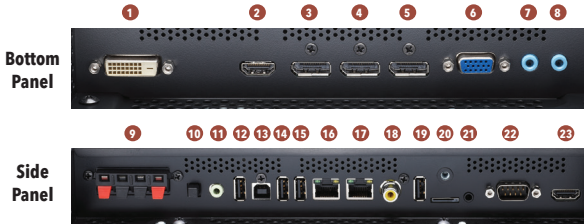


Removable Logo

When mounting from Landscape to Portrait orientation, there is now the ability to change the orientation of the logo or remove it all together



		P404	P484	P554
LCD MODULE				
Panel Technology		SPVA	SPVA	S-IPS
Viewable Image Size		40"	48"	55"
Native Resolution		1920 x 1080		
Brightness (Typical/Minimum)		550 cd/m ² / 700 cd/m ²		
Contrast Ratio (Typical)		4000:1		1300:1
Viewing Angle		178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR>10		
Aspect Ratio		16:9		
Displayable Colors		Over 1.07 Billion		
Orientation		Landscape, Portrait, Face Up, Face Down		
Panel Haze (%)		25		44
CONNECTIVITY				
Input Terminals	Digital	HDMI 2.0 x2 (with HDCP), DVI-D (with HDCP), DisplayPort x2 (with HDCP)		
	Analog	VGA 15-pin D-SUB, RCA Composite		
	Audio	3.5mm Audio Mini Jack x2, DisplayPort Audio x2, HDMI Audio x3		
	External Control	LAN (100Mbit), 3.5 Mini Jack IR Remote, RS232C		
	Data	microSD (Media Player), USB 2.0 (Media Player), USB 2.0 (Service), USB Type-B (Upstream), USB 2.0 x2 (Compute Module, Powered 5V/2A)		
Output Terminals	Digital	DisplayPort (Outputs DisplayPort)		
	Audio	3.5mm Audio Mini Jack		
	External Control	LAN (100Mb)		
POWER CONSUMPTION				
On (Typ/Max)		92W/115W	115W/140W	125W/175W
Network Standby		3W		
Normal Standby		<0.5W		
Current Rating		2.9A - 1.2A @ 100V - 240V	3.1A - 1.2A @ 100V - 240V	3.6A - 1.5A @ 100V - 240V
Speaker Rating		Integrated 10W x 10W, Optional 15W x 3		
PHYSICAL SPECIFICATIONS				
Bezel Width (L/R, T/B)		13.2mm/13.2mm/ 13.2mm/13.2mm	13.2mm/13.2mm/ 13.2mm/13.2mm	14.2mm/14.2mm/ 14.2mm/14.2mm
Net Dimensions (Without stand; W x H x D)		36.1 x 20.9 x 2.2 in. 918.0 x 530.6 x 54.7mm	42.8 x 24.6 x 2.2 in. 1086.5 x 625.3 x 54.7mm	49.0 x 28.1 x 2.5 in. 1244.0 x 714.8 x 62.9mm
Net Weight (Without Stand)		31.5lbs / 14.3kg	38.8lbs / 17.6kg	54.2lbs / 24.6kg
VESA Hole Configuration		4x M6 x 12mm (300 x 300)		
SENSORS				
Ambient Light Sensor		Integrated and programmable		
Human Sensor		Optional through KT-RC2 Accessory		
Temperature Sensor		Integrated and programmable; linked to cooling fans		
NFC Sensor		Integrated; works in conjunction with free NEC Intelligent Wireless Data Application		
ENVIRONMENTAL CONDITIONS				
Operating Temperature		0 to 40C		
Operating Humidity		20-80%		
Operating Altitude		3000m (9843ft)		
LIMITED WARRANTY		5 years Advanced Replacement		
ADDITIONAL FEATURES		Ambient Light Sensor, AMX Support, Auto ID/Auto TileMatrix, Automated Email Alert Function, CEC Support through HDMI, Crestron Roomview Support, DICOM Simulation, Display Browser Control, Display Wall Calibrator Compatible, Factory Uniformity Correction, High Haze Panel, Image Flip, Intelligent Wireless Data (NFC), Key Guide, Media Player through Browser Control/SD Card/USB, Multi Picture Mode, NaViSet Administrator 2 Compatible, OSD Rotation for Portrait Orientation, OPS Compatible, PJ Link Support, Point Zoom Function, Power USB Port (5V/2A), Programmable LUT x3, Raspberry Pi Compute Module Compatible, Removeable Logo Ornament, Real Time Clock, SpectraView Engine Support, SNMP Support (with Uniformity Control), 24-Hour Scheduler Function, UHD Support through HDMI/DisplayPort		
SHIPS WITH		3m AC Power Cord, 1.8m DVI Cable, IR Remote Control, Batteries, CD-ROM (User Manual)		
OPTIONAL ACCESSORIES		Table Top Stand (ST-401), Optional Speakers (SP-TF1), All OPS Option Cards, NEC Raspberry Pi Compute Module (RP3CM16GB) with optional Compute Module Interface Board (DS1-IF10CE), Wall Mount (WMK-3257), Slim Wall Mount (WMK-3255S), Human Sensor (KT-RC2)		



MultiSync, NaViSet and TileMatrix are trademarks or registered trademarks of NEC Display Solutions, Ltd. in Japan, the United States and other countries. The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries. DisplayPort and DisplayPort Compliance Logo are trademarks owned by the Video Electronics Standards Association in the United States and other countries.

HDBaseT™ and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.

CRESTRON and CRESTRON ROOMVIEW are trademarks or registered trademarks of Crestron Electronics, Inc.

AMX is a trademark or registered trademark of AMX in the United States and other countries.

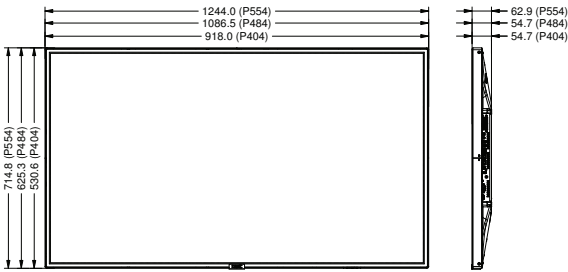
VESA is a trademark of a nonprofit organization, Video Electronics Standard Association.

All other trademarks are the property of their respective owners. The images in this brochure are samples.

All specifications are subject to change without notice.

©2017 NEC Display Solutions of America, Inc. and the NEC logo are registered trademarks of NEC.

Dimensions



Options

OPS PC's

OPS-APIC-PS

OPS-PCIB-PS

OPS-TCIS-PS

OPS-PCAEQ-PS

OPS-APIS-PS



SDI

HD-SDI

3G-SDI

SB-01HC

SB-04HC



HDBaseT

SB-07BC



Compute Module

Compute Module Interface Board

NEC Raspberry Pi Compute Module

DS1-IF10CE

RP3CM16GB

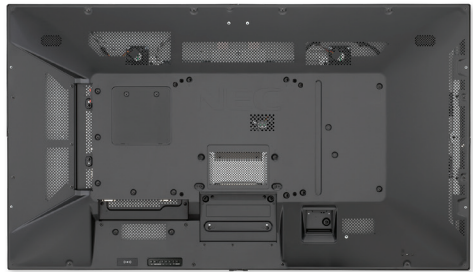


Tabletop Stand

ST-401

Speaker

SP-TF1



Input Panels

1. DVI-D
2. HDMI IN2
3. DisplayPort IN2
4. DisplayPort IN1
5. DisplayPort OUT
6. VGA (RGB, YPbPr)
7. Audio IN1
8. Audio IN2
9. External Speaker Terminal
10. Internal/External Speaker Switch
11. Audio OUT
12. USB1
13. USB2
14. USB CM1 (2A)
15. USB CM2
16. LAN1
17. LAN2
18. VIDEO IN
19. USB MP
20. microSD
21. REMOTE IN
22. RS-232C
23. HDMI IN1



Orchestrating a brighter world

NEC

40", 48" and 55" Professional Displays Ideal for Digital Signage Applications

NEC Professional Large Format Displays

Gate **D2**

FlyUSA 

1:05PM
DD006
SEATTLE
Please Wait

Chicago Monday 7th
52° 

E

D

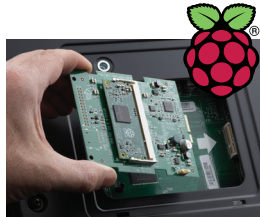
Brand new aesthetically-focused design allows for seamless integration into any digital signage environment while maintaining the professional ruggedness necessary for the transportation, restaurant and financial industries.

Beyond Standard Signage

Create maximum visual impact through seamless simplicity with the new professional NEC P series products. New contemporary and slim mechanical design with focused aesthetics allows for the smooth and stylistic integration into any type of environment. Their full metal chassis coupled with real-time temperature sensors and integrated cooling fans maintain the professional quality necessary for commercial environments. With a wide range of the latest connectivity interfaces including resolution support up to Ultra High Definition at 60Hz, these displays offer the future-proofing necessary for the investment. These displays also include expandability options such as the Open Pluggable Specification (OPS) and Raspberry Pi Compute Module slots for source integration directly into the display. The NEC P series boasts 700 cd/m² brightness along with a new anti-glare surface that allows for efficient readability in higher ambient light situations and is ideal for 24/7 signage in airports, quick-serve restaurants, financial institutions and command and control.

Scalable Computing Power

Integrated computing options allow for cable free signage for any type of situation. The on-board multimedia player can be utilized for simple signage applications by allowing auto-play off of USB or SD card and content transfer via LAN. For more advanced signage systems, these displays contain an industry first ability to integrate a Raspberry Pi Compute module for near limitless potential and application. Finally, each display adheres to the Open Pluggable Specification that gives the ability to seamlessly integrate a full PC, HDBaseT receiver or other options directly into the unit.

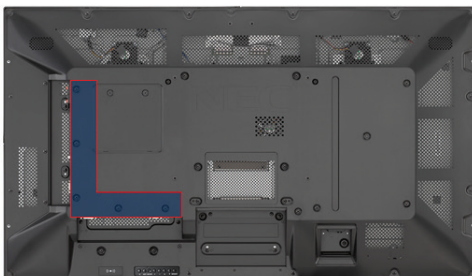


Advanced Heat Management

Monitoring and managing the temperature of each display is crucial to secure reliability and longevity. An industrial-strength, premium-grade panel with additional thermal protection, internal temperature sensors with self-diagnostics, and fan-based technology allows for 24/7 operation, and protects your display investment. Without thermal management, displays can be prone to damaging heat over time. This damaging heat will lower the picture quality and life expectancy of the product. Integrated cooling fans automatically turn on and stay on when high internal temperatures are detected. These will stay on until the heat is properly dissipated and the display remains under proper temperature thresholds.

L-Shaped Connectivity

Connectivity is located on both the bottom and side of the display to allow for easy access regardless of orientation



NEC

Blue ON LED and Ambient Light Sensor

New mechanical structure allows for sleeker LED and ambient light sensor design. Auto dimming of the LED backlights can be utilized through the ambient light sensor allowing for the brightness to change depending on the external lux in the room of installation.



Proof of Play

This function provides accurate proof that displays are working as established when checking from an external location. Information regarding video source, time on, audio source and more can be pulled through the display when coupled with NaViSet Administrator 2.

SpectraView Engine

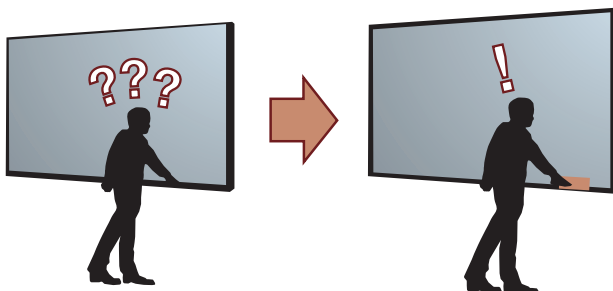
Enhanced imaging performance through advanced settings of all relevant parameters allow full control of brightness, color, gamma and uniformity via integrated color-critical chipset.

Auto TileMatrix, Auto ID and Auto IP Address Technologies

Auto IP Address simplifies control setup by setting the static IP address on the first display then initiating the feature so that the IP Addresses of consecutive displays follow the LAN daisy chain. These displays also have Auto TileMatrix and Auto ID that can, in the case of a video wall, automatically scale up to a UHD signal across the entirety of the wall through DisplayPort 1.2 while individually IDing each screen, saving time and overall cost of installation.

Key Guide

New Key Guide function allows for easier access to buttons when manually controlling the unit via the buttons on the back of the display by adding a graphic on the screen that directs the customer to the correct button layout in both landscape and portrait modes.



(EXIT) (▼) (▲) (—) (+) (SET) (MUTE) (|)

NaViSet Administrator 2

This software is an all-in-one remote support solution that runs from a central location and provides monitoring, asset management and control functionality of the majority of NEC display devices and Windows computers. It is ideal for multi-device installations over larger infrastructures.



Dedicated Color Calibration Software

As the brightness and color temperature of the LCD change with time, colors may not match across multiple screens. The NEC Display Wall Calibrator software ensures color uniformity and fidelity across multiple screens, creating a perfectly matched image in tiled environments.

NEC Display Wall Calibrator

Intelligent Wireless Data Function

The built-in near field communication (NFC) chip allows data to be read and written via a mobile phone or tablet PC. Users can significantly reduce installation costs as displays can be easily configured and serviced using the NEC NFC Android app. This is extremely useful for larger rollouts as it can be utilized even when the display is powered off.

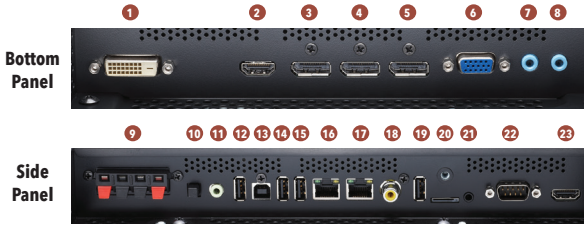


Removable Logo

When mounting from Landscape to Portrait orientation, there is now the ability to change the orientation of the logo or remove it all together



		P404	P484	P554
LCD MODULE				
Panel Technology		SPVA	SPVA	S-IPS
Viewable Image Size		40"	48"	55"
Native Resolution		1920 x 1080		
Brightness (Typical/Minimum)		550 cd/m ² / 700 cd/m ²		
Contrast Ratio (Typical)		4000:1		1300:1
Viewing Angle		178° Vert., 178° Hor. (89U/89D/89L/89R) @ CR>10		
Aspect Ratio		16:9		
Displayable Colors		Over 1.07 Billion		
Orientation		Landscape, Portrait, Face Up, Face Down		
Panel Haze (%)		25		44
CONNECTIVITY				
Input Terminals	Digital	HDMI 2.0 x2 (with HDCP), DVI-D (with HDCP), DisplayPort x2 (with HDCP)		
	Analog	VGA 15-pin D-SUB, RCA Composite		
	Audio	3.5mm Audio Mini Jack x2, DisplayPort Audio x2, HDMI Audio x3		
	External Control	LAN (100Mbit), 3.5 Mini Jack IR Remote, RS232C		
	Data	microSD (Media Player), USB 2.0 (Media Player), USB 2.0 (Service), USB Type-B (Upstream), USB 2.0 x2 (Compute Module, Powered 5V/2A)		
Output Terminals	Digital	DisplayPort (Outputs DisplayPort)		
	Audio	3.5mm Audio Mini Jack		
	External Control	LAN (100Mb)		
POWER CONSUMPTION				
On (Typ/Max)		92W/115W	115W/140W	125W/175W
Network Standby		3W		
Normal Standby		<0.5W		
Current Rating		2.9A - 1.2A @ 100V - 240V	3.1A - 1.2A @ 100V - 240V	3.6A - 1.5A @ 100V - 240V
Speaker Rating		Integrated 10W x 10W, Optional 15W x 3		
PHYSICAL SPECIFICATIONS				
Bezel Width (L/R, T/B)		13.2mm/13.2mm/ 13.2mm/13.2mm	13.2mm/13.2mm/ 13.2mm/13.2mm	14.2mm/14.2mm/ 14.2mm/14.2mm
Net Dimensions (Without stand; W x H x D)		36.1 x 20.9 x 2.2 in. 918.0 x 530.6 x 54.7mm	42.8 x 24.6 x 2.2 in. 1086.5 x 625.3 x 54.7mm	49.0 x 28.1 x 2.5 in. 1244.0 x 714.8 x 62.9mm
Net Weight (Without Stand)		31.5lbs / 14.3kg	38.8lbs / 17.6kg	54.2lbs / 24.6kg
VESA Hole Configuration		4x M6 x 12mm (300 x 300)		
SENSORS				
Ambient Light Sensor		Integrated and programmable		
Human Sensor		Optional through KT-RC2 Accessory		
Temperature Sensor		Integrated and programmable; linked to cooling fans		
NFC Sensor		Integrated; works in conjunction with free NEC Intelligent Wireless Data Application		
ENVIRONMENTAL CONDITIONS				
Operating Temperature		0 to 40C		
Operating Humidity		20-80%		
Operating Altitude		3000m (9843ft)		
LIMITED WARRANTY		5 years Advanced Replacement		
ADDITIONAL FEATURES		Ambient Light Sensor, AMX Support, Auto ID/Auto TileMatrix, Automated Email Alert Function, CEC Support through HDMI, Crestron Roomview Support, DICOM Simulation, Display Browser Control, Display Wall Calibrator Compatible, Factory Uniformity Correction, High Haze Panel, Image Flip, Intelligent Wireless Data (NFC), Key Guide, Media Player through Browser Control/SD Card/USB, Multi Picture Mode, NaViSet Administrator 2 Compatible, OSD Rotation for Portrait Orientation, OPS Compatible, PJ Link Support, Point Zoom Function, Power USB Port (5V/2A), Programmable LUT x3, Raspberry Pi Compute Module Compatible, Removeable Logo Ornament, Real Time Clock, SpectraView Engine Support, SNMP Support (with Uniformity Control), 24-Hour Scheduler Function, UHD Support through HDMI/DisplayPort		
SHIPS WITH		3m AC Power Cord, 1.8m DVI Cable, IR Remote Control, Batteries, CD-ROM (User Manual)		
OPTIONAL ACCESSORIES		Table Top Stand (ST-401), Optional Speakers (SP-TF1), All OPS Option Cards, NEC Raspberry Pi Compute Module (RP3CM16GB) with optional Compute Module Interface Board (DS1-IF10CE), Wall Mount (WMK-3257), Slim Wall Mount (WMK-3255S), Human Sensor (KT-RC2)		



MultiSync, NaViSet and TileMatrix are trademarks or registered trademarks of NEC Display Solutions, Ltd. in Japan, the United States and other countries. The terms HDMI and HDMI High-Definition Multimedia Interface, and the HDMI logo are trademarks or registered trademarks of HDMI Licensing LLC in the United States and other countries. DisplayPort and DisplayPort Compliance Logo are trademarks owned by the Video Electronics Standards Association in the United States and other countries.

HDBaseT™ and the HDBaseT Alliance logo are trademarks of the HDBaseT Alliance.

CRESTRON and CRESTRON ROOMVIEW are trademarks or registered trademarks of Crestron Electronics, Inc.

AMX is a trademark or registered trademark of AMX in the United States and other countries.

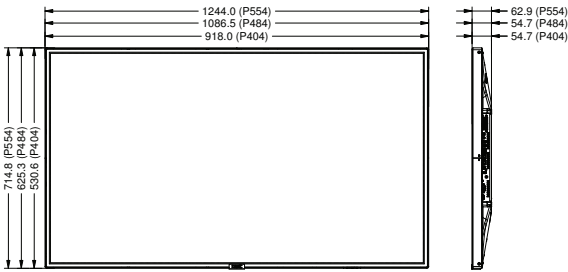
VESA is a trademark of a nonprofit organization, Video Electronics Standard Association.

All other trademarks are the property of their respective owners. The images in this brochure are samples.

All specifications are subject to change without notice.

©2017 NEC Display Solutions of America, Inc. and the NEC logo are registered trademarks of NEC.

Dimensions



Options

OPS PC's

OPS-APIC-PS

OPS-PCIB-PS

OPS-TCIS-PS

OPS-PCAEQ-PS

OPS-APIS-PS



SDI

HD-SDI

3G-SDI

SB-01HC

SB-04HC



HDBaseT

SB-07BC



Compute Module

Compute Module Interface Board

NEC Raspberry Pi Compute Module

DS1-IF10CE

RP3CM16GB

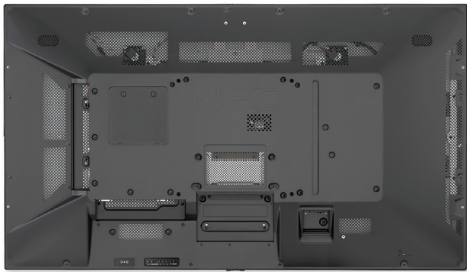


Tabletop Stand

ST-401

Speaker

SP-TF1



Input Panels

1. DVI-D
2. HDMI IN2
3. DisplayPort IN2
4. DisplayPort IN1
5. DisplayPort OUT
6. VGA (RGB, YPbPr)
7. Audio IN1
8. Audio IN2
9. External Speaker Terminal
10. Internal/External Speaker Switch
11. Audio OUT
12. USB1
13. USB2
14. USB CM1 (2A)
15. USB CM2
16. LAN1
17. LAN2
18. VIDEO IN
19. USB MP
20. microSD
21. REMOTE IN
22. RS-232C
23. HDMI IN1



Planar SL6564K

4K LCD Display

The Planar® Simplicity™ Series SL6564K is a 65" 4K LCD display for digital signage that incorporates media playback, 4K @ 60Hz support, HDCP2.2 compliance and commercial functionality into an affordable 65" digital signage solution. Its elegant design with a narrow, logo-free bezel, slim profile and integrated OPS slot provide the ideal display solution for digital signage applications in retail stores, restaurants, medical offices, corporate meeting areas and hospitality.



SPECIFICATION	DETAIL
Product Name	SL6564K
Planar Part Number	997-9257-00
Display Resolution	Ultra HD (3840 x 2160)
HD format	4K UHD 2160p
Screen Size	65 in. (diagonal)
Aspect Ratio	16:9
Display Technology	Direct-lit LED LCD
Display Active Area	56.3" x 31.7" (1430mm x 807mm)
Viewing Angle (typ)	178°
Backlight	LED
Brightness (typ)	350 nits
Response Time (typ)	8 ms
Frame Rate	60Hz
Contrast Ratio (typ)	4000:1
Pixel Pitch	0.372mm x 0.372mm
Color Gamut	68% NTSC
Display Color	>1 billion colors. Full 10 bit data path
External Connections	HDMI 2.0 x 4 (HDCP 2.2), DisplayPort x 1, VGA x 1, OPS x 1, OPS USB 2.0 x 2, OPS USB 3.0 X 1
Modes	3840x2160 @ 24/25/30/60Hz; 480p, 576p, 720p @ 50/60 Hz; 1080p @ 50/60Hz; 1080i @ 50/60 Hz
Display Control	IR, RS-232, LAN, Keypad
Cabinet Dimensions (W x H x D)	57.4" x 32.9" x 3.2" (1458.7mm x 834.7mm x 81.6mm)

Cabinet Dimensions with Handles (W x H x D)	Not Applicable
Orientation	Landscape only
Bezel Width	0.8" (21.0mm)
Weight	56 lb (26 kg)
Weight (Shipping)	77 lbs (35 kg)
Audio Output	PC Line Out, S/PDIF, RCA L/R out
Speakers	10W x 2 built-in
Mounting	VESA: 400mm x 200mm; 400mm x 400mm
Fanless	Yes
Line Voltage	100-240V; 50/60Hz
Power Consumption (typ)	150W (standby: <0.5W)
Operating Temperature	0° to +40°C (32° to 104°F) up to 3000m
Humidity	20 - 85% RH (non-condensing)
Options / Features	USB playback with scheduling, logo-free bezel, Kensington security slot, lockable rear keypad, OPS slot
Approvals	FCC Class A, CE, cTUVus, CCC
Warranty	2 years
Recommended Usage	Up to 16 hours per day
In the Box	SL6564K display, C14 connector power cord, HDMI cable, RS-232 cable, IR cable, remote control, and cable clamps
UPC	8 10689 00462 2

For more information, please visit www.planar.com

Specifications are subject to change without notice.

Specification Report Date: 2/8/2019

© Copyright 2019 Planar Systems, Inc. All rights reserved

Small, energy efficient, and affordable the Atlona Stereo/Mono Audio Amplifier fits the needs of most offices, classrooms and more. Unlike traditional A/B amplifiers the Class D audio amplifier is energy efficient and easily integrated behind a TV where space is limited.



Sometimes a "D" is better than an "A"

Requiring less power, class D amplifiers use an efficient design that reduces size and cost. By removing the need for large space consuming heat sinks and power regulators, the PA100-G2 becomes easy to integrate with a small size that can fit into most spaces.

Use ALL the MICs

Using a captive screw connector and a 3 mode switch, the AT-PA100-G2 changes to meet your needs. Whether its a condenser, dynamic, or wireless MIC the PA100-G2 adapts to you.

Your control needs

Fully adjustable, the AT-PA100-G2 has three control options: RS-232, IR, and Panel Buttons. Built to suit your control needs, adjust the MIC and Line volume, or the bass and treble levels using the control system you want.

You are the experience

Become part of the audio with a built in MIC mixing feature. Simply speak into your MIC and hear your voice along with the line audio. With only 1ms delay in MIC detection, have no noticeable lag between your words and the audio coming from the speakers.



Specifications

Audio

Rated Output	20 W x 2 40 W x 1 (Bridged Operation)
Gain	32dB
Frequency Range	20Hz to 20KHz
Signal/Noise Ratio	80dB (at max output)
Total Harmonic Distortion	1% (1KHz), 0.3% (20KHz) -- at nominal levels
Input Impedance	Input 1&2: >10K Ω
MIC Input Impedance	48V: 35K Ω MIC: 10K Ω LINE: 75K Ω
Output Impedance	3.5mm Loop Out: 50 Ω stereo Speaker out: 4 ~ 8 Ω Amplifier
Stereo Channel Separation	>75dB from 20Hz to 20KHz
Common Mode Rejection Ratio	>70dB from 20Hz to 20KHz
MIC Audio Detection Delay	1ms

Temperature

Operating	0°C to 40°C	32°F to 104°F
Storage	-20°C to 60°C	-4°F to 140°F
Humidity	20 to 90% non-condensing	

Power

Consumption	40W
Idle Consumption	4W
Supply	Input: AC100~240V 50/60Hz Output: DC 24V/5A

Dimension

H x W x D	38 x 96 x 87 (mm)	1.5 x 3.78 x 3.43 (inch)
-----------	-------------------	--------------------------

Weight

Device	0.3 kg	0.66 lbs
Shipping	0.98 kg	2.16 lbs

Certification

Power Supply	CE, FCC, RoHS, cULus
--------------	----------------------

BB-200 Microwave Motion Sensor

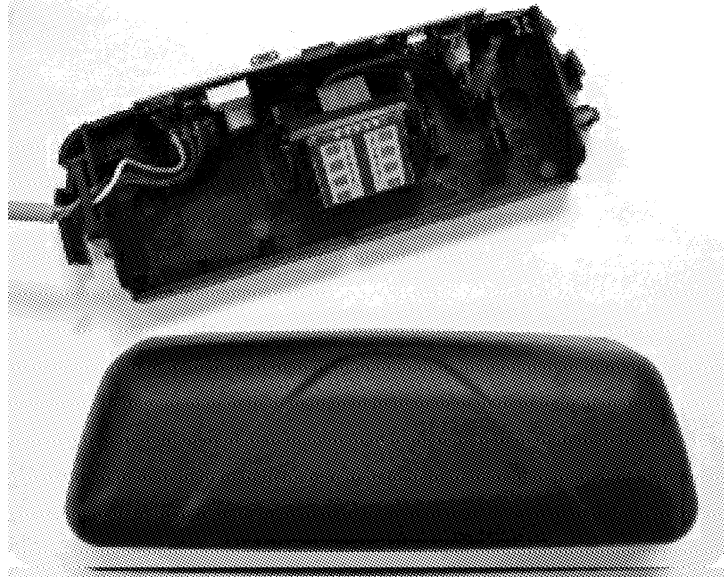
*Senses People Up to
16 Feet Away*

Adjustable Range

FCC Approved

*Reliable Microwave
Technology*

*May Be Concealed
Behind Exhibit*



BB-200 Motion Sensor Top: Cover Removed

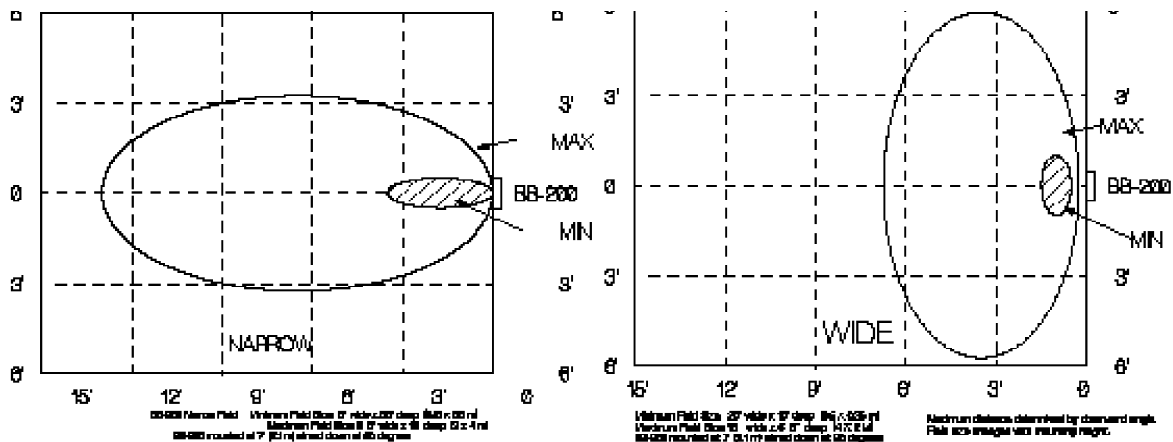
Based on the Doppler Principle, the BB-200 provides a compact and reliable method of detecting when a visitor approaches an exhibit. Unlike passive infra-red detectors used in burglar alarms and driveway lights, the low power radar beam may be aimed to cover a specific area. Also, the range, or sensitivity, is easily adjusted over a range of approximately 3 to 16 feet. In this way, the exhibit is started only when a person is within the appropriate range.

The BB-200 operates from any power source capable of providing 12 to 24 volts AC or DC at 100 milliamps. Any of the Museum Technology products employing the RJ-11 modular plug system is able to directly supply the required power.

In general, the BB-200 should be mounted above, and aimed at, the area to be covered. A light visible on the BB-200 assists in aiming and adjustment. It is suggested that the BB-200 be powered up, and temporarily mounted in the proposed location to ensure proper operation prior to permanent mounting.

The BB-200 may be mounted behind common non-metallic building materials such as plywood, MDF, and drywall. This might result in a slight reduction in maximum range. Again, the BB-200 should be temporarily installed and tested prior to final mounting.

BB-200 Microwave Motion Sensor



DIMENSIONS ARE APPROXIMATE AND TO BE USED AS A GENERAL GUIDE ONLY
BB-200 BEAM PATTERNS

Technical Specifications

Operating Principle: Microwave Doppler Radar

Frequency: K-Band, 24.125 GHz

Range: Approximately 3 to 16 feet; Adjustable by mounting angle and sensitivity control.
Wide or narrow beam determined by orientation of antenna

Output: SPST solid state (silent) relay provides for normally normally open operation.
Contacts rated 1 amp at 24 VDC

Power: 12 to 24 volts DC or 10 to 24 volts AC
100 mA relay OFF, 120 mA relay ON

Environmental: -4 to 140 Degree F (-20 to +60 C)

Indicator: Green LEDlights while motion sensed

Size: 6.8" wide x 2.4" high x 1.9" deep (172 x 60 x 48 mm); 5 Oz (140 g)

Mounting: Screw holes for mounting to flat surface

Weight: 9 ounces (240 grams)

Adjustments: Range adjustable 3 to 16 feet (1 to 5 meters)
Microwave Horn pivots -20 to +20 degrees; -5 to 90 degrees from horizontal

Approval: FCC

Warranty: Two years parts and labor

323 Andover Street Wilmington, MA 01887
phone 800-729-6873 / 978-657-3898
www.museumtech.com | contact@museumtech.com



CONTROL 23-1

Ultra-Compact Indoor/Outdoor Background/Foreground Speaker

Professional Series

Features:

- ▶ Components:
 - 3" woofer with woven fiberglass cone
 - 1/2" PEI diaphragm tweeter with fluid cooling
- ▶ Contemporary, high-design appearance
- ▶ Built-in InvisiBall® mounting hardware*, plus available U-bracket
- ▶ Weather resistant enclosure and transducers
- ▶ Wide 100° x 100° coverage
- ▶ 50 Watt power handling (100 Watt program) in direct 8Ω setting, plus built-in 15 Watt 70V/100V multi-tap transformer.
- ▶ High fidelity sound character with broad frequency response of 70 Hz – 20 kHz.



Applications:

The Control® 23-1 is a two-way 3" speaker with rich sonic character, wide coverage, consistent dispersion, versatile mounting, and a contemporary high-design look that fits into a wide range of decors. This makes Control 23-1 an excellent choice for a wide variety of applications, including retail stores, restaurants, health clubs, theme parks, educational facilities, hospitality, music cafes, leisure venues, and anywhere where a top quality compact indoor/outdoor foreground/background music (and/or paging) speaker is required.

The unique InvisiBall mounting hardware is included with each system, making short work of permanent installation. The InvisiBall mounting method provides a high degree of both vertical and horizontal rotation, and because InvisiBall adjustments are made through a hidden access behind the logo badge, the grille never needs to be removed. In addition, that provides a high degree of theft deterrence. Integrated M6 mounting points for an optional U-bracket adds to the installation versatility.

The LF driver's woven fiberglass cone provides durability and weather capable performance. The light weight high-temperature Kapton™ voice coil former and high-temperature voice coil wire ensure excellent sensitivity and high power handling, while also providing stable performance under long-term high-power working conditions. The pure butyl rubber surround delivers clean sound and robust operation. JBL's WeatherEdge™ is a seamless, rubberized extension of the woofer surround that provides added protection to critical transducer elements. Cone geometry is optimized for smooth frequency response and consistent off-axis performance, while an FEA-optimized motor construction and linear suspension spider helps to lower harmonic distortion.

The HF driver's low viscosity ferro-magnetic fluid increases voice coil cooling for higher long-term power handling. The softened PEI diaphragm delivers a smooth and pure high frequency sound quality. The light weight Kapton™ voice coil former increases durability while providing better high frequency response extension. All these factors also contribute toward making the driver especially rugged for outdoors and other stressful applications.

In addition to the driver designs contributing toward a high degree of weather resistance, the cabinet provides excellent endurance against sun, salt and moisture. Grilles are heavily zinc-plated and finished in a tough, high-grade powder coating for rust resistance. The optional MTC-23WMG-1 WeatherMax™ grilles are available for especially difficult environments and to break up driving rain. Connection is made via weather-capable screw-down terminals. The optional MTC-PC2 and MTC-PC3 panel covers are available to further protect the terminal compartment, providing a water-tight sealed gland-nut entrance (when used with round-jacketed cable within the specified diameter range).

The speaker provides a very natural sound character. The system is capable of handling 50 Watts continuous pink noise (100 Watts program) at its 8 ohm setting and is also equipped with a built-in 15 Watt 70V/100V multi-tap transformer for operation on distributed speaker lines. The combination of high sensitivity and power handling provides high Max SPL of 103 dB.

The Control 23-1 readily accepts a variety of paints and finishes to match any décor. Available in black or white (-WH).

Specifications:

Frequency Range (-10 dB):	70 Hz to 20 kHz
Frequency Response (+/-3 dB):	95 Hz - 19 kHz
Power Rating ² :	100W Continuous Program (2 hrs) 50 W (200W peak), Continuous Pink Noise (2 hrs) 40 W (160W peak) Continuous Pink Noise (100 hrs)
Maximum Input Voltage:	17.2 V RMS (2 hrs), 34.4 V peak
Maximum SPL ³ :	103 dB ave. Continuous Pink Noise (109 dB peak)
Sensitivity ⁴ :	86 dB, 1W/1m (ave. 100 Hz – 10 kHz)
Coverage Angle ⁵ :	100° x 100°
Directivity Factor (Q):	5.8 (averaged 1kHz – 16kHz)
Directivity Index (DI):	7.2 dB (averaged 1kHz – 16kHz)
Nominal Impedance:	8 ohms (THRU setting)
Crossover Type:	2nd order low-pass, 2nd order high-pass
Circuitry:	
Transformer Taps:	70V: 15W, 7.5W, 3.7W, 1.8W 100V: 15W, 7.5W, 3.7W Insertion Loss <0.43 dB at any tap setting Thru Setting: 8Ω nominal
Recommended Protective High-Pass ⁶ :	70 Hz high-pass (24 dB/oct) (for 8Ω operation and for all 70V/100V taps settings) .
Transducers:	
Low Frequency Driver:	76 mm (3.0 in), woven-fiberglass cone with pure butyl rubber surround with Weather-Edge frame protection, high-temp Kapton™ voice coil former, high-temp voice coil wire, optimized cone geometry, linear suspension spider, and FEA optimized motor structure.
High Frequency Driver:	13 mm (0.5 in) PEI diaphragm, low-viscosity ferro-magnetic fluid, and lightweight Kapton™ voice coil former.
Physical:	
Enclosure Material:	High Impact Polystyrene (HIPS), painted with highly-UV resistant paint on white (-WH) version for maximum UV fade resistance.
Grille:	Highly zinc-plated, finished in durable TGIC polyester powdercoating. MTC-23WMG-1 (&-WH) available with Weather-Max™ multi-layer foam and tight-weave mesh vapor barrier backing.
Installation:	InvisiBall™ wall-mounting system included. Two 6 mm attachment points (on top and bottom) for optional MTC-23UB-1 (&-WH) U-bracket. Secondary safety attachment loop point on back panel.
Environmental:	IP-44 per IEC529 (IP-55 when installed with the optional MTC-23WMG-1 WeatherMax™ grille and either MTC-PC2 or MTC-PC3 panel cover.) Exceeds MilSpec 810 for humidity, salt-spray, temperature & UV. Passes MilStd-202F for salt spray and ASTM G85 for acid-air plus salt spray. Optional MTC-23WMG-1 WeatherMax™ grille for breaking up driving rain and for especially difficult environments.
Termination:	Screw-down terminal strip, zinc-plated copper based, nickel-plated metal screws and washers. Accepts up to 9 mm outside 4 mm inside open lugs (#6, #8, or #10 lug), plus bare wire (up to 12 AWG / 2.5 mm2). Optional MTC-PC2 and MTC-PC3 protective panel covers available to provide sealed entrance for additional weather protection.
Agency Rating:	ROHS-compliant; Transformer UL Recognized per UL1876
Colors:	Black (RAL9004) or white (-WH, RAL9016)
Dimensions (H x W x D) ⁷ :	200 x 141 x 111 mm (7.9 x 5.6 x 4.4 in); 141 mm (5.6 in) deep total when mounted on InvisiBall wall-mount bracket.
Net Weight:	1.8 kg (4.0 lbs)
Shipping Weight:	3.85kg (8.5 lbs) for the pair-pack (for 2 speakers) 12.0kg (26.5lbs) for the master-pack (for 6 speakers)
Included Accessories:	InvisiBall™ wall-mounting system), 4 mm x 80 mm hex key
Optional Accessories:	MTC-23UB-1 – Yolk-type U-bracket (&-WH) MTC-23WMG-1 – WeatherMax grille with backing (&-WH) MTC-23CM – Ceiling-Mount InvisiBall adapter (&-WH)

¹ In half-space (on-wall, 2m).

² At 8Ω setting. Continuous Pink Noise rating is IEC-shaped pink noise with a 6 dB crest factor. Continuous Program Power is defined as 3 dB above the Continuous Pink Noise Rating and is a conservative expression of the system's ability to handle normal speech and music program material.

³ Calculated from sensitivity and power handling, exclusive of power compression, at THRU setting.

⁴ Half-space (on-wall) averaged 100 Hz – 10 kHz, 2.83V.

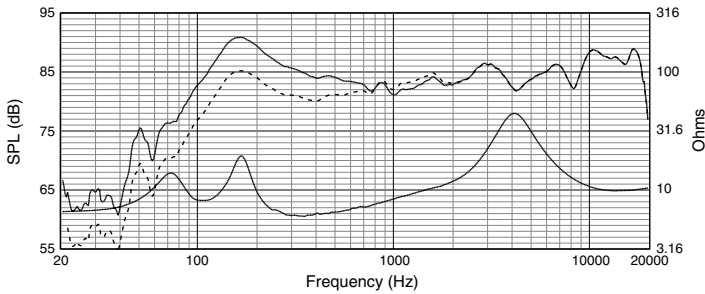
⁵ Coverage angle (-6 dB) average between 1.5 kHz and 12 kHz.

⁶ For protection against driving below resonant frequency and to keep transformer out of saturation.

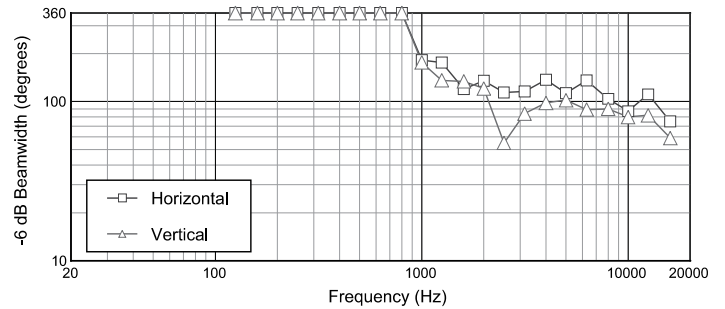
⁷ In vertical orientation

Frequency Response

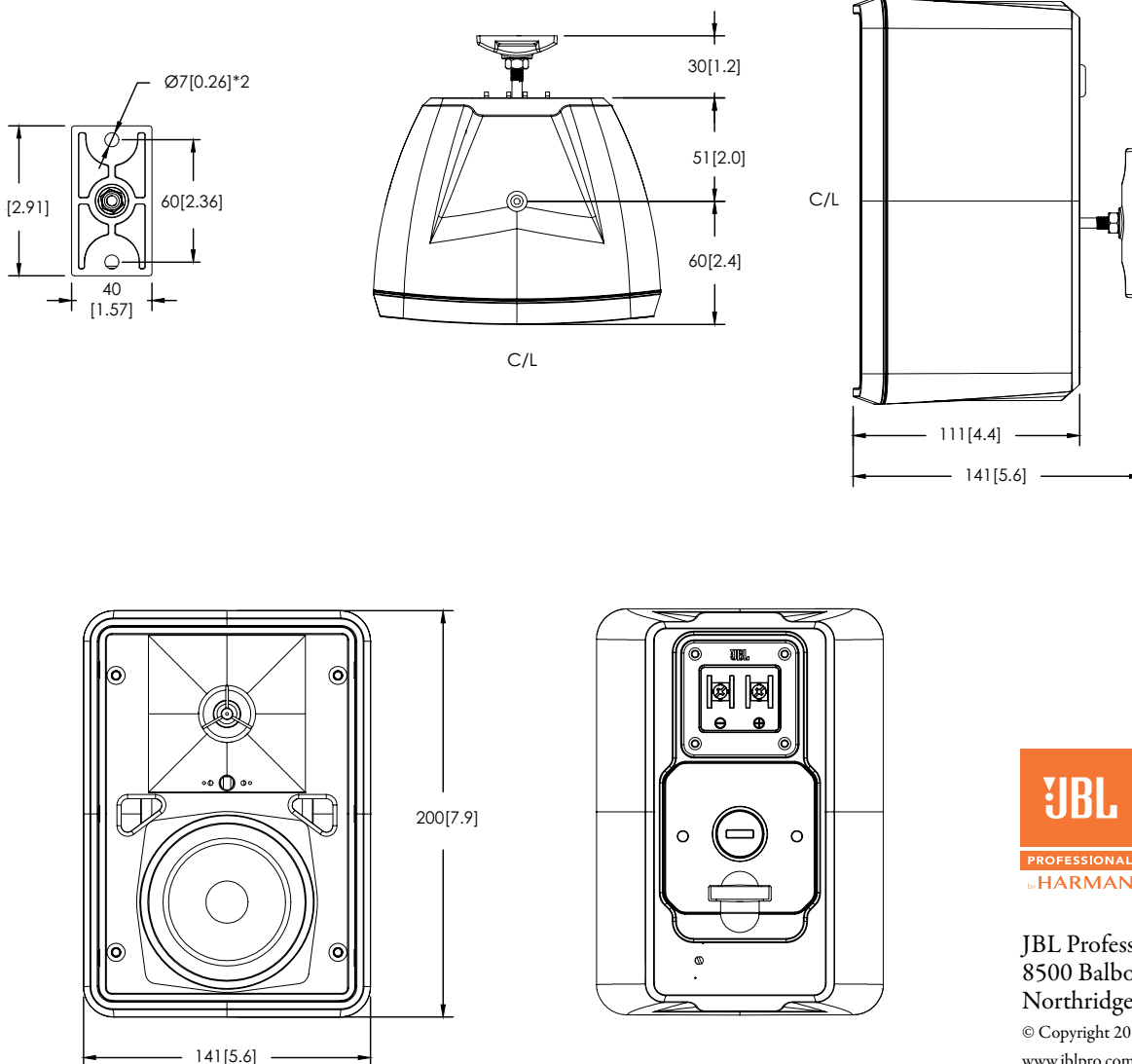
On-Axis in half-space (2π , solid line) and full-space (4π , dotted line)
at thru (8 Ω) setting Input Impedance



Beamwidth



Dimensions:

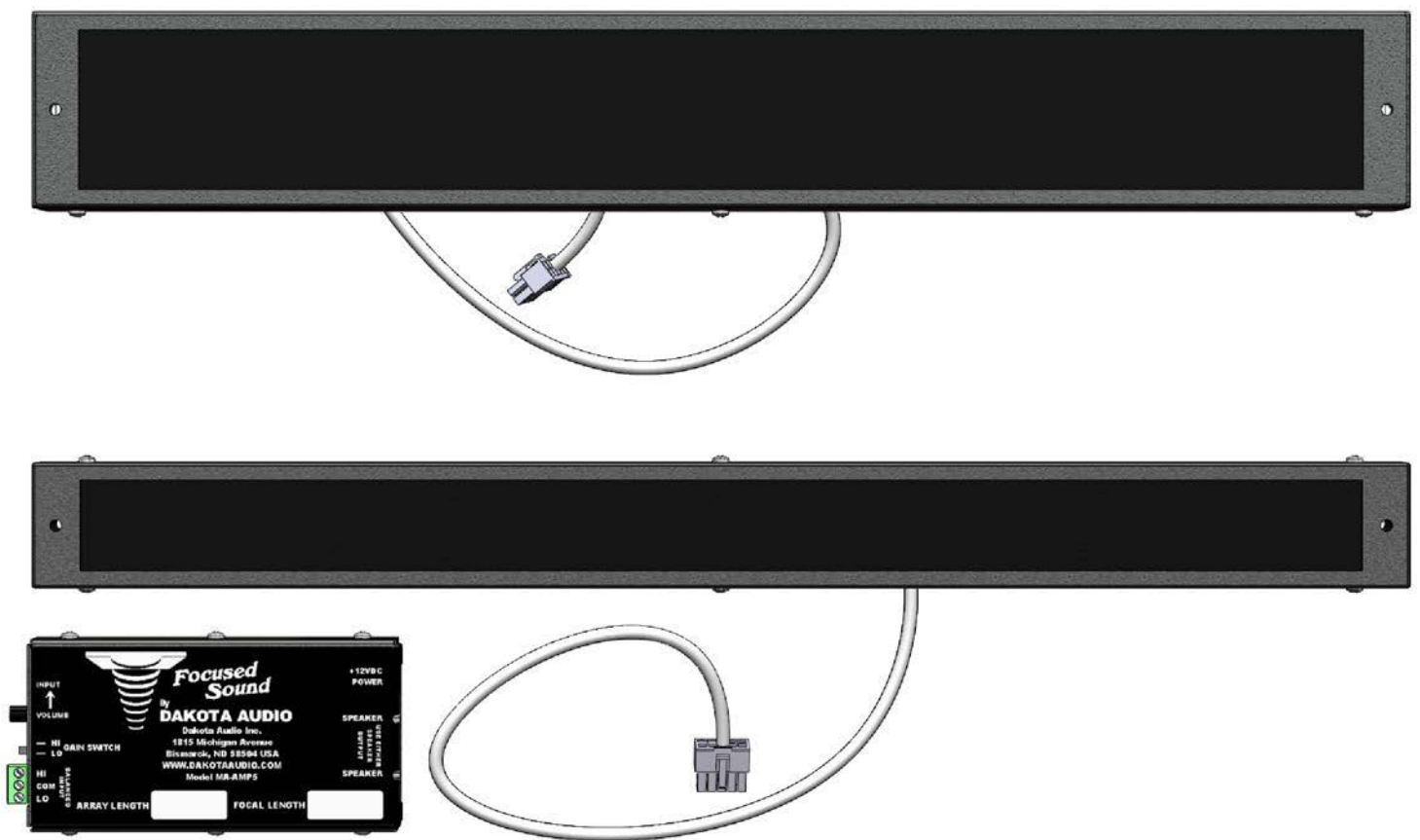


JBL Professional
8500 Balboa Boulevard, P.O. Box 2200
Northridge, California 91329 U.S.A.
© Copyright 2015 JBL Professional
www.jblpro.com

DAKOTA AUDIO INC.

MINI-ARRAYS

MA-5 & MA-4

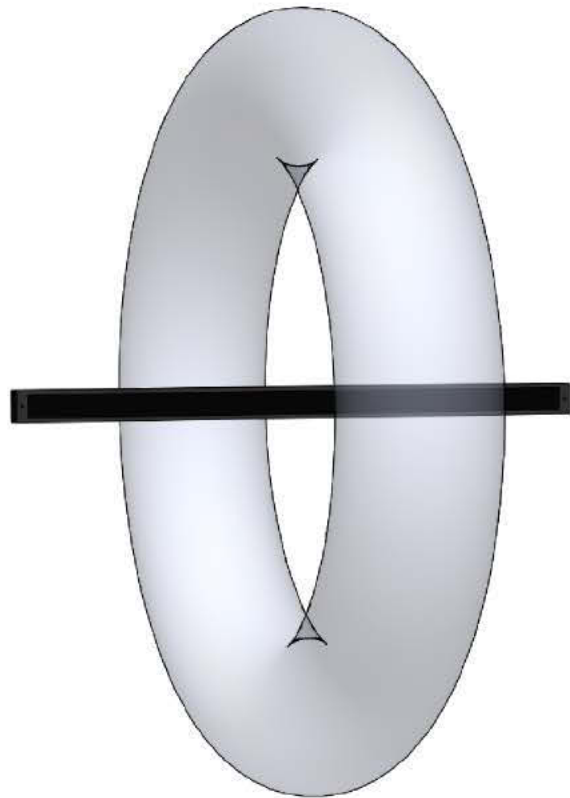


DAKOTA AUDIO INC.
1815 MICHIGAN AVE.
BISMARCK, ND, 58504 USA
PHONE: 701-224-9331
FAX: 701-223-1296
WWW.DAKOTAAUDIO.COM
SALES@DAKOTAAUDIO.COM

SOUND PATTERN

THIS SHOWS THE AREA OF MAXIMUM SOUND LEVEL.

**IT IS NOT MEANT TO
REPRESENT ALL OF THE
SOUND EMITTED BY THE
ARRAY.**



This shows the area of maximum sound level.

The sound extends 360 degrees around the axis of the speaker array.

It gives good sound isolation side-to-side, with very little directionality vertically.

A child in a wheelchair or a pro basketball player will be in the pattern vertically.

It is almost never necessary to “tip” the arrays up or down, there is no directionality up or down.

It is not meant to represent all of the sound emitted from the array. There will be sound outside of the indicated area, but it will be at a lower level than the sound in the focal area. It is important to note that our ears are logarithmic. In order to achieve a $\frac{3}{4}$ reduction in apparent loudness, the sound energy has to be reduced approximately 99%. In quiet areas with reflective surfaces, this can be difficult to achieve. If you have any questions, please read our white papers that explain this in more detail.

MA-4 OR MA-5

WHICH IS BETTER FOR MY APPLICATION?

MA-4

The MA-4 was originally designed for science museums to have good intelligibility in a noisy environment. It is smaller than the MA-5. The low frequency response is limited, it is designed for voice, not optimal for music.

They come in various lengths, the lengths are for looks, to match a screen or kiosk dimensions. All the lengths have the same pattern

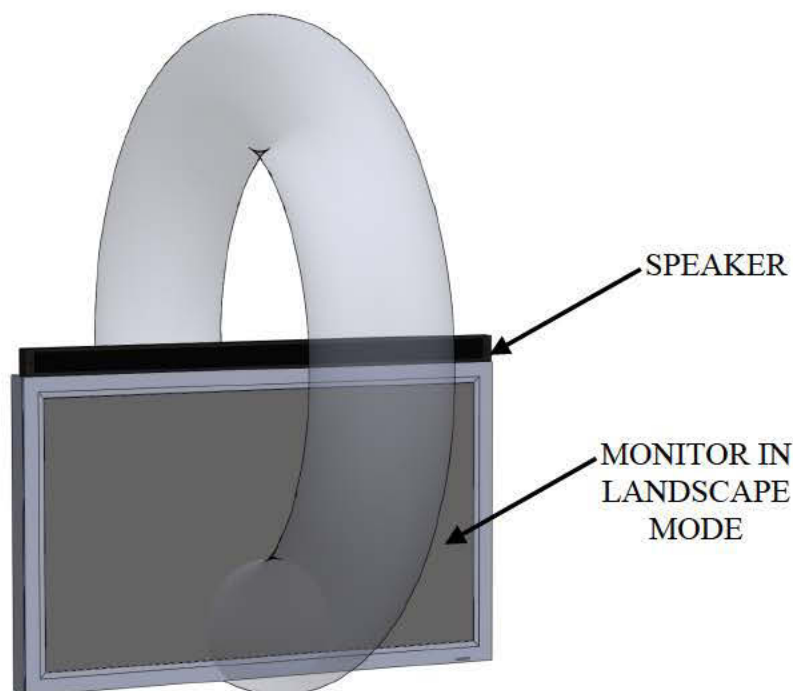
MA-5

The MA-5 was originally designed for digital Signage as in malls, for voice and for incidental music. The frequency response is tailored for good voice intelligibility with acceptable low frequency response.

They come in various lengths, the lengths are for looks, to match a screen or kiosk dimensions. All the lengths have the same pattern.

SPEAKER ARRAY MOUNTING

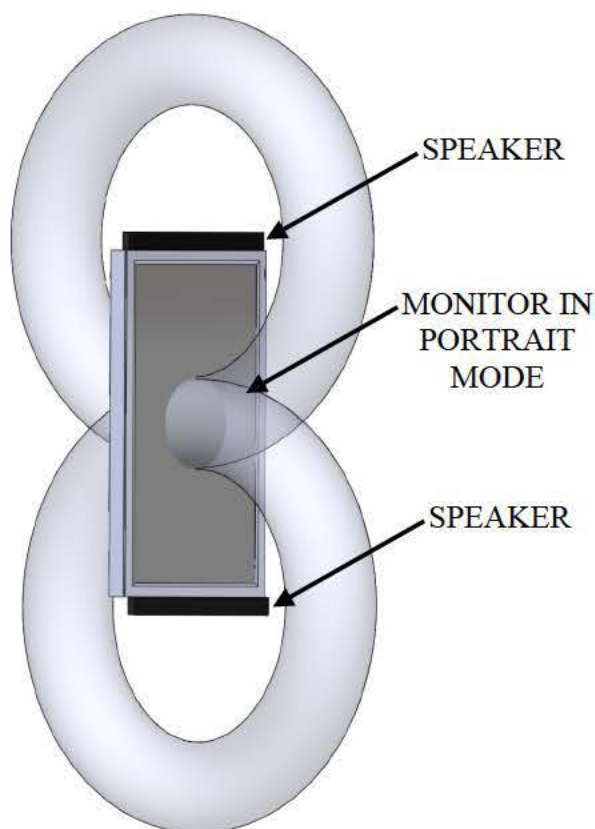
LANDSCAPE MONITOR



In most cases, the speaker array will be mounted at the top of the video monitor.

Please note that the sound projects from the back of the array almost as loud as from the front. If this is a problem it may be necessary to place a baffle behind the speaker array.

(SEE INFORMATION ON NEXT PAGE)



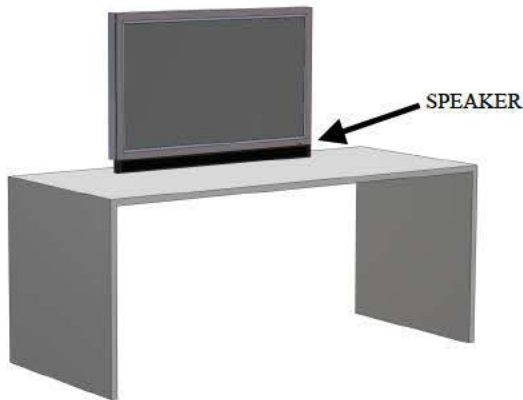
PORTRAIT MONITOR

A large monitor mounted in portrait mode may require two speaker arrays to provide satisfactory vertical coverage. The included amplifier has two speaker outputs to drive two arrays.

Please note that the sound projects from the back of the array almost as loud as from the front. If this is a problem it may be necessary to place a baffle behind the speaker array.

(SEE INFORMATION ON NEXT PAGE)

SUGGESTED MOUNTING METHODS

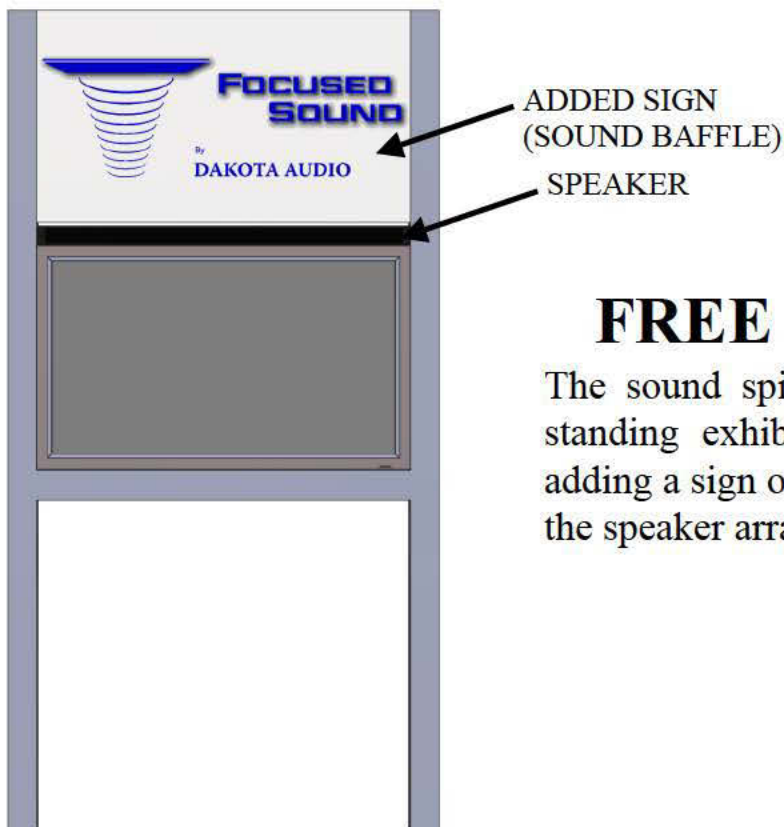
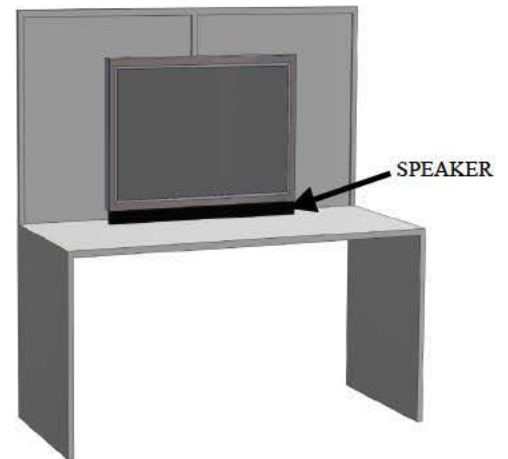


DESK

By mounting the speaker at the bottom of the monitor, the monitor and the surface of the desk help reduce the sound spill to the rear.

WORK STATION

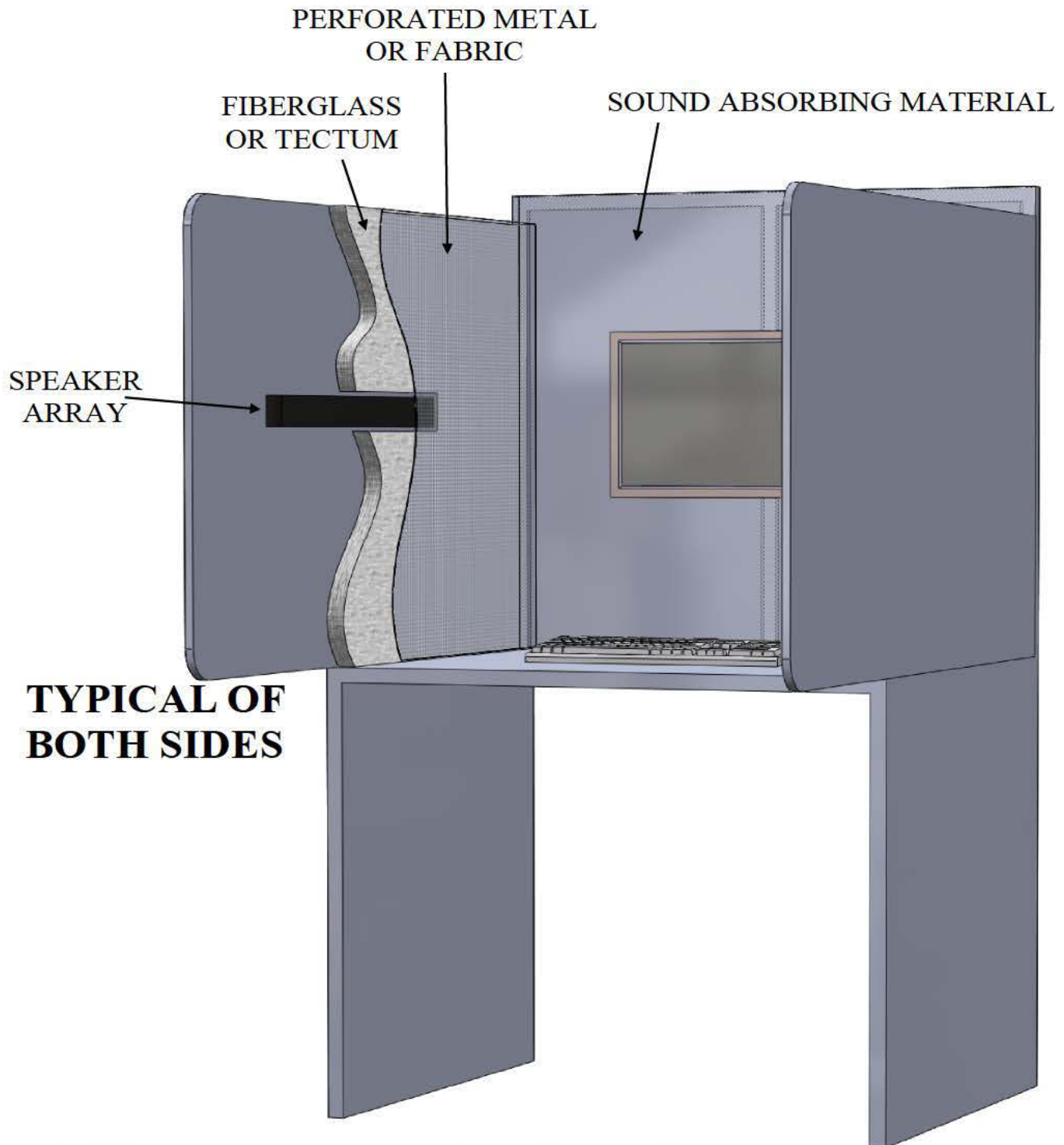
For increased isolation, especially where the workstations are mounted back to back, a physical barrier is recommended to prevent interference between the workstations.



FREE STANDING

The sound spill to the rear of a free standing exhibit can be reduced by adding a sign or other flat surface above the speaker array.

PRIVACY BOOTH



As it becomes more common to enter private information into a computer, privacy is becoming an issue.

By combining our mini-arrays with sound absorbing material, privacy can be enhanced considerably.

With the addition of background noise masking, very good sound isolation can be achieved.

AMPLIFIER

3.5mm (1/8") mini-phone jack input.
Automatically combines stereo to mono. This input is unbalanced and is susceptible to noise and hum pickup.

Volume control
This controls the 3.5mm input jack. It does not have any effect on the balanced input

Gain switch
Always try the 'HI' setting first. It's better to increase the signal level from the audio source if possible to reduce the possibility of noise or hum.

Balanced input
This input is balanced, transformer isolated. It is generally used with professional equipment or if the sound source is located some distance from the amplifier.



Power jack

12 volt, 0.5 amp power. The power supply must be regulated, low noise. The jack is 5.5 / 2.1 mm Center pin is positive.

Speaker outputs.

The amplifier can drive two speaker arrays, use either output.

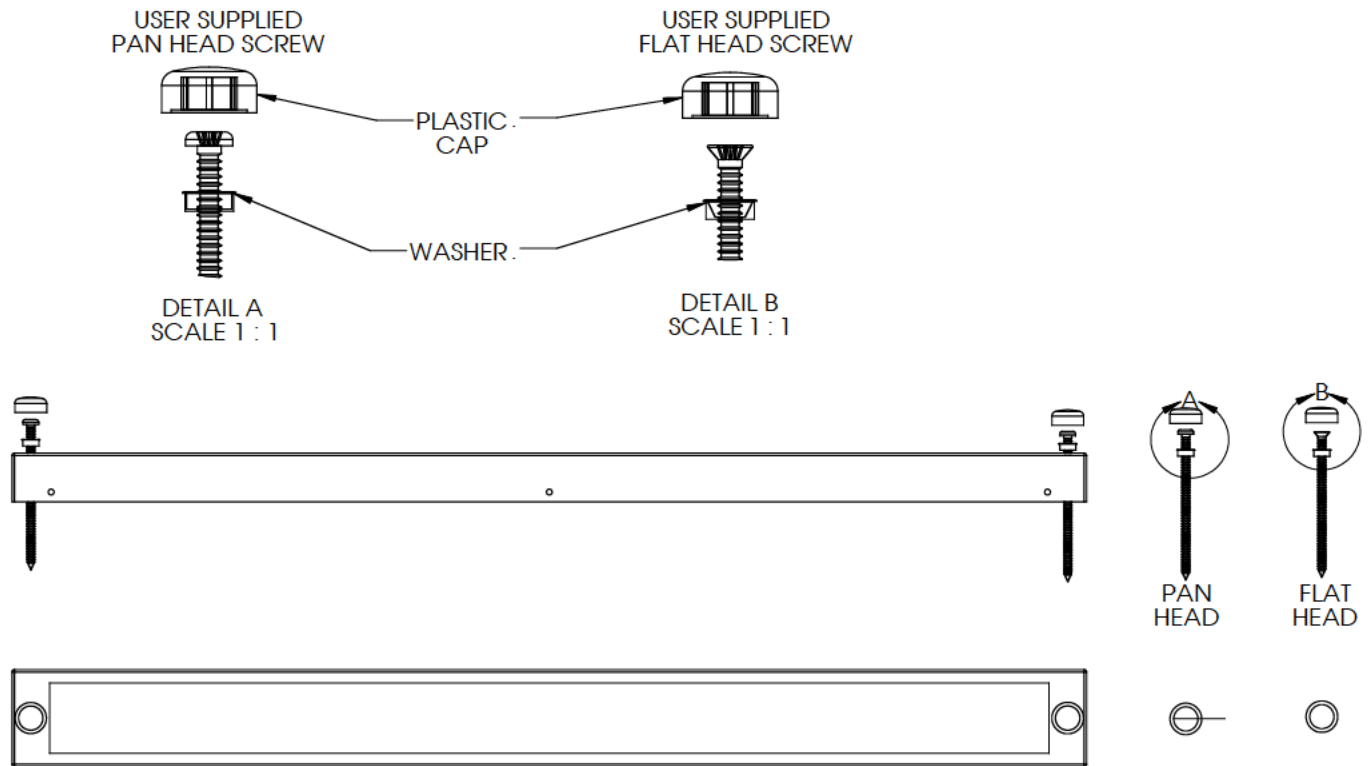
NOTE.

The cables from the speakers should not be extended. Please contact us for information.

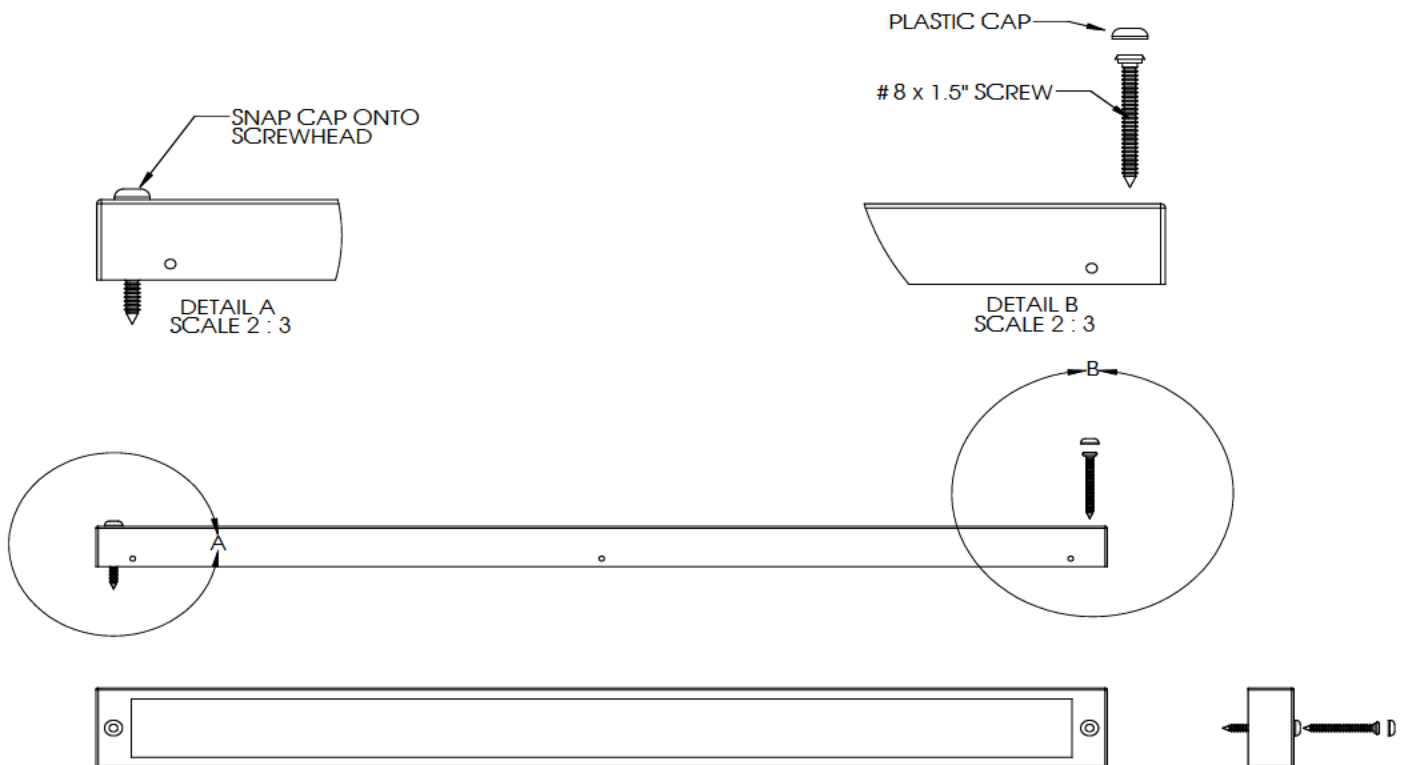
ALWAYS CONTACT US BEFORE ATTEMPTING TO EXTEND THE CABLES FROM THE SPEAKER HOUSING TO THE AMPLIFIER.

IF YOU HAVE HUM OR NOISE, GIVE US A CALL,
WE PROBABLY HAVE A SOLUTION.

MOUNTING

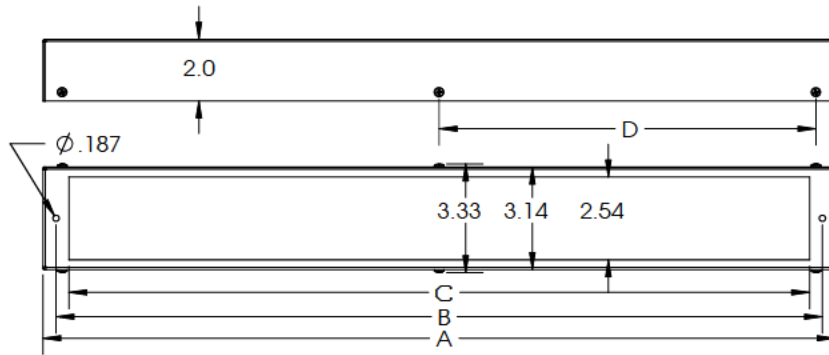


MA-4 & MA-5 WITH USER SUPPLIED MOUNTING SCREWS



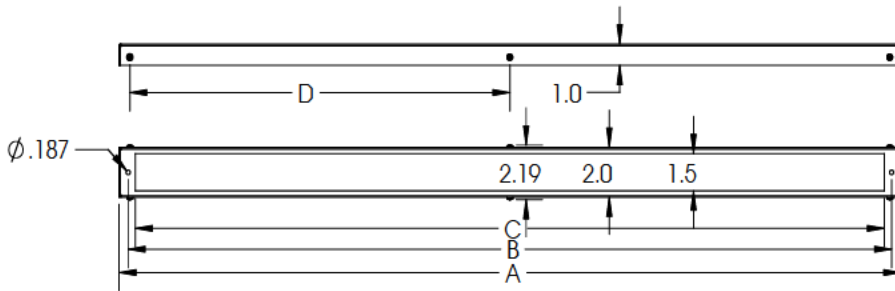
MA-4 MOUNTING WITH INCLUDED SCREWS AND CAPS

DIMENSIONS



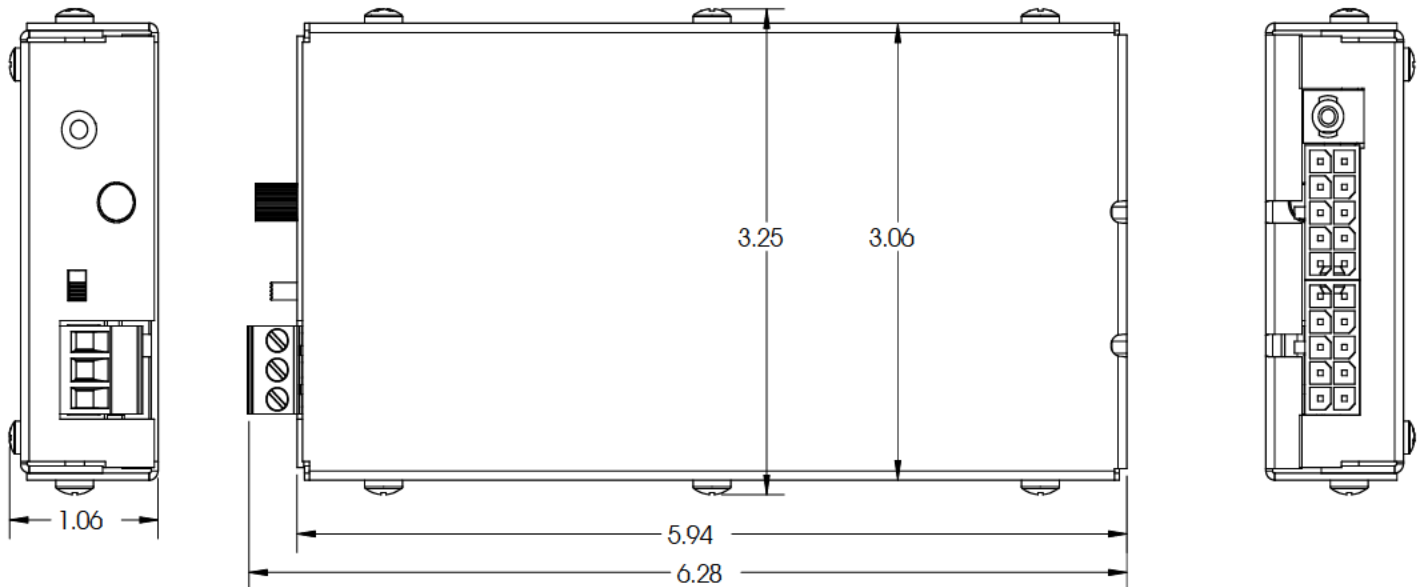
A	B	C	D
22"	21.50	20.5	10.44
23"	22.25	21.5	10.94
25"	24.25	23.5	11.94
30"	29.25	28.5	14.44
36"	35.25	34.5	17.44
38"	37.25	36.5	18.44

MA-5 DIMENSIONS



A	B	C	D
18"	17.11	16.4	8.18
22"	21.26	20.5	10.25
23"	22.26	21.5	10.75
25"	24.16	23.4	11.71
30"	29.16	28.4	14.21
36"	17.21	34.4	35.07
38"	37.16	36.4	18.21

MA-4 DIMENSIONS



AMPLIFIER DIMENSIONS

THESE DIMENSIONS ARE SUBJECT TO CHANGE

We need to give credit to Mr. William Lobb who, while employed at Jaffe Holden Acoustics, co-invented this technology.

Some of the ideas presented here the result of conversations with Bill over the years.

The SonicBeam™ Speaker System

SB-40

Technical Information



Physical Properties

The SonicBeam has a very thin rectangular enclosure.

Size: 39.4375 "W x 2.875"H x 3.6875"D

Weight: 5.9 lbs.

Isolation

The SB-40 provides an isolated audio experience for a small group of listeners.

12 dB SPL drop two feet from center of the focused field.

Stereo Separation

The sound created by the SB-40 SonicBeam produces stereo reproduction.

Channel Separation: 6dB

The Isolated Listening Region

The listening area is a beam 40" wide that extends out 2 meters in front of the speaker.

Listening Region Dimensions:

3.33'H x 3.33'W x 6.56'D

Installation

The SonicBeam has mounting gromits placed 15" apart on the top of the speaker. An optional bracket is available to mount the SonicBeam underneath a screen.

Connect to the Myriad amplifier with 3-conductor speaker wire.

Amplifier Power Requirements

Minimum: 1 watts per Channel

Maximum: 25 watts per Channel

Speaker Impedance

4 Ω Stereo, 8 Ω Mono

Sensitivity

100 dB SPL 1 watt, 1 meter

Frequency Response

150Hz - 20kHz, +/-2dB *

* When using the Myriad amplifier only. Specifications using an alternative amplifier will differ.

 **BROWN INNOVATIONS, INC.**

Sales: 1545 W. Nelson, 2nd Floor, Chicago, IL 60657

Phone 773.477.7500, Fax: 773.477.7501

Manufacturing: 369 Congress St., Boston, MA 02210
Phone: 617.357.1000, Fax: 617.357.1001

www.purestereo.com US Patent No. 5,532,438

Model No.: PMT-37N28AL01-04
Product Line: Tymphany

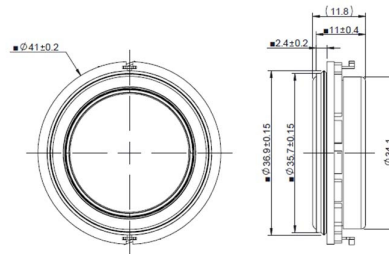
Rev: 1
Last Update: 2017-03-03 02:00:02

Product Description

This 37 mm 4 ohm compact Premium Micro Transducer is designed for computer, television array, and similar applications. It features a neodymium-iron-boron magnet, a light aluminium cone, and a high-temperature polycarbonate frame. The PMT family's transducers feature low resonant frequencies and a full range bandwidth.



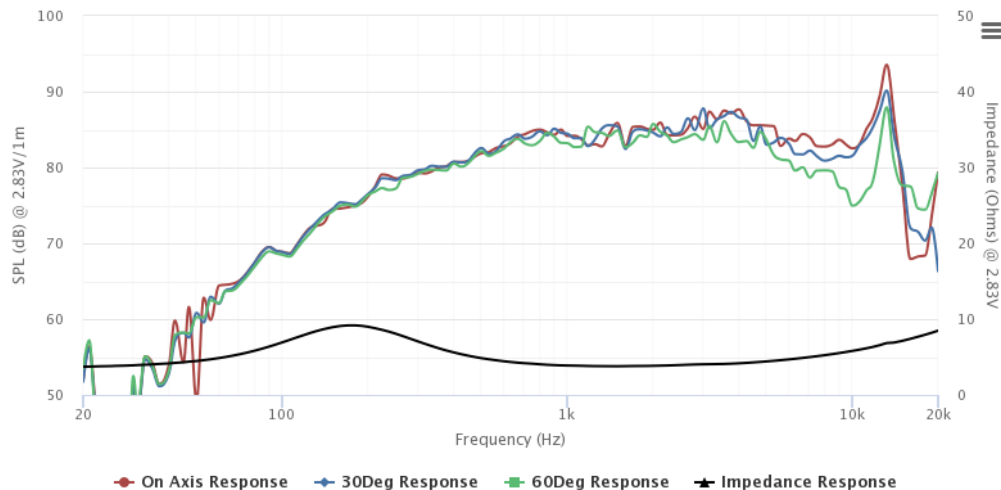
Mechanical Drawing



Specifications

DC Resistance	Revc	Ohms	3.58	5.0%	Energy Bandwidth Product	EBP	(1/Oes)*fs
Minimum Impedance	Zmin	Ohms	3.78	7.5%	Moving Mass	Mms	g
Voice Coil Inductance	Le	mH	0.06		Suspension Compliance	Cms	um/N
Resonant Frequency	Fs	Hz	167.6	15%	Effective Cone diameter	D	cm
Mechanical Q Factor	Qms		1.28		Effective Piston Area	Sd	cm ²
Electrical Q Factor	Qes	0.5			Effective Volume	Vas	L
Total Q Factor	Qts		0.36		Motor Force Factor	BL	Tm
Ratio Fs/Qts	F	Fs/Qts	466.85		Motor Efficiency Factor	β	(T*M ²)/Ohms
Half Space Sensitivity @2.83V	db@2.83V/1M	dB	84.25	+/- 1.0db	Voice coil former Material	VCfm	ASV
Half Space Sensitivity @1W/1M	db@1W/1M	dB	81	+/- 1.0db	Voice coil inner diameter	VCd	mm
Gap Height	Gh	mm	2		Rated Noise Power	P	W
Maximum Linear Excursion	Xmax	mm	0.1		Test Spectrum Bandwidth	200Hz-20k Hz	
Ferrofluid Type	FF				Driver Size	Inch	37 mm
Driver Mass	Kg	0.04					

Frequency and Impedance Response

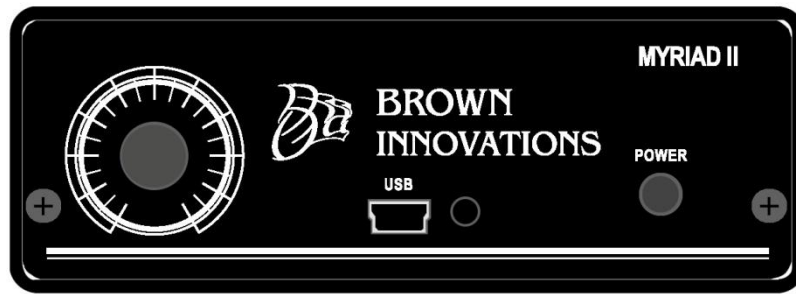


Highcharts.com

The Myriad

DSP Amplifier

Technical Information



A compact, low power audio amplifier that utilizes DSP (Digital Signal Processing) to control and process audio.

Performs as a conventional amplifier or utilize a micro SD memory card.

Audio playback can be controlled using the built in function control or an optional multi-push button or sensor option.

Audio processing possibilities include equalization, time delay, compression, soft clipping, normalization, etc.

USB connection provides communication with a PC for programming and firmware updates.

Audio Playback

Play any analog audio through the single 3.5 mm input.

Digital audio can also be played from a micro SD card in Wave 48K format.

Nominal Output Power and Impedance

The Myriad amplifier uses a class D switching amplifier. This design is very efficient, minimizing the amount of power needed to create a high output.

15 watts continuous per channel into 6 Ω

30 watts peak per channel into 6 Ω

Control

Volume: Digital Encoder with push button

Multi-button and Sensory input: available through expansion options.

Connections

Audio In: 3.5 mm, input impedance 5k Ω

Speaker Output: Removable 3 conductor screw terminal block.

Microphone Input: Two 3.5 mm (3 conductors) jack with 1.5V phantom power supply for Bii electret microphone, input impedance 2.2k Ω
(Available with SmartVolume add-on.)

USB: 2.0 Full Speed (12Mb)

SD Memory card: 1 to 32 GB

Internal expansion Slot: utilizes optional function boards to provide multiple inputs for control.



Physical Dimensions

1.6"H x 4.125"W x 4.5"D (4.1 x 10.5 x 11.5cm)

Weight

8.3 oz (.24kg) (without wall pack power supply)

Shipping Weight: 2lbs. (1kg)

Power Supply

12 to 20 Vac or 18 to 30Vdc 30 watt min.

17 Vac 1.25 Amp 120 Vac wall pack supplied

100 Vac and 220 Vac available on request

BROWN INNOVATIONS, INC.

Manufacturing: 369 Congress St., Boston, MA 02210

Phone: 617-357-1000, Fax: 617-357-1001

Sales: 1545 W. Nelson, Chicago, IL 60657

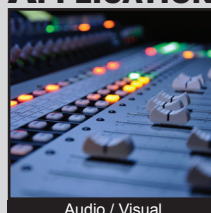
Phone 773-477-7500, Fax: 773-477-7501

PV5 SERIES ANTI-VANDAL SWITCH

ANTI-VANDAL SWITCHES
DETECTOR SWITCHES
DIP SWITCHES
KEYLOCK SWITCHES
NAVIGATION SWITCHES
PUSHBUTTON SWITCHES
ROCKER SWITCHES
ROTARY SWITCHES
SLIDE SWITCHES
SNAP ACTION SWITCHES
TACTILE SWITCHES
TOGGLE SWITCHES
CAP OPTIONS



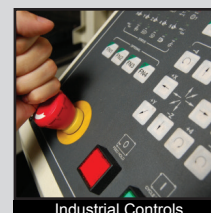
APPLICATIONS / MARKETS



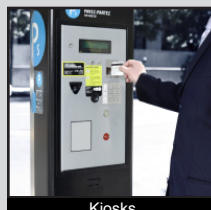
Audio / Visual



Security Devices



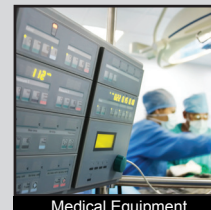
Industrial Controls



Kiosks



Electrical Housewares



Medical Equipment

RoHS

SPECIFICATIONS

Electrical Rating: 2A, 36VDC
Mechanical Life: 1,000,000 Cycles
Electrical Life: 200,000 Cycles
Contact Resistance: 50mΩ Max.
Insulation Resistance: 1000 MΩ Min.
Dielectric Strength: 2,000VAC
Operating/Storage Temperature: -25°C to 55°C
Travel: 2.50mm
Moisture Protection: IP65
Contact Arrangement: SPST Off-(On)
Actuation Force: 5 N
Panel Thickness: 1-5mm
Mounting Nut Torque: 0.3Nm

FEATURES & BENEFITS

- Multiple actuator finish options
- Solder or screw termination options
- Raised or domed actuator options
- IP65 rated

PART NUMBER CONFIGURATOR

Series	Actuator Options	Terminal Options	Function Options	Rating Options	Body Finish Options	Actuator Finish Options	Contact Material Options
PV5	H	2	4	0	N	1	NONE
PV5	H - Raised S - Domed	2 - Solder 6 - Screw	4 - 1 Pole Off - (On)*	0 - 2A, 36VDC	N - Nickel S - Polished Stainless 1 - Black Anodized	1 - Black 2 - White 6 - Yellow 7 - Blue 8 - Green 9 - Red N - Nickel S - Polished Stainless	NONE - Silver G - Gold

NOTES:

*(ON) Denotes function is momentary

Specifications subject to change without notice



E-SWITCH®

www.e-switch.com

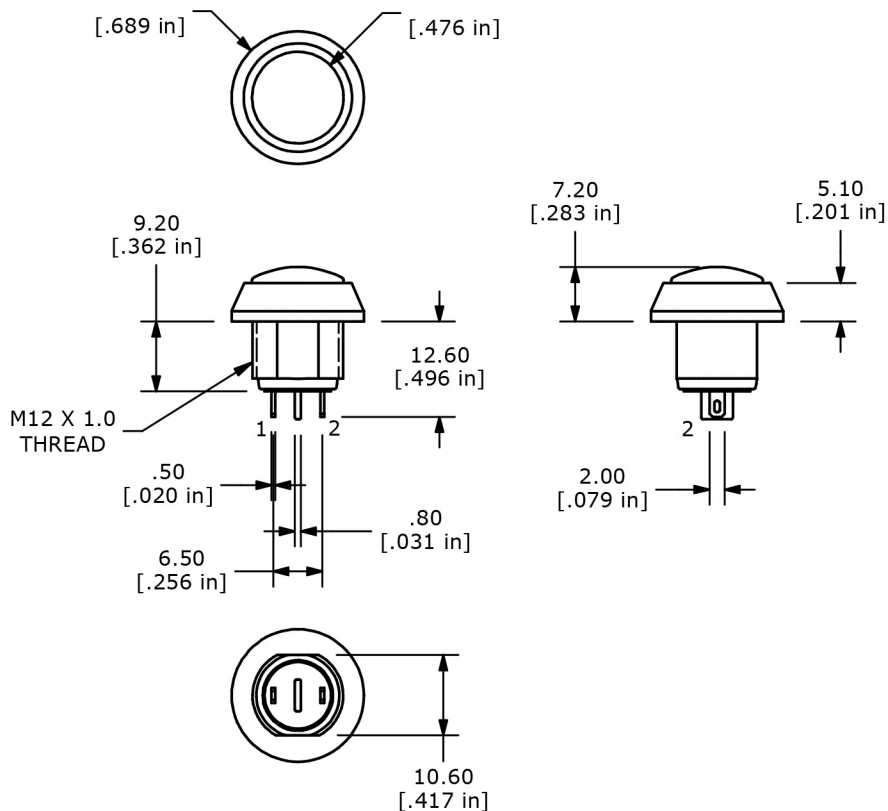
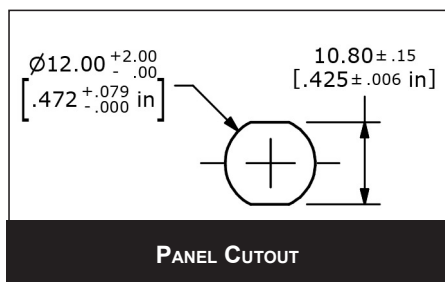
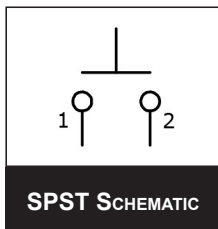
800.867.2717

EE-351

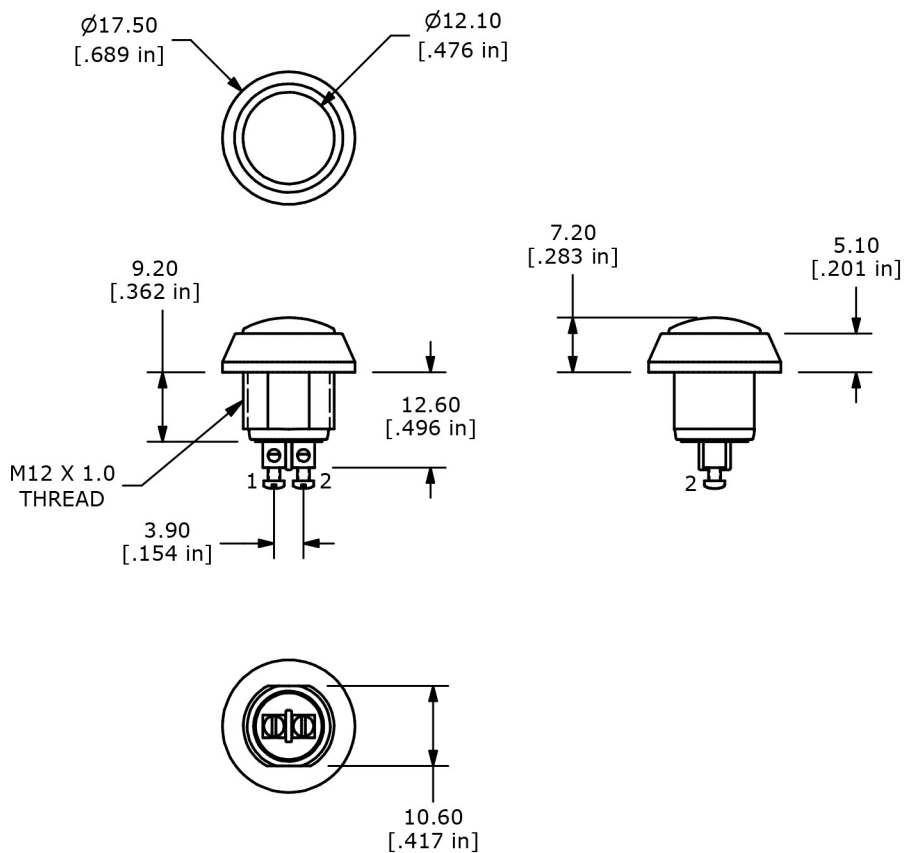
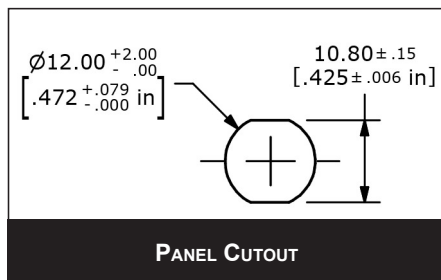
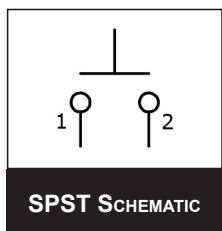
PV5 SERIES ANTI-VANDAL SWITCH

BODY DIMENSIONS - FLATS

SOLDER TERMINATION



SCREW TERMINATION



E-SWITCH®

www.e-switch.com

800.867.2717

EE-36

2

ANTI-VANDAL
SWITCHES

DETECTOR
SWITCHES

DIP
SWITCHES

KEYLOCK
SWITCHES

NAVIGATION
SWITCHES

PUSHBUTTON
SWITCHES

ROCKER
SWITCHES

ROTARY
SWITCHES

SLIDE
SWITCHES

SNAP ACTION
SWITCHES

TACTILE
SWITCHES

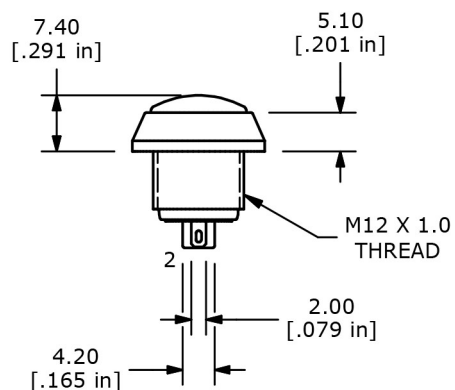
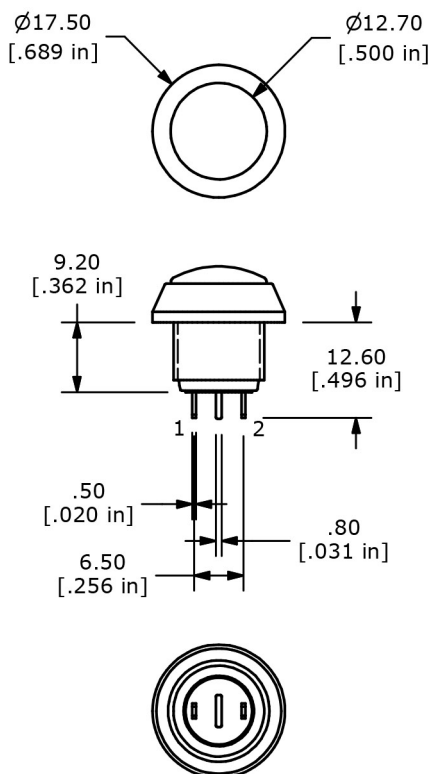
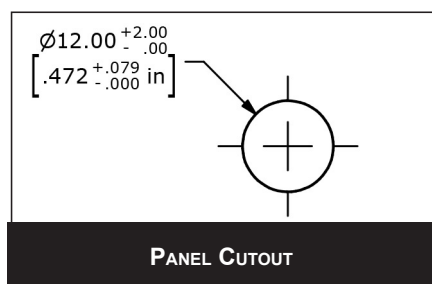
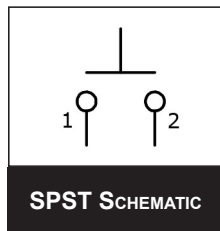
TOGGLE
SWITCHES

CAP
OPTIONS

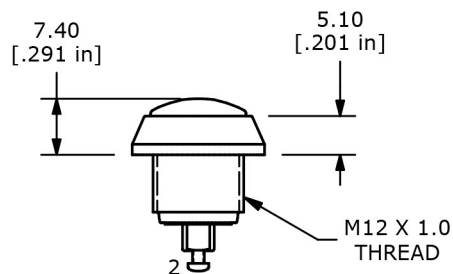
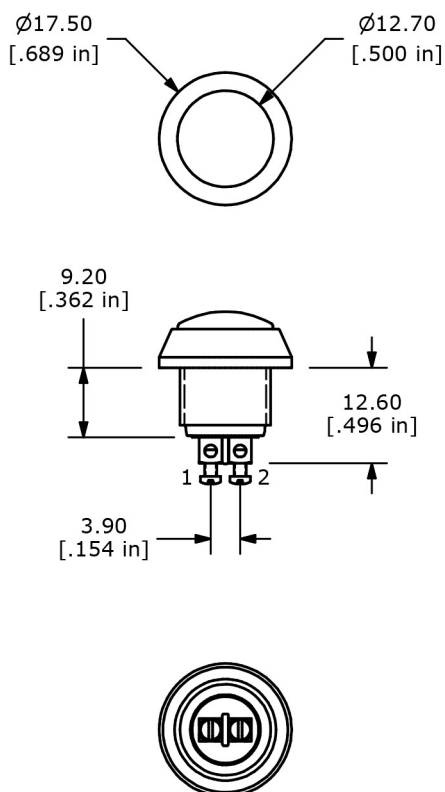
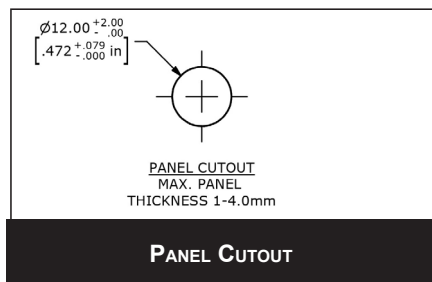
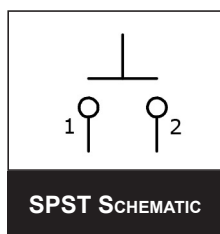
PV5 SERIES ANTI-VANDAL SWITCH

BODY DIMENSIONS - NICKEL, BLACK ANODIZED OR STAINLESS

SOLDER TERMINATION



SCREW TERMINATION



E-SWITCH®

www.e-switch.com

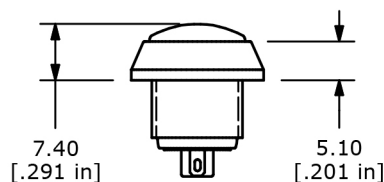
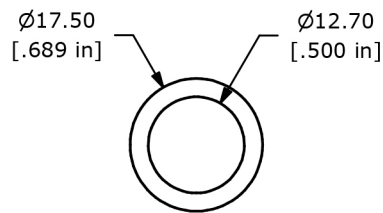
800.867.2717

EE-37

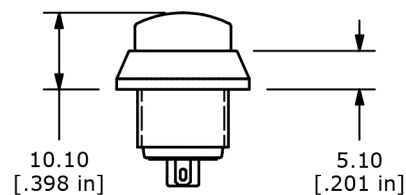
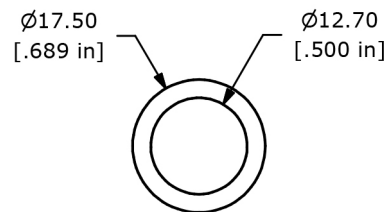
3

ACTUATOR OPTIONS

NICKEL OR STAINLESS

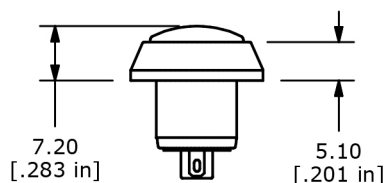
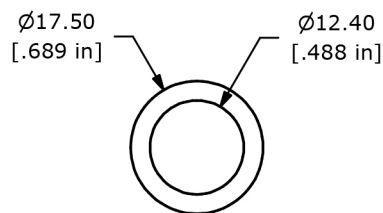


DOMED ACTUATOR

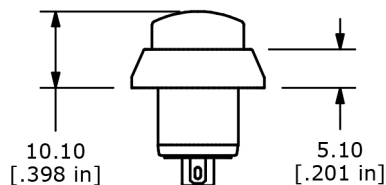
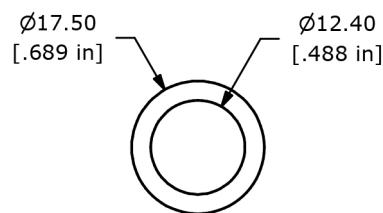


RAISED ACTUATOR

BLACK, WHITE, YELLOW, BLUE, GREEN OR RED



DOMED ACTUATOR



RAISED ACTUATOR





SALES AREA CUT SHEETS

Categories ▾ / Retail Type ▾ / Specials ▸


 Search...

 Search store fixtures, shelves, store displays, etc...

[Home](#) / [slatwall](#) / [slatwall panels](#) / [mdf & eq slatwall panels - 3" o.c.](#) / [slatwall panels - paint grade 3" o.c.](#) / *Paint Ready Slatwall - Horizontal*

Slatwall Panels

MDF & EQ Slatwall Panels - 3"
O.C. [^](#)

All MDF & EQ Slatwall Panels - 3"
O.C.

Slatwall Panels - Melamine (LPL)
3" O.C.

Slatwall Panels - Woodgrain
Melamine (LPL) 3" O.C.

Slatwall Panels - Veneer
Woodgrain 3" O.C.

Slatwall Panels - High Pressure
Laminate 3" O.C.

Slatwall Panels - Paint Grade 3"
O.C.

Mirrored Slatwall Panels - 3" O.C.

MDF & EQ Slatwall Panels - 6"
O.C. [v](#)

Plastic Slatwall [▸](#)

Metal Slatwall [v](#)

Textured Slatwall - Designer
Slatwall [v](#)

Specials - Slatwall Panels [▸](#)

Slatwall Groove Treatments

Premium Slatwall Floor Displays

Slatwall Merchandisers

Slatwall Waterfalls & Slatwall Faceouts

Slatwall Shelf Brackets

Slatwall Hooks - Metal

Slatwall Hooks - Nylon - Plexi - Lexan

Slatwall Hook Accessories

Slatwall Tube Brackets

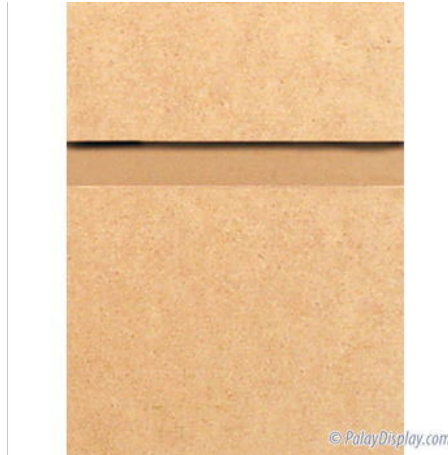
Slatbox Slatwall Display Bins

Cratebox Series Slatbox Display
Bins [▸](#)

Hobibox Series Slatbox Display
Bins [▸](#)

Popbox Series Slatbox Display
Bins [▸](#)

Shelfbox Series Slatbox Display
Bins [▸](#)



Paint Ready Slatwall - Horizontal

Price **\$38.95 EA**

Board Type
and Ship Point

Please select board type and ship poi... ▾

Quantity

2

Note: You must order at least 2 of this item.

Add to Cart

Ask a question about this product [▸](#)

SKU KIT65

Dimensions 48"H x 96"W

Color Paint Grade



Description

5

Horizontal paint ready slatwall Panel is 3/4" thick and grooved 3" on center. The Horizontal Slatwall Panel is 48"H x 96"W. Call for available groove extrusion options on this slatwall board. This slatwall panel is available in traditional MDF board or our stronger, greener EQ slatwall board. This slatwall panel ships from multiple shipping points. Please select the location nearest you for the best freight rates. If you are picking up this slatwall at our warehouse in Bloomington, MN, please make sure to select "Minneapolis, MN" from the shipping location when ordering online.

Additional Images:

Shipping Locations



[View Locations](#)

EQ: A Green Option



[Go Green](#)

MDF vs. EQ Strength



[View Comparison](#)



Related Items



Sample Application Reflects:
(2) Slim-Line Floor Gondolas
(2) 36" Slim-Lin End-Caps
(4) end-plate add-ons
(3) Optional Headers Plates



Slim-Line Floor Gondola (Starter)

Part Number: FD-0734-SW (Slatwall)

Overall Dimensions:

49.5"(W) x 54"(H) x 38"(D)

FEATURES:

- Used in conjunction with Slim-Line Endcap (FD-0561)
- Free-standing, solid metal frame.
- Quick and easy installation and change outs.
- Can be setup individually or in a series.
- Flexibility to reconfigure and expand as needed.

OPTIONS:

- Frame is available in Black & White Finish
- Panel options include: Slatwall, Solid, Slat-Grid and/or Full Graphic Background.
- Standard panel colors are White, Black, Gray, Hardrock Maple, Walnut & Cherry



Slim-Line Connector provides stability to frame

Numerous panel options to choose from.

Slim-Line Panel Retainers for easy install and change-outs

Wire Management designed into uprights with end-plates to conceal after install

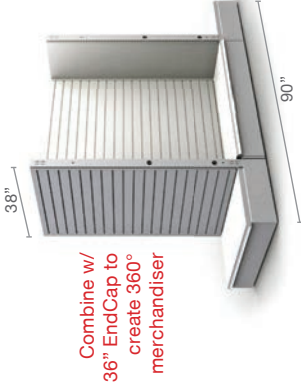
Slim-Line T-Uprights w/ Standards Hole Pattern for shelving and brackets

Heavy Duty Metal Base Deck

Durable Metal Kick Plate

Simplicity of Parts

Ships flat (RTA). Assembles in minutes!

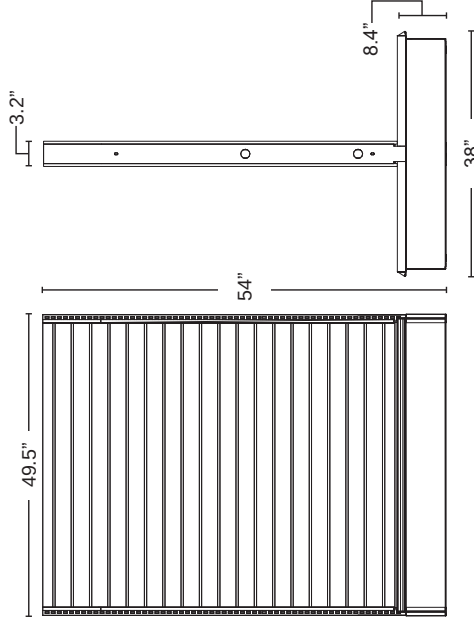


Combine w/ 36" EndCap to create 360° merchandiser

Available Accessories:

shelves, back-lit headers, brackets, mega-bar, hooks, end-caps. (see accessories page)

simple. sleek. stylish.





CALL US
877.445.4486
 Mon-Fri 6am-6pm PT
 Sat 7am-5pm PT

MURO Magnetic Board

By **Blomus**

\$35.09 - \$140.39

Select items in stock, choose options to view or [check availability](#).

4.7 (9) Write a review

FREE SHIPPING on orders over \$75.

EXCLUSIVE FREE GIFT: Only at Lumens, use code **STRING** at checkout to get a FREE [Vintage String Light Kit](#) by Bulbrite (a \$100 value) with qualifying \$400 purchase. One per customer, while supplies last. Limited time only.

Size: 45.28 x 29.53 inch

11.81 x 15.75 inch	15.75 x 19.69 inch	15.75 x 31.5 inch	19.69 x 23.62 inch	23.62 x 35.43 inch	45.28 x 29.53 inch
11.81 x 15.75 inch	15.75 x 19.69 inch	15.75 x 31.5 inch	19.69 x 23.62 inch	23.62 x 35.43 inch	45.28 x 29.53 inch



ITEM #: R214620
 MFR ID: 66745

\$140.39

IN STOCK Ships within 2 business days.

Details

Create a contemporary instant message center with the Blomus MURO Magnetic Board. It is made out of stainless steel and comes in several convenient sizes. For a seamless, coordinated look, try using the MURO Magnetic Board with the MURO set of 6 Magnets.

Blomus, headquartered in Germany, specializes in the design and manufacture of beautifully engineered home and office accessories in modern stainless steel styles.

The MURO Magnetic Board is available with the following:

Details:

- Finish: Stainless Steel
- Material: Stainless Steel
- Warranty: 2 year
- Made In Germany

Options:

- **Size:** 11.81 x 15.75 inch, 15.75 x 19.69 inch, 15.75 x 31.5 inch, 19.69 x 23.62 inch, 23.62 x 35.43 inch, 45.28 x 29.53 inch

Dimensions:

- **11.81 x 15.75 inch Option Item:** Width 11.81", Height 15.75", Depth 0.48"
- **15.75 x 19.69 inch Option Item:** Width 15.75", Height 19.69", Depth 0.48"
- **15.75 x 31.5 inch Option Item:** Width 15.75", Height 31.5", Depth 0.48"
- **19.69 x 23.62 inch Option Item:** Width 19.69", Height 23.62", Depth 0.48"
- **23.62 x 35.43 inch Option Item:** Width 23.62", Height 35.43", Depth 0.48"
- **45.28 x 29.53 inch Option Item:** Width 29.53", Height 45.28", Depth 0.48"

Ratings: Based on 9 reviews, this product is rated 4.7 out of 5.

