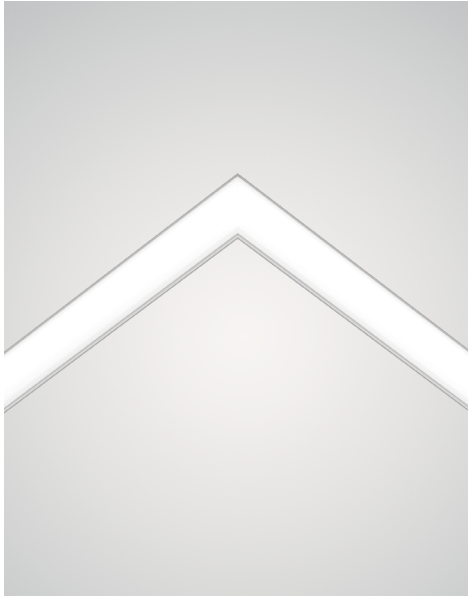


VIA 1.5 RECESSED PATTERN

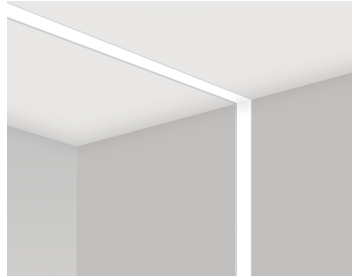
DIRECT
STATIC WHITE, BIOS



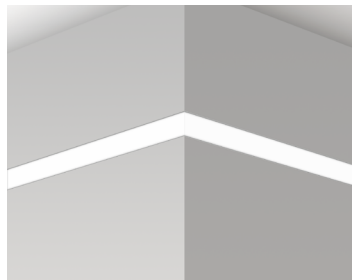
Project: _____
Type: _____



Leveled corner



Inner corner



Outer corner

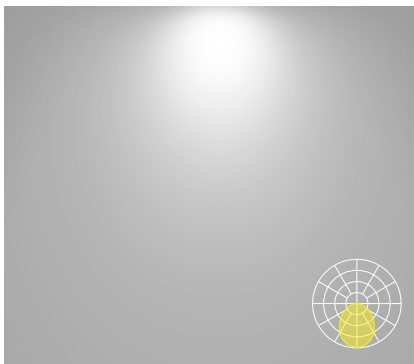
DESCRIPTION

Our elegant, flexible Via family is composed of linear, pendant, surface, recessed, and wall mounted luminaires. Each lighting fixture can be installed as a discrete luminaire or in continuous runs or patterns in which a combination of luminaires forms part of a custom design that can also incorporate less conventional acute and obtuse angles. Via 1.5 Recessed is offered with Lambertian, asymmetric, or wall wash optics.

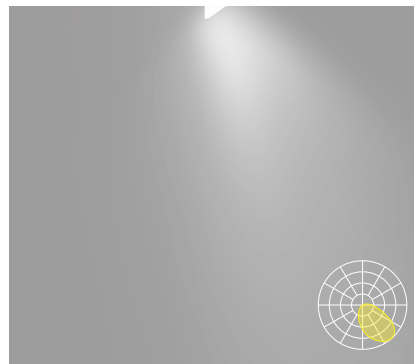
Up to 118 lm/W performance

IC RATED

SENSORS
For latest
information
on sensors,
click [here](#).



HLO¹
High-Efficiency Lambertian Optic



ARO
Asymmetric Refractive Optic



WRO
Wall Wash Refractive Optic

¹Drop lens positions available with HLO only.

VIA 1.5 RECESSED PATTERN



DIRECT
STATIC WHITE, BIOS

Project: _____
Type: _____

Order Guide

A drawing of your pattern is required - anything from a line drawing to an architectural drawing.

LUMINAIRE ID	DISTRIBUTION	OPTIC	LENS POSITION	LIGHT SOURCE ²	CRI
VIA1.5RPAT	D				
VIA1.5RPAT - Via 1.5" Recessed Pattern	D - Direct	HLO - High-Efficiency Lambertian Optic ARO - Asymmetric Refractive Optic WRO - Wall Wash Refractive Optic	FH - Flush 0.5D ¹ - 0.5" drop 1.5D ¹ - 1.5" drop ¹ Available with HLO only.	SW - Static white BIOSST ^{3,4} - BIOS Biological Static BIOSDY ^{3,4} - BIOS Biological Dynamic BIOSTU ^{3,4} - BIOS Biological Tunable ² Chromawerx Sola, Duo and Quadro also available. Consult other spec sheets. ³ Only available with low and medium lumen packages. ⁴ See page 7 for details.	80CRI - 80 CRI 90CRI ⁵ - 90 CRI ⁵ Not available with BIOS.

LUMEN PACKAGE	COLOR TEMP.	PATTERN LENGTH	CORNER TYPE ¹⁴
200LMF ^{6,7,8} - Hypo output 200 lm/ft 350LMF - Low output 350 lm/ft 500LMF - Medium output 500 lm/ft 750LMF - High output 750 lm/ft 900LMF ^{9,10,11} - Hyper output 900 lm/ft ⁶ Minimum 4' fixture. ⁷ Available with HLO only. ⁸ Not available with ELV/TRI driver options. ⁹ Not available with 90CRI. ¹⁰ Fixture will be very bright. Use in suitable applications. ¹¹ Only available for non-IC applications.	27K ¹² - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K ¹² - 5000K ¹² Not available with BIOS.	##FT##IN(##X##FT#IN-##X##FT#IN-...) ¹³ - ##FT##IN: total nominal length of pattern in feet and/or inches ##X: quantity of each section ##FT#IN: nominal length of each section in feet and/or inches Continuous runs: lengths over 12' ¹³ Minimum 2'.	#LEV2C(##) - 2-way leveled corner #LEV3C(##) ^{15,16} - 3-way leveled corner #LEV4C(##) ^{15,16} - 4-way leveled corner #INN2C(90) ^{16,17} - 2-way inner corner #OUT2C(90) ^{16,17} - 2-way outer corner ¹⁴ Specify quantity (#) and angle (##) for each required corner type. ¹⁵ Separate angles with a "+" if more than one type is required, e.g. 1LEV4C(60+120). ¹⁶ Not available with ARO/WRO. ¹⁷ Available with 90° only. Consult factory for other angles. ¹⁸ Minimum angle is 30°.

VOLTAGE	DRIVER ²⁰	ELECTRICAL	ELECTRICAL SECTIONS (optional) ^{26,27}	MOUNTING CEILING ³²	MOUNTING WALL
120V - 120V 277V - 277V UNV - 120V-277V 347V ¹⁹ - 347V ¹⁹ Available with D1 driver only.	D1 - 1% 0-10V DA ²¹ - DALI LDE1 ²¹ - Lutron Hi-lume 1% Eco ELD1 - eldoLED 1% ECODrive 0-10V ELDO - eldoLED 0.1% SOLODrive 0-10V ELV ²² - ELV 120V TRI ²² - TRIAC 120V ²⁰ PoE (Power-over-Ethernet) compatible. Consult factory for details. ²¹ On-site commissioning is required. ²² Available with 120V only.	1C - 1 circuit #MC ²³ - Multi circuit EC - Emergency-powered fixture NL - Night light fixture DL - Daylight fixture GTD ^{24,25} - Generator transfer device fixture ²³ Specify total number of circuits (#), including any required for electrical section or Micro Spot options. Provide drawing or layout specifications. Minimum 4' section per circuit. ²⁴ Minimum 4' fixture. ²⁵ Not available with 347V.	#EC## ²⁸ - Emergency-powered section #NL## ²⁸ - Night light section #DL## ²⁸ - Daylight section #GTD## ^{28,29,30} - Generator transfer device section #EMB ^{30,31} - Emergency battery NA - None ²⁶ Specify with multi circuit (#MC) electrical option only. ²⁷ Provide drawing or layout specifications. Consult factory for other configurations. Default section length is 4'. ²⁸ Specify quantity (#), and section length in inches (##). ²⁹ Minimum 4' section. ³⁰ Not available with 347V. ³¹ Specify quantity (#). All batteries will be on the same circuit. Each battery powers a 4' section.	TG9 - T-bar 9/16" TG15 - T-bar 15/16" TB9 - T-bar 9/16" TB15 - T-bar 15/16" ST - Screw slot T-bar DTR - Drywall trim DTL - Drywall trimless DMF - Drywall mud flange NA - Not applicable MFM ³³ - Multiple flange mounting ³² Transition mounting options also available (e.g. Recessed to Pendant/Surface), consult factory for details. ³³ See page 4 for details.	DTR - Drywall trim DTL - Drywall trimless DMF - Drywall mud flange NA - Not applicable

FINISH	CONTROL ³⁴	OPTIONS	MODULE (optional) ^{41,42,43}
W - Matte white B - Matte black CF# - Custom finish, specify RAL#	STANDALONE CONTROLS ^{35,36,37} Specify the quantity (#) of sensors per fixture. #OMS ³⁸ - Onboard Occupancy #OMS## ³⁹ - Onboard Occupancy with bi-level dimming #ODS - Onboard Daylight #OCS - Onboard Occupancy & Daylight NA - None ³⁴ Standalone and connected control options cannot be combined. ³⁵ Available with D1 driver and 1 circuit options only. ³⁶ Minimum 4' per zone. Provide control zone length. ³⁷ Available with flush lens option only.	CONNECTED CONTROLS ⁴⁰ LU - Lutron AWN - Lutron Athena Wireless Node RF Only AWNS - Lutron Athena Wireless Node Sensor EN - Enlighted ENC - Encelium WL - Cooper Wavelinx AN - Acuity nLight CA - Casambi LG - Legrand ³⁸ Fixture turns off when no occupancy. ³⁹ Fixture dims to specified light level % (##). ⁴⁰ Consult factory for connected controls.	FUI20 - Fuse 120V FU277 - Fuse 277V FWC - Flexible whip cable (6' std) CP - Chicago Plenum NA - None #MS25() - Micro Spot 25° #MS35() - Micro Spot 35° #MS50() - Micro Spot 50° NA - None ⁴¹ See page 3 for ordering details. ⁴² If more than one option is specified, separate codes with a "+", e.g. 1MS25()+1MS35(). ⁴³ Not available with ELV/TRI driver options.

VIA 1.5 RECESSED PATTERN



DIRECT

STATIC WHITE, BIOS

Module

For a module, specify the options in the parentheses.

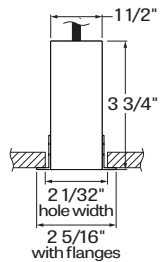
Example: 1MS25(SW-80CRI-400LM-27K-W)

MODULES (optional)					
MODULES ^{1,2,3}	LIGHT SOURCE	CRI	LUMEN PACKAGE ⁴	COLOR TEMP.	FINISH
#MS25() - Micro Spot 25° #MS35() - Micro Spot 35° #MS50() - Micro Spot 50° NA - None ¹ Specify quantity (#). ² 6" blank per module. ³ If more than one option is specified, separate codes with a "+", e.g. 1MS25(-)+1MS35(-).	SW - Static white	80CRI - 80 CRI 90CRI - 90 CRI	400LM - 400 lm ⁴ 5 W. Wattage is for reference only. May change based on driver.	27K - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K - 5000K	W - Matte white B - Matte black

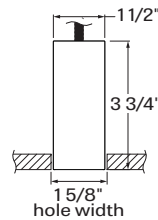
Dimensions

DRYWALL

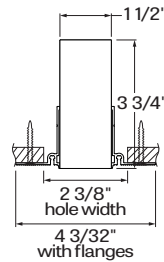
DTR - Drywall Trim



DTL - Drywall Trimless

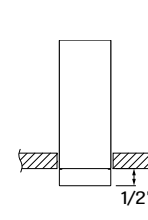


DMF - Drywall Mud Flange

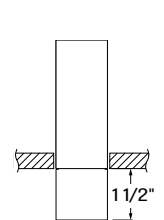


LENS POSITIONS

0.5" Drop Lens ¹

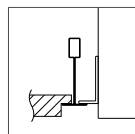
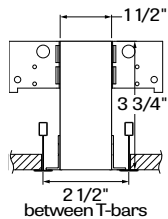


1.5" Drop Lens ¹

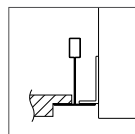


¹ Drop lens positions available with HLO only.

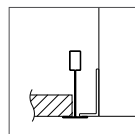
GRID



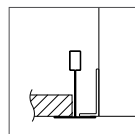
TG9
Tegular 9/16"



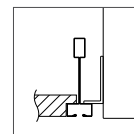
TG15
Tegular 15/16"



TB9
T-bar 9/16"

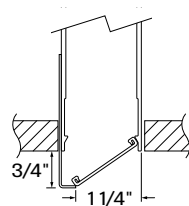


TB15
T-bar 15/16"



ST
Screw slot T-bar

Section View



ARO / WRO

Asymmetric Refractive Optic
Widespread Direct Optic

VIA 1.5 RECESSED PATTERN

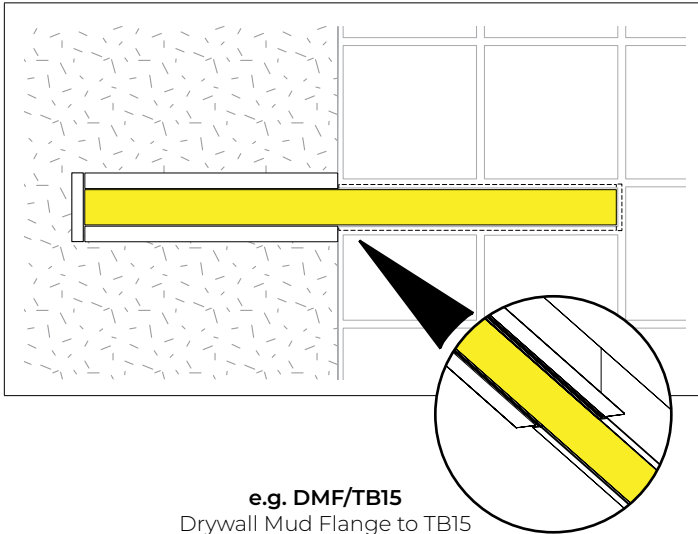
DIRECT
STATIC WHITE, BIOS

Multiple Flange Mounting Details

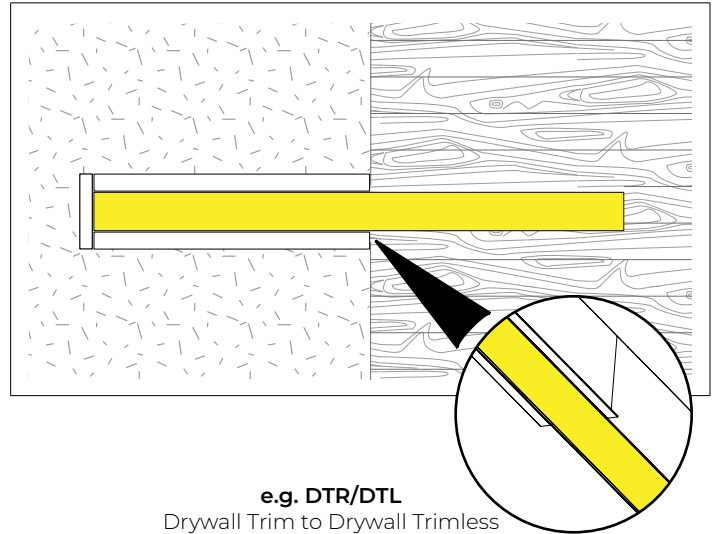
Multiple flange mounting can be specified when a fixture run needs to have a multiple flange recessed mounting detail. A drawing is required to clearly illustrate the application.

CEILING CONDITION EXAMPLES (consult factory for project specific ceiling conditions)

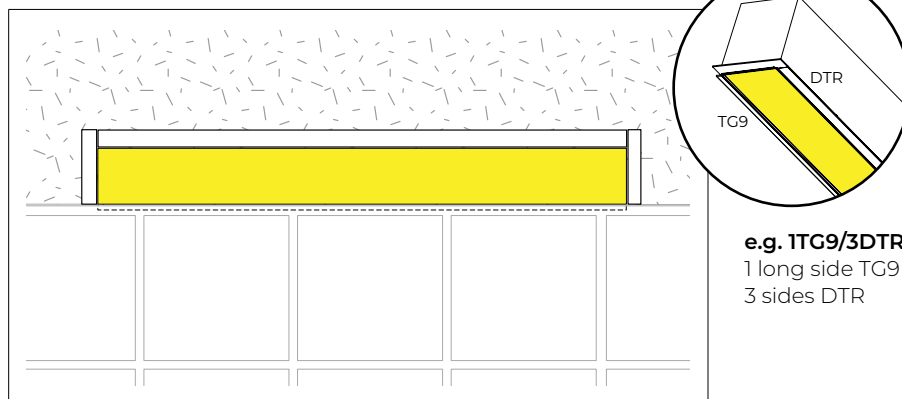
DRYWALL/GRID



DRYWALL/WOOD



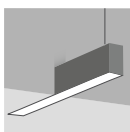
DRYWALL/GRID



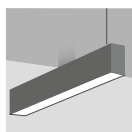
All drawings are for illustrative purposes only.

TRANSITION MOUNTING OPTIONS (consult factory for details)

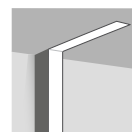
Mounting condition alters along the run of the fixture.



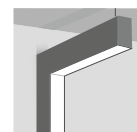
Recessed to Pendant



Surface to Pendant



Surface to Recessed in corner



Surface to Pendant in corner

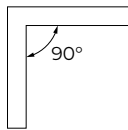
VIA 1.5 RECESSED PATTERN

DIRECT
STATIC WHITE, BIOS

Pattern Layout

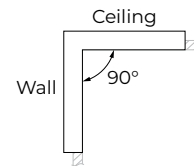
CORNER TYPES

LEVELED CORNERS

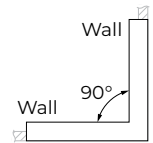


1LEV2C(90)

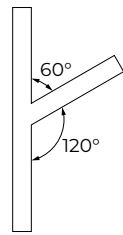
2-way



1INN2C(90)

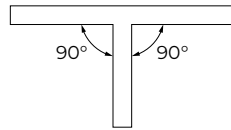


1OUT2C(90)

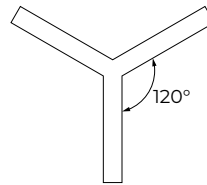


1LEV3C(60+120)

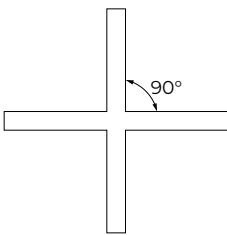
3-way



1LEV3C(90+90)

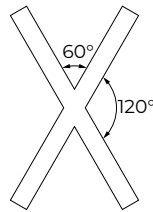


1LEV3C(120)



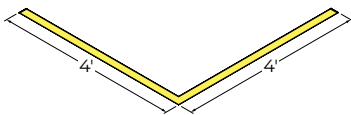
1LEV4C(90)

4-way

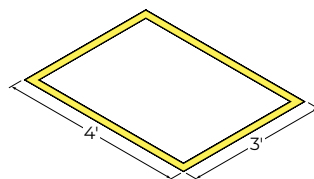


1LEV4C(60+120)

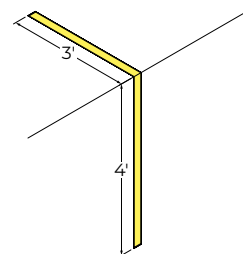
EXAMPLES



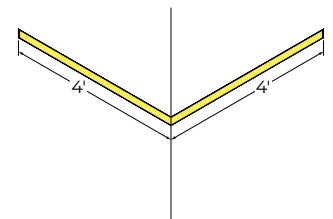
8FT(2X4FT)-1LEV2C(90)



14FT(2X4FT-2X3FT)-4LEV2C(90)



7FT(1X3FT-1X4FT)-1INN2C(90)



8FT(2X4FT)-1OUT2C(90)

VIA 1.5 RECESSED PATTERN



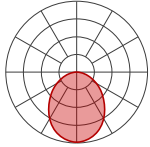
DIRECT

STATIC WHITE, BIOS

Photometrics

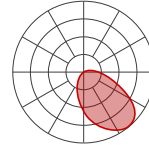
Values calculated based on a 4ft fixture at 35K and 80 CRI for all optics.

HLO (Flush Lens)



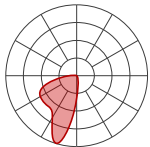
LM/FT	W/FT	LPW
200	2.7	75
350	4.8	74
500	7.0	72
750	10.9	69
900	13.4	67

ARO



LM/FT	W/FT	LPW
350	3.3	107
500	4.8	104
750	7.6	99
900	9.4	96

WRO



LM/FT	W/FT	LPW
350	3.1	112
500	4.6	109
750	7.2	104
900	8.9	101

MULTIPLIER TABLES

Use these tables to get results for different color temperatures, CRI, and drop lenses, for all photometric tables.

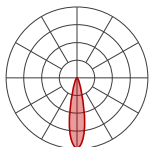
Multiplier - CCT/CRI

CCT (K)	WATTS		LPW	
	CRI 80	CRI 90	CRI 80	CRI 90
2700	1.05	1.27	0.95	0.79
3000	1.02	1.23	0.98	0.81
3500	1.00	1.19	1.00	0.84
4000	1.00	1.19	1.00	0.84
5000	0.96	1.12	1.04	0.89

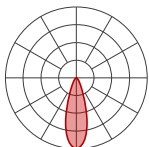
Multiplier - Drop Lens

DIRECT LENS	WATTS	LPW
Flush Lens	1.00	1.00
Drop Lens 0.5"	0.89	1.12
Drop Lens 1.5"	0.88	1.14

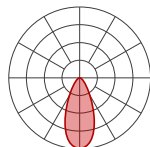
MICRO SPOT



Micro Spot 25°



Micro Spot 35°



Micro Spot 50°

DELIVERED LUMENS

Wattage	5.0									
	80					90				
CRI	2700K	3000K	3500K	4000K	5000K	2700K	3000K	3500K	4000K	5000K
Lumen	373	400	400	432	432	324	344	344	345	372

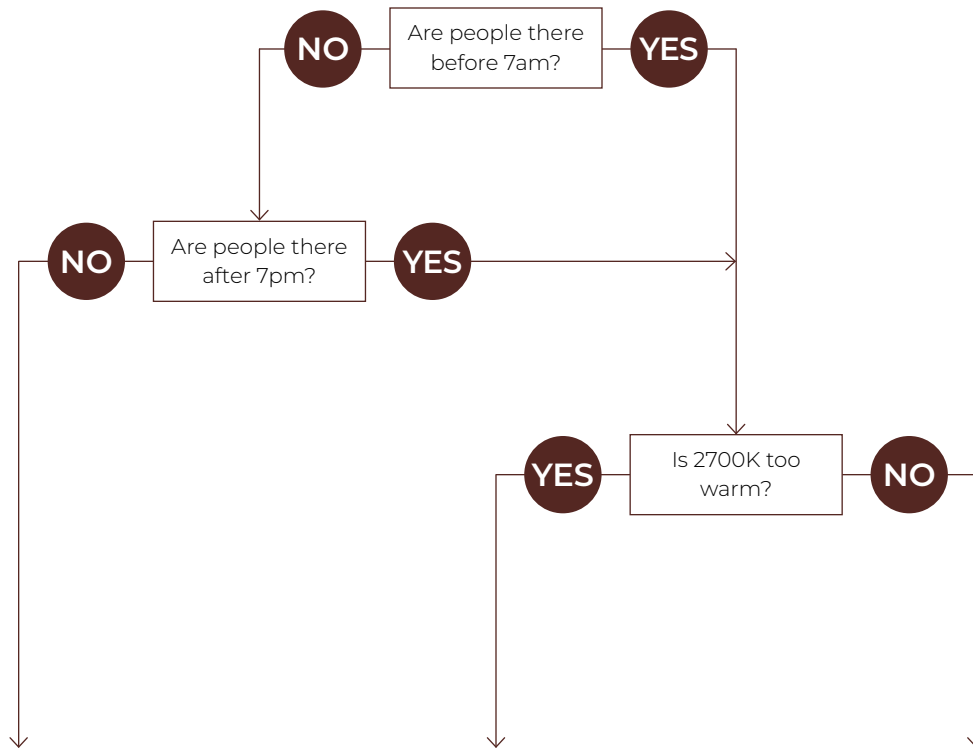
VIA 1.5 RECESSED PATTERN

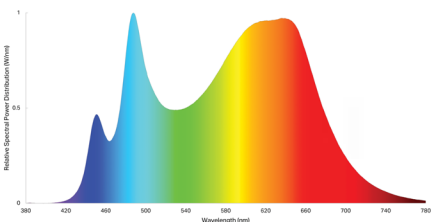
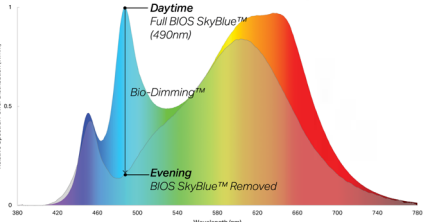
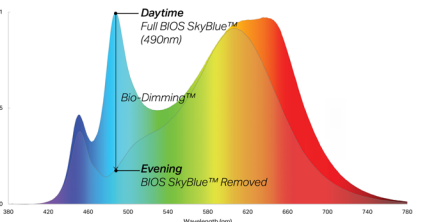


DIRECT
STATIC WHITE, BIOS

BIOS

Three BIOS Circadian LED solutions are offered – Biological Static, Biological Dynamic, and Biological Tunable. Use the decision tree below to identify when and where to use BIOS Wellness LED Lighting Solutions.



Biological Static BIOSST	Biological Dynamic BIOSDY	Biological Tunable BIOSTU
No CCT change when dimmed	500K shift when dimmed	Dims to 2700K
Daytime solution	Daytime + evening solution	Daytime + evening solution
Spaces in operation during daytime hours, between 7am and 7pm	Spaces in operation overnight, after 7pm and before 7am, and when CCT color shift in the evening is not preferred	Suitable for spaces in operation overnight, after 7pm and before 7am, and where people do not sleep (CCT color shift in the evening is preferred)
E.g. offices, medical/dental offices	E.g. hospitals	E.g. offices, shiftwork
		

VIA 1.5 RECESSED PATTERN



DIRECT

STATIC WHITE, BIOS

Technical Specifications

OPTICS

High-Efficiency Lambertian Optic (HLO)

The High-Efficiency Lambertian Optic (HLO) uses matte white reflectors to distribute LED output across 0.075" acrylic shielding, providing up to 88% transmission and good obscuration.

Available as a flush lens or as a drop lens, the HLO has a spacing criterion of 1.12.

Asymmetric Refractive Optic (ARO)

The Asymmetric Refractive Optic (ARO) combines a matte-finished reflector with a high-transmission diffusing film to control the distribution of light in two ways:

- 1) on one side, through a modified Lambertian with peak intensity at nadir; and
 - 2) on the other side, through a batwing with peak intensity at 40°.
- A visor shields luminaire hardware from lateral viewing angles.

Wall Wash Refractive Optic (WRO)

The Wall Wash Refractive Optic (WRO) delivers smooth illumination with a gentle gradient. Maximum intensity is at 20° from vertical. WRO uses a specular aluminum reflector, combined with a high-transmission diffusing film. A "visor" shields luminaire hardware from lateral viewing angles.

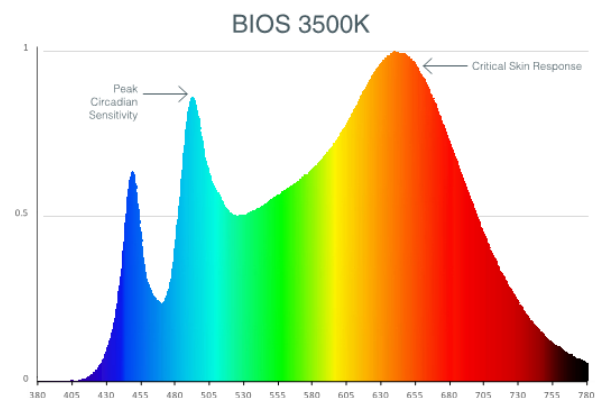
LIGHT SOURCE - STATIC WHITE

Custom linear array of mid-flux LEDs are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with a minimum 80 CRI and an option for 90 CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. LEDs operate at reduced drive current to optimize efficacy and lumen maintenance. All LEDs have been tested in accordance with IESNA LM-80-08 and the results have shown L80 lumen maintenance greater than 60,000 hours. Absolute product photometry is measured and presented in accordance with IESNA LM-79, unless otherwise indicated.

LIGHT SOURCE - BIOS

BIOS SkyBlue™ Technology is designed to provide the specific circadian stimulus to improve overall sleep quality, recovery during the night, and overall feelings of well-being.

The non-visual light signals that stimulate our circadian system have peak intensity in the "sky blue" region. As the diagram below illustrates, BIOS SkyBlue technology shifts the peak LED spectral intensity (490 nm) to align better with the peak response of circadian stimulus. Also note the enhanced deep-red (near 660 nm) spectrum.



Three BIOS solutions are offered: BIOS Biological Static (BIOSST), BIOS Biological Dynamic (BIOSDY), and BIOS Biological Tunable (BIOSTU). See page 7 for details.

PATTERN LENGTH

All individual sections are joined together onsite using the joiner kits provided. Lumenwerx offers joiner kits that are extremely simple to work with in the field and result in a fixture that appears virtually seamless with no light leak at any connection.

VIA 1.5 RECESSED PATTERN



DIRECT

STATIC WHITE, BIOS

ELECTRICAL

Factory-set, adjustable output current LED driver with universal (120-277VAC) input. Dimmable from 100% to 1% with 0-10V dimming control. Rated life (90% survivorship) of 50,000 hours at 50°C max. ambient (and 70°C max. case) temperature. At maximum driver load: Efficiency > 84%, PF > 0.9, THD < 20%. Other specifiable options include Lutron Hi-Lume 1% Eco, eidoLED 1% ECoDrive 0-10V, eidoLED 0.1% SOLOdrive 0-10V, ELV, TRIAC, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant.

PoE

Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, Duo (tunable white), Quadro (RGBW) emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

ELECTRICAL SECTION OPTIONS

Electrical section options are available for fixtures specified as multi circuit (#MC). With MC, specify the total number of circuits (#), including any circuits required for optional electrical sections. A drawing is required to specify the layout. Please consult factory for custom configurations.

Electrical sections

Options include emergency-powered (#EC##), night light (#NL##), daylight (#DL##), and generator transfer device (#GTD##) sections. Specify the quantity (#), as well as the section length in inches (##).

Example 1: A 32' Direct fixture with two 8' emergency-powered sections on a second circuit.

Code: 2MC-2EC96

Example 2: A 24' Direct fixture with one 4' generator transfer device section.

Code: 1MC-1GTD48

Battery

Each emergency battery (#EMB) powers a 4' section. All batteries will be on the same circuit. Specify the number of batteries (#) required.

Factory installed long life, high temperature, maintenance-free Lithium-Ion battery pack with self-test functionality, test switch and charge indicator. Minimum of 90 minutes operation, up to 1000 lumens per 4' (25°C) emergency lighting output and recharge time of 24 hours.

MOUNTING OPTIONS

Recessed fixtures can be mounted into exposed or concealed T-bar or tegular ceiling, as well as in drywall ceilings with trim, trimless, or mud flange options.

FINISH

Interior - 95%, reflective matte powder coated white paint

Exterior - Matte white or matte black powder coating. Custom finishes are also available.

CONTROLS

Lumenwerx offers several options for integrating occupancy and daylight harvesting controls in our luminaires.

For latest information on sensors, click [here](#).



STANDALONE CONTROLS

An integrated standalone sensor controls the luminaire in which it is installed. Depending on the length, more than one sensor may be necessary and may control the entire luminaire, or just a section of it. These controls operate independently. Unless otherwise agreed, sensor location, blank size, and functionality of the sensor within the luminaire are selected by Lumenwerx. See client drawings for details.

Three types are available:

OMS: An integral Passive InfraRed (PIR) sensor turns luminaires on and off automatically with field-adjustable time out period. No wall control is used. Coverage pattern for large motion has a 12' diameter with the sensor mounted 8' above the floor; for small motion, the pattern has an 8' diameter. Typically, one sensor is required for every 10' of a continuous luminaire run.

ODS: An integral, daylight harvesting sensor with closed-loop operation dims the luminaire in which it is installed in order to compensate for available daylight. The sensor measures the combination of daylight and luminaire light reflected from horizontal surfaces below the luminaire. Initial onsite calibration is required via the use of provided remote control.

OCS: Both an occupancy and a daylight sensor are installed in the luminaire.

VIA 1.5 RECESSED PATTERN



DIRECT

STATIC WHITE, BIOS

CONNECTED CONTROLS

With connected controls, sensors or nodes installed in the luminaire form part of a larger control system infrastructure from manufacturers such as: Lutron, Enlighted, Encelium, Cooper Wavelinx, Acuity nLight, Casambi, Legrand, and others. These connected controls allow for a scalable system providing features like occupancy and daylight control, manual control, scheduling and configuration of various zones and scenes. Energy reporting and system monitoring are also possible. Specific capabilities depend on the control system being used.

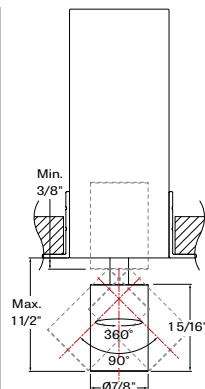
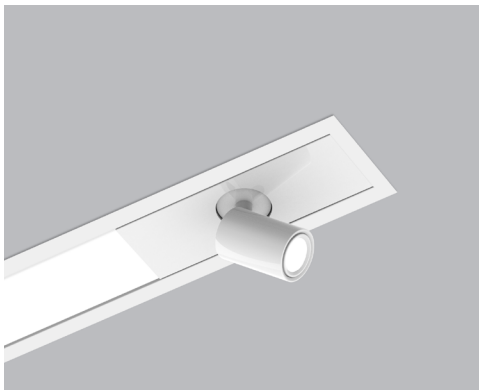
Lumenwerx installs the components (sensors, nodes, power packs, etc) which may be supplied to us by a third party, or procured directly by Lumenwerx, depending on the control system manufacturer.

Lumenwerx is solely responsible for the installation of specified components; the controls manufacturer is responsible for performance of the control system.

To indicate a Lumenwerx luminaire with connected controls, identify the specific onsite control system to be integrated into the luminaires using the ordering code. Due to the diversity of components, you must contact factory to assure complete compatibility with intended control system and to fully specify the luminaire.

Complete control specifications, sensor/node/power pack layout, and narrative for the control system are required for Lumenwerx to create shop drawings and submittals.

MICRO SPOT (MS)



The Micro Spot is a $\varnothing 7/8$ " x $1 5/16$ " adjustable spotlight that extends, retracts, rotates 360°, and tilts 90°. Its LED light source is coupled with a TIR refractor to provide beam angles of 25°, 35°, and 50°, while producing up to 400 lumens. LED light source CCT options are 2700K, 3000K, 3500K, 4000K, and 5000K available in either 80 CRI or 90 CRI. The Micro Spot is offered in a white or black finish. The Micro Spot driver is mounted within the luminaire housing and accepts universal input voltage (120-277VAC) with 0-10 V dimming control.

CONSTRUCTION

Housing - Extruded aluminum, up to 90% recycled content

Interior brackets - Die-formed cold rolled sheet steel

Joining system - Die-cast zinc

Reflectors - Die-formed cold rolled steel, 95% reflective matte white painted

Lens - Acrylic

Drop lens - Extruded with glued end caps

Mud flange - Extruded aluminum, up to 90% recycled content

Slip-through bracket - Die-formed galvanized sheet

End plate - Die-formed cold rolled sheet steel

CERTIFICATIONS

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

Chicago Plenum - City of Chicago Approved (CCEA)

IC rated - Suitable for direct contact with insulation.

WARRANTY

Lumenwerx provides a five-year limited warranty of electrical and mechanical performance of the luminaires, including the LED boards, drivers, and auxiliary electronics. Lumenwerx will repair or replace defective luminaires or components at our discretion, provided they have been installed and operated in accordance with our specifications. Other limitations apply, please refer to the full warranty on our website.