

# VIA 1.5 RECESSED

DIRECT  
STATIC WHITE, BIOS



Project: \_\_\_\_\_

Type: \_\_\_\_\_



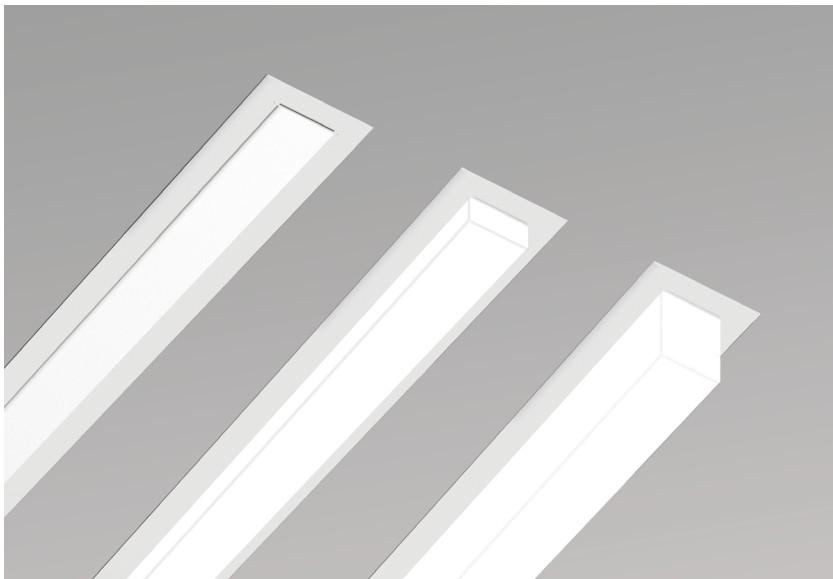
## DESCRIPTION

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. Via 1.5 Recessed is offered with Lambertian, asymmetric, widespread, wall wash, or low-glare optics. Via 1.5 Recessed can accommodate the Micro Spot, an adjustable spotlight that extends, rotates 360°, and tilts 90°.

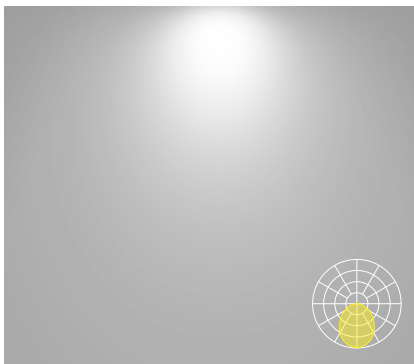
Up to 118 lm/W performance

IC RATED

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



Lens Positions <sup>1</sup>



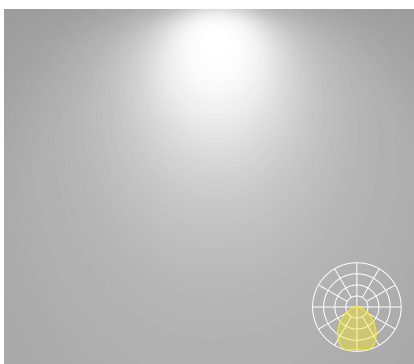
HLO  
High-Efficiency Lambertian Optic



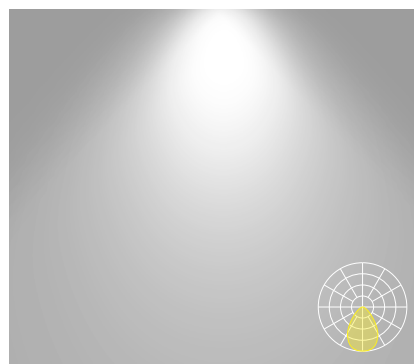
ARO  
Asymmetric Refractive Optic



WRO  
Wall Wash Refractive Optic



WDO  
Widespread Direct Optic



LGO  
Low-Glare Optic

<sup>1</sup> Drop lens positions available with HLO only.

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Project: \_\_\_\_\_  
Type: \_\_\_\_\_

## Order Guide

LUMINAIRE ID	DISTRIBUTION	OPTIC	LENS POSITION	LIGHT SOURCE <sup>2</sup>
VIA1.5R	D			
VIA1.5R - Via 1.5" Recessed	D - Direct	HLO - High-Efficiency Lambertian Optic ARO - Asymmetric Refractive Optic WRO - Wall Wash Refractive Optic WDO - Widespread Direct Optic LGO - Low-Glare Optic	FH - Flush 0.5D <sup>1</sup> - 0.5" drop 1.5D <sup>1</sup> - 1.5" drop  <sup>1</sup> Available with HLO only.	SW - Static white  BIOSST <sup>3,4</sup> - BIOS Biological Static BIOSDY <sup>3,4</sup> - BIOS Biological Dynamic BIOSTU <sup>3,4</sup> - BIOS Biological Tunable  <sup>2</sup> Chromawerx Sola, Duo and Quadro also available. Consult other spec sheets. <sup>3</sup> Only available with low and medium lumen packages. <sup>4</sup> See page 6 for details.

CRI	LUMEN PACKAGE	COLOR TEMP.	LUMINAIRE LENGTH	VOLTAGE
80CRI - 80 CRI 90CRI <sup>5</sup> - 90 CRI  <sup>5</sup> Not available with BIOS.	200LMF <sup>6,7,8</sup> - Hypo output 200 lm/ft 350LMF - Low output 350 lm/ft 500LMF - Medium output 500 lm/ft 750LMF - High output 750 lm/ft 900LMF <sup>9,10,11,12</sup> - Hyper output 900 lm/ft  <sup>6</sup> Minimum 4' fixture. <sup>7</sup> Available with HLO only. <sup>8</sup> Not available with ELV/TRI driver options. <sup>9</sup> Not available with 90CRI. <sup>10</sup> Fixture will be very bright. Use in suitable applications. <sup>11</sup> Only available for non-IC applications. <sup>12</sup> Not available with WDO/LGO.	27K <sup>13</sup> - 2700K 30K - 3000K 35K - 3500K 40K - 4000K 50K <sup>13</sup> - 5000K  <sup>13</sup> Not available with BIOS.	#FT#IN - Specify nominal length (#) in 1' and/or 1" increments  Standard nominal lengths: Single units: 2' to 12' Continuous runs: lengths over 12'	120V - 120V 277V - 277V UNV - 120V-277V 347V <sup>14</sup> - 347V  <sup>14</sup> Available with D1 driver only.

DRIVER <sup>15</sup>	ELECTRICAL	ELECTRICAL SECTIONS (optional) <sup>21,22</sup>	MOUNTING <sup>27</sup>
D1 - 1% 0-10V DA <sup>16</sup> - DALI LDE1 <sup>16</sup> - Lutron Hi-lume 1% Eco ELD1 - eldoLED 1% ECOdrive 0-10V ELDO - eldoLED 0.1% SOLOdrive 0-10V ELV <sup>17</sup> - ELV 120V TRI <sup>17</sup> - TRIAC 120V  <sup>15</sup> PoE (Power-over-Ethernet) compatible. Consult factory for details. <sup>16</sup> On-site commissioning is required. <sup>17</sup> Available with 120V only.	1C - 1 circuit #MC <sup>18</sup> - Multi circuit EC - Emergency-powered fixture NL - Night light fixture DL - Daylight fixture GTD <sup>19,20</sup> - Generator transfer device fixture  <sup>18</sup> 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. <sup>19</sup> Minimum 4' fixture. <sup>20</sup> Not available with 347V.	#EC## <sup>23</sup> - Emergency-powered section #NL## <sup>23</sup> - Night light section #DL## <sup>23</sup> - Daylight section #GTD## <sup>23,24,25</sup> - Generator transfer device section #EMB <sup>25,26</sup> - Emergency battery NA - None  <sup>21</sup> Specify with multi circuit (#MC) electrical option only. <sup>22</sup> Provide drawing or layout specifications. Consult factory for other configurations. Default section length is 4'. <sup>23</sup> Specify quantity (#), and section length in inches (##). <sup>24</sup> Minimum 4' section. <sup>25</sup> Not available with 347V. <sup>26</sup> Specify quantity (#). All batteries will be on the same circuit. Each battery powers a 4' section.	TC9 - Tegular 9/16" TG15 - Tegular 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  MFM <sup>28</sup> - Multiple flange mounting  <sup>27</sup> Transition mounting options also available (e.g. Recessed to Pendant/Surface), consult factory for details. <sup>28</sup> See page 4 for details.

FINISH	CONTROL <sup>29</sup>	OPTIONS	MODULE (optional) <sup>36,37,38</sup>
W - Matte white B - Matte black CF# - Custom finish, specify RAL#	<u>STANDALONE CONTROLS</u> <sup>30,31,32</sup> Specify the quantity (#) of sensors per fixture. #OMS <sup>33</sup> - Onboard Occupancy #OMS## <sup>34</sup> - Onboard Occupancy with bi-level dimming #ODS - Onboard Daylight #OCS - Onboard Occupancy & Daylight  <u>CONNECTED CONTROLS</u> <sup>35</sup> LU - Lutron AWNR - 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  NA - None  <sup>29</sup> Standalone and connected control options cannot be combined. <sup>30</sup> Available with D1 driver and 1 circuit options only. <sup>31</sup> Minimum 4' per zone. Provide control zone length. <sup>32</sup> Available with flush lens option only.	FU120 - Fuse 120V FU277 - Fuse 277V FWC - Flexible whip cable (6' std) CP - Chicago Plenum NA - None  <sup>33</sup> Fixture turns off when no occupancy. <sup>34</sup> Fixture dims to specified light level % (##). <sup>35</sup> Consult factory for connected controls.	#MS25( ) - Micro Spot 25° #MS35( ) - Micro Spot 35° #MS50( ) - Micro Spot 50° NA - None  <sup>36</sup> See page 3 for ordering details. <sup>37</sup> If more than one option is specified, separate codes with a "+", e.g. 1MS25( )+1MS35( ). <sup>38</sup> Not available with ELV/TRI driver options.

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## Module

For a module, specify the options in the parentheses.

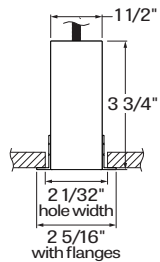
Example: 1MS25(SW-80CRI-400LM-27K-W)

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

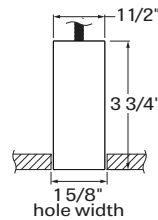
## Dimensions

### DRYWALL

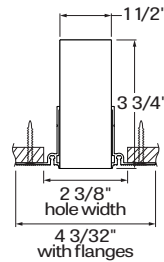
#### DTR - Drywall Trim



#### DTL - Drywall Trimless

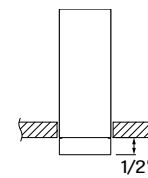


#### DMF - Drywall Mud Flange

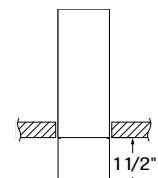


### LENS POSITIONS

#### 0.5" Drop Lens <sup>1</sup>

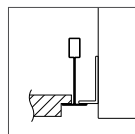
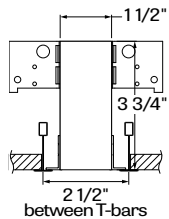


#### 1.5" Drop Lens <sup>1</sup>

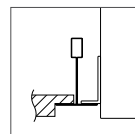


<sup>1</sup> Drop lens positions available with HLO only.

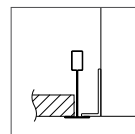
### GRID



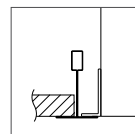
TG9  
Tegular 9/16"



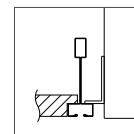
TG15  
Tegular 15/16"



TB9  
T-bar 9/16"

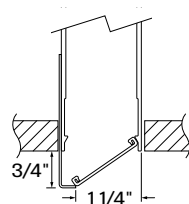


TB15  
T-bar 15/16"



ST  
Screw slot T-bar

## Section View



### ARO / WRO

Asymmetric Refractive Optic  
Widespread Direct Optic

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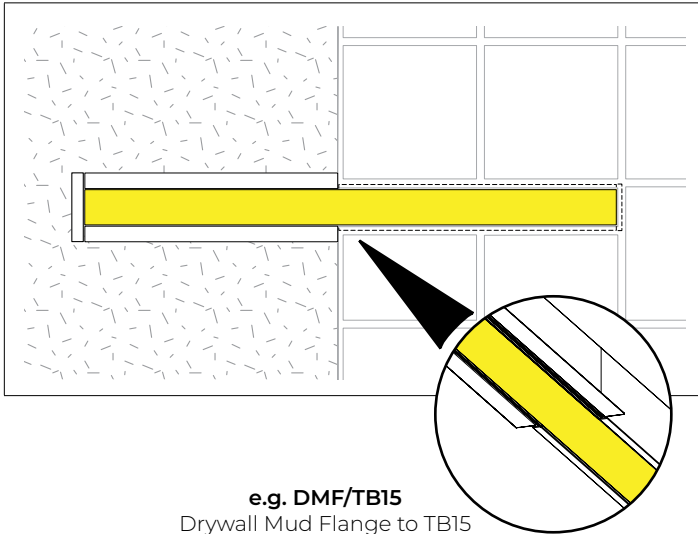
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## Multiple Flange Mounting Details

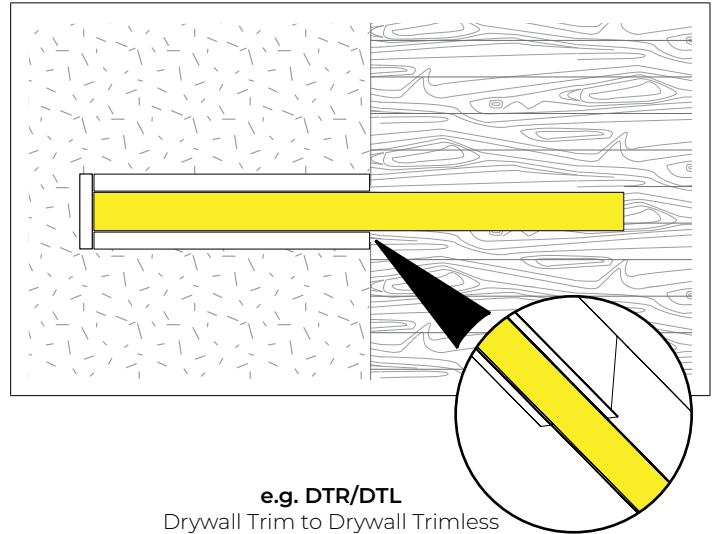
Multiple flange mounting can be specified when a fixture run needs to have a multiple flange recessed mounting detail.  
A drawing is required to clearly illustrate the application.

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

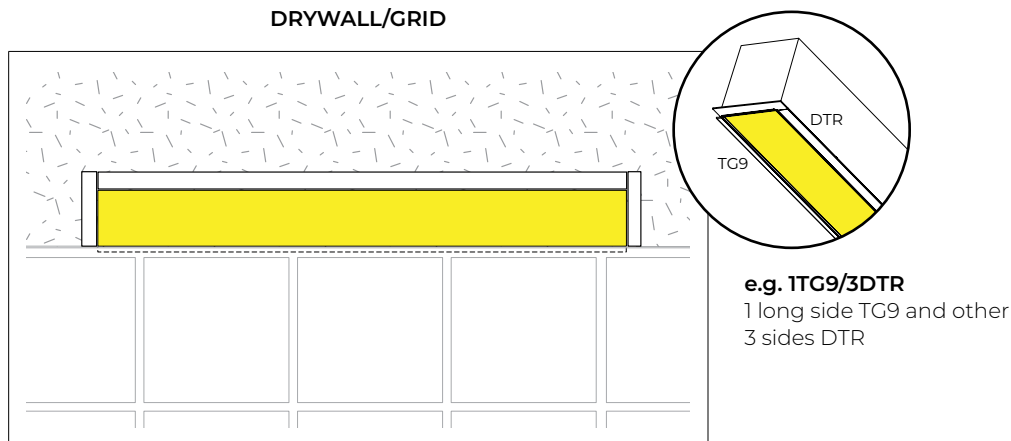
**DRYWALL/GRID**



**DRYWALL/WOOD**



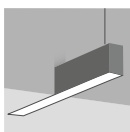
**DRYWALL/GRID**



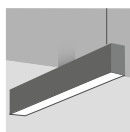
All drawings are for illustrative purposes only.

## TRANSITION MOUNTING OPTIONS (consult factory for details)

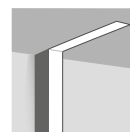
Mounting condition alters along the run of the fixture.



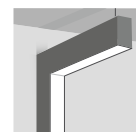
Recessed to Pendant



Surface to Pendant



Surface to Recessed in corner



Surface to Pendant in corner

# VIA 1.5 RECESSED

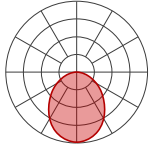


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## Photometrics

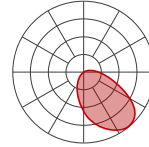
Values calculated based on a 4ft fixture at 35K and 80 CRI for all optics.

HLO (Flush Lens)



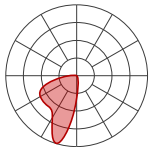
LM/FT	W/FT	LPW
200	2.7	75
350	4.8	74
500	7.0	72
750	10.9	69
900	13.4	67

ARO



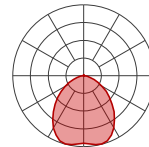
LM/FT	W/FT	LPW
350	3.3	107
500	4.8	104
750	7.6	99
900	9.4	96

WRO



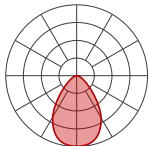
LM/FT	W/FT	LPW
350	3.1	112
500	4.6	109
750	7.2	104
900	8.9	101

WDO



LM/FT	W/FT	LPW
350	4.9	72
500	7.2	69
750	11.6	65

LGO



LM/FT	W/FT	LPW
350	5.6	63
500	8.4	60
750	13.5	56

## MULTIPLIER TABLES

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

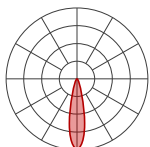
Multiplier - CCT/CRI

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

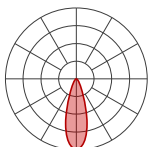
Multiplier - Drop Lens

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

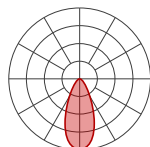
## MICRO SPOT



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

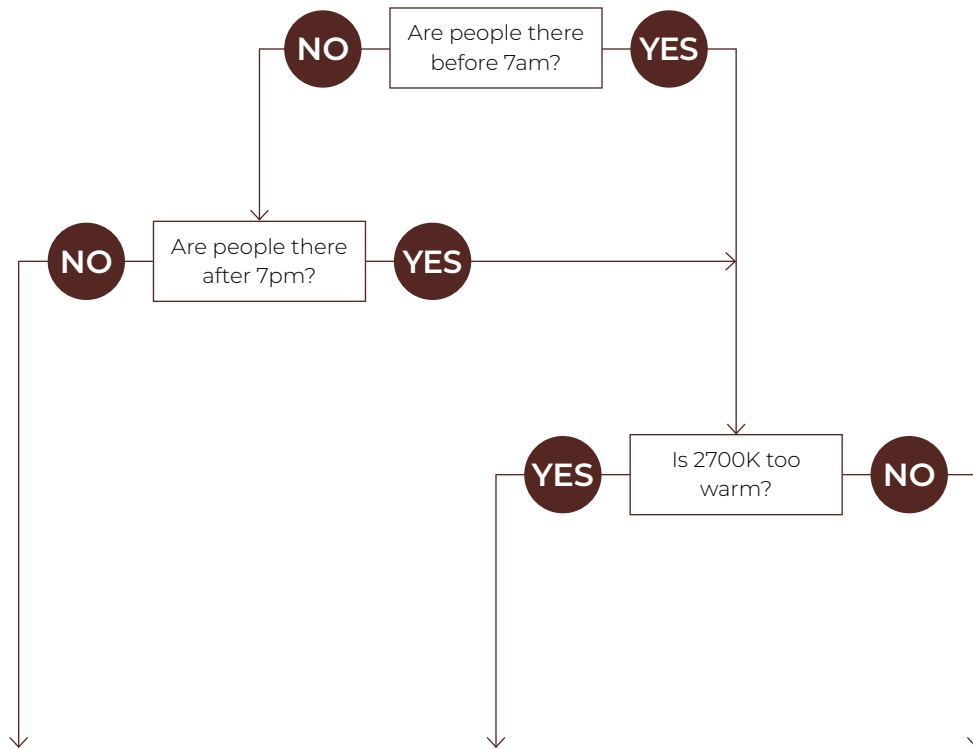
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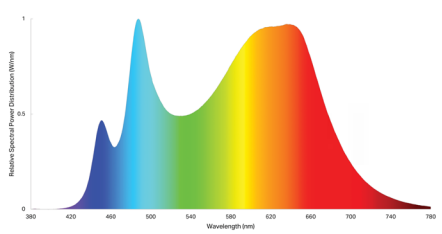
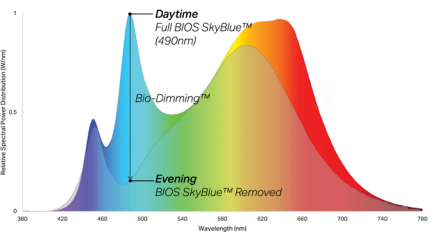
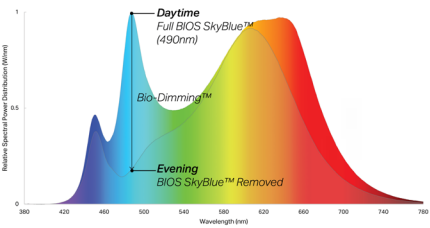


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## BIOS

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
		

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## 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.

#### Widespread Direct Optic (WDO)

The Widespread Direct Optic (WDO) is designed to distribute light far and wide. As such, it has an excellent luminous efficacy, a light span that is 40% farther than that of our traditional HLO, and it maximizes spacing distance while still creating a sense of uniformity. The lens snaps into place and utilizes nano prismatic optics to mask the diodes that are actually emitting the light.

#### Low-Glare Optic (LGO)

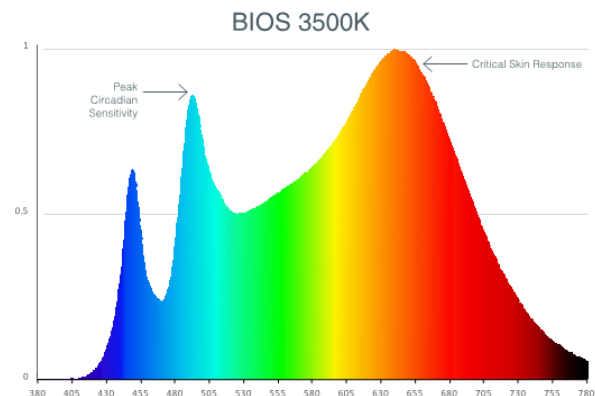
The Low-Glare Optic (LGO) is designed to cut off high-angled light and control glare. The carefully crafted lens refracts light downward through its center from which it then disperses into a wide conical distribution that negates any illumination at about 40°. The LGO provides the visual comfort of a louver in a smooth acrylic lens.

### 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 6 for details.

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## LUMINAIRE LENGTH

Via 1.5 is available in standard lengths of 2' to 12'. Continuous runs are available for run lengths over 12'. Exact run length must be noted in the product code. The minimum length is 2', and can be ordered in 1' and/or 1" increments. 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.

## 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



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.

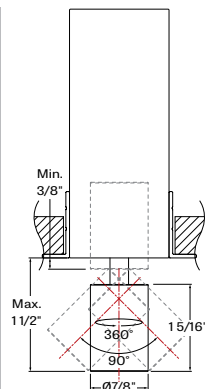
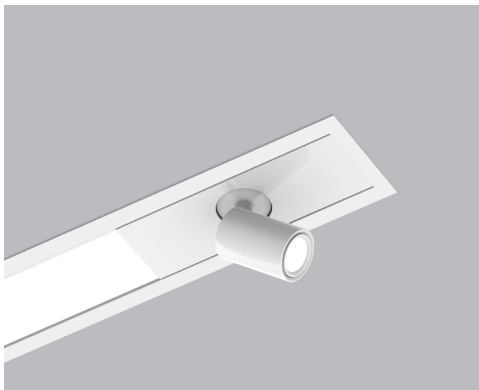
Lumenwerx installs the components (sensors, nodes, power packs, etc) which may be supplied to us by a third party, or procured directly by Lumenwerx, depending on the control system manufacturer.

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

## WEIGHT

**4ft** - 7.16 lbs - 3.25 kg

**8ft** - 14.32 lbs - 6.5 kg

**12ft** - 21.48 lbs - 9.75 kg

## 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.