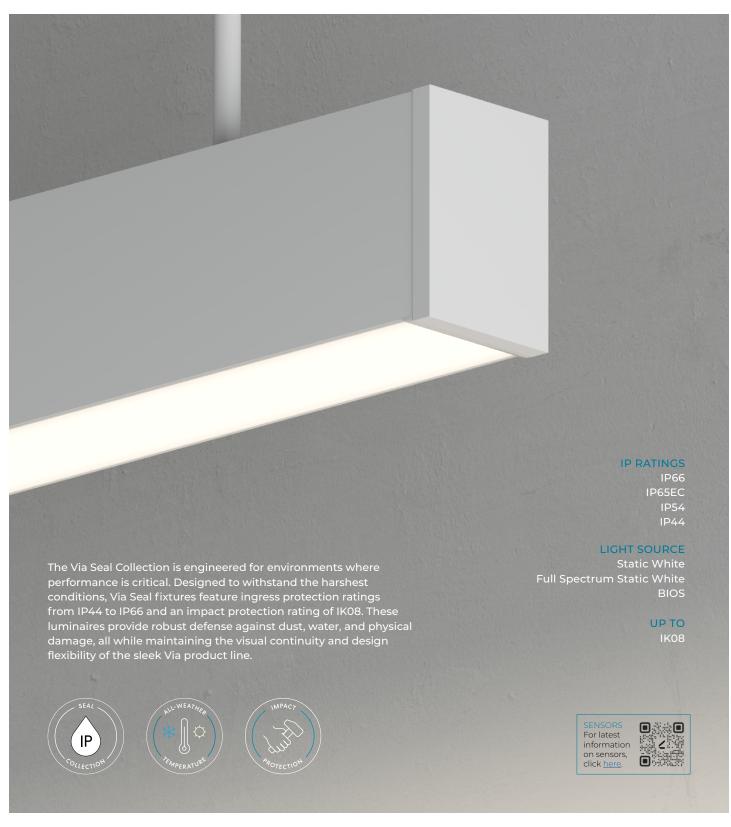


# 5 STERR WARRANT

#### SEALWERX SERIES





## PENDANT DIRECT

### SEALWERX SERIES

Lumenwerx
Lumenwerk

Project:		
Type:		

## Order Guide

LUMINAIRE ID	DISTRIBUTION	ENVIRONMENT <sup>1</sup>	OPTIC	LIGHT SOURCE 3	CRI
V3SEALP	D				
V3SEALP - Via 3" Seal	<b>D</b> - Direct	IP66 - IP66-Rated IP65EC - IP65-Rated Electrical Components	<b>EPDO</b> - Environmentally Protected Direct Optic	SW - Static white FS - Full spectrum static white	<b>80CRI</b> <sup>5</sup> - 80+ CRI <b>90CRI</b> <sup>5,6</sup> - 90+ CRI
Pendant		IP54 <sup>2</sup> - IP54-Rated IP44 <sup>2</sup> - IP44-Rated  1 See page 4 for more information on the features		BIOSST 4 - BIOS Biological Static BIOSDY 4 - BIOS Biological Dynamic BIOSTU 4 - BIOS Biological Tunable	95CRI 7 - 95+ CRI  SNot available with full spectrum.
		and installation details for each environment option. <sup>2</sup> Fixture must be installed with direct lens facing down.		<sup>3</sup> Chromawerx SOLA and DUO also available. Consult factory for RGBW.  4See page 6 for details.	<sup>6</sup> Not available with BIOS. <sup>7</sup> Only available with full spectrum.

		l l	ļ	I
LUMEN PACKAGE	COLOR TEMPERATURE	LUMINAIRE LENGTH	VOLTAGE	DRIVER <sup>13</sup>
	1	1		1
500LMF - Low output 500 lm/ft	<b>27K</b> <sup>10</sup> - 2700K	#FT#IN " - Specify nominal length (#)	120V - 120V	<b>D1</b> - 1% O-10V
750LMF 8 - Medium output 750 lm/ft	<b>30K</b> - 3000K	in 1' and/or 1" increments	<b>277∨</b> - 277∨	ELV 14 - ELV 120V
1000LMF <sup>8,9</sup> - High output 1000 lm/ft	<b>35K</b> - 3500K		UNV - 120V-277V	TRI 14 - TRIAC 120V
	<b>40K</b> - 4000K	Standard nominal lengths:	347V 12 - 347V	DA 15 - DALI
<sup>8</sup> Not available with BIOS.	<b>50K</b> 10 - 5000K	Single units: 2' to 12'		LDE1 15 - Lutron Hi-lume 1% Eco
<sup>9</sup> Not available with full spectrum.		Continuous runs: lengths over 12'	<sup>12</sup> Available with D1 driver	ELD1 - eldoLED 1% ECOdrive 0-10V
	<sup>10</sup> Not available with BIOS.		only.	ELDO - eldoLED 0.1% SOLOdrive 0-10V
		<sup>11</sup> Minimum 2' for Direct. Minimum 3' for Direct/Indirect.		RLTD10 - Low-temperature 10% 0-10V
				<sup>13</sup> See page 4 for driver temperature ranges.
				<sup>14</sup> Available with 120V only.
				<sup>15</sup> On-site commissioning is required.

ELECTRICAL	ELECTRICAL SECTIONS (optional) 20, 21	POWER FEED	MOUNTING 28	FINISH	OPTION
		TF			
1C - 1 circuit  #MC 16 - Multi circuit  EC - Emergency-powered fixture  NL - Night light fixture  DL - Daylight fixture  GTD 17, 18, 19 - Generator transfer device fixture  16 Specify total number of circuits (#), including any circuits required for electrical section options. Provide drawing or layout specifications. Minimum 4' section per circuit.  17 Minimum 4' fixture.  18 Not available with 347V.  18 Not available for environments where the ambient temperature falls below 0°C (32°F).	#EC## <sup>22</sup> - Emergency-powered section #NL## <sup>22</sup> - Night light section #DL## <sup>22</sup> - Daylight section #GTD## <sup>22, 23, 24, 25</sup> - Generator transfer device section #EMB <sup>24, 25, 26, 27</sup> - Emergency battery NA - None <sup>20</sup> Specify with multi circuit (#MC) electrical option only. <sup>21</sup> Provide drawing or layout specifications. Consult factory for other configurations. Default section length is 4'. <sup>22</sup> Specify quantity (#), and section length in inches (##). <sup>23</sup> Minimum 4' section. <sup>24</sup> Not available for environments where the ambient temperature falls below 0°C (32°F). <sup>26</sup> Specify quantity (#). All batteries will be on the same circuit. Each battery powers a 4' section. <sup>27</sup> Only available with IPS4 and IP44.	TF - Top feed	STS - Stem, standard STC() - Stem, custom  28 Standard canopies are black for black fixtures, and white for all other finishes. See page 3 for full details on standard and custom options.	W - Matte white AL - Aluminum B - Matte black WA - White antimicrobial Silverwerx CF# - Custom finish, specify RAL#	CRF - Corrosion- resistant finish NA - None





## Pendant Mounting Code

#### Standard

For a standard mounting, please refer to the information below.

#### MOUNTING

#### STS - Stem, standard

- ∙Ø 5" for power canopy
- ∙Ø 5" for non-power canopy
- $\boldsymbol{\cdot}$  Canopies are black for black fixtures, and white for all other fixture finishes
- Stem finish is the same color as fixture
- Stem length is 18"
- · Stem is not field adjustable
- Power cord is black for black fixtures, and white for all other fixture finishes

#### Custom

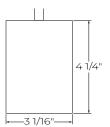
#### Stem

For a custom mounting, specify the options in the parentheses.

Example: STC(5NPC-36IN-W-STW-SLS)

MOUNTING					
STC()					
	NON-POWER CANOPY SIZE	STEM LENGTH	CANOPY FINISH	STEM COLOR	OPTION
STC	<b>5NPC</b> - Ø 5" non-power canopy	<b>18IN</b> - 18" <b>36IN</b> - 36"  #IN 1 - Specify length in inches	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish,	STW - Matte white STAL - Aluminum STB - Matte black STCF# - Custom finish,	SLS - Sloped ceiling for stem NA - None
		<sup>1</sup> Minimum length is 6". Maximum length is 72". Stem is not field adjustable.	specify RAL#	specify RAL#	

### **Dimensions**







## **L**umenwerx

## **Environment Options**

			Dir	ect			
IP6	6		55EC Components	IP5	4	IP4	4
Dust tight	High water resistance		Moderate water resistance	Dust protected	Water splash resistance	Particles larger than 1mm protected	Water splash resistance
			OUTE	DOOR			
	oosed to the nents		exposure to ements		canopy, exposed		canopy, posed
			IND	OOR			
Healthcare	application application application				application application		
	lens gasket external end cap gasket internal end cap gasket						
	iner gasket ry 12'		ous line of over 12'	with soft s	iner gasket hadow line ry 12'		ous line of over 12'
<b>Driver</b> : in a sealed enclosure <b>Electrical connections</b> : water and dust proof							
LED boards protection	s: conformal c	coated for ma	aximum				

Ambient Temperature Range  based on driver selection					
	LDE1	ELV / TRI	DA / ELD1 / ELD0	D1	LTD10
Minimum temperature:	0 °C / 32 °F	-10 °C / 14 °F	-20 °C / -4 °F	-30 °C / -22 °F	-40 °C / -40 °F
Maximum temperature: 40 °C / 104 °F					





## Photometrics

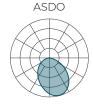
Values calculated based on a 4' fixture at 3500K and 80+ CRI for all optics.

#### DIRECT

DIRECT



LM/FT	W/FT	LM/W
500	5.0	101
750	7.7	98
1000	10.5	95



LM/FT	W/FT	LM/W
500	4.4	113
750	7.0	107
1000	9.7	103

### MULTIPLIERS

Use this table to get results for different color temperatures and CRI for all photometric tables.

Multiplier - CCT/CRI

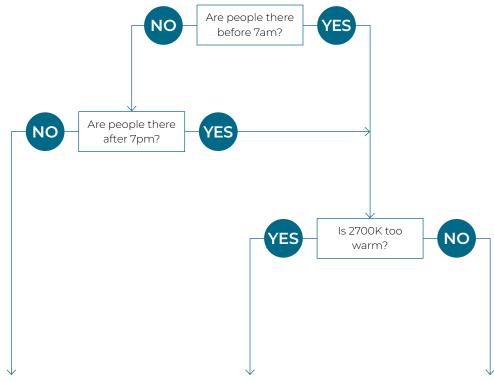
ССТ	WATTS		LP	w
	80+ CRI	90+ CRI	80+ CRI	90+ CRI
2700K	1.05	1.27	0.95	0.79
3000K	1.02	1.23	0.98	0.81
3500K	1.00	1.19	1.00	0.84
4000K	1.00	1.19	1.00	0.84
5000K	0.96	1.12	1.04	0.89





### 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	
300 420 460 500 140 600 433 460 730 140 190	Daytime Full BIOS SkyBlue™ Removed    Bio-Dimming M   Bio-Dim	Daytime	



#### SEALWERX SERIES

## **Technical Specifications**

#### **OPTICS**

#### **Environmentally Protected Direct Optic (EPDO)**

The Environmentally Protected Direct Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. This extruded snap-in lens has a gasket to ensure proper sealing. The lens is 1/16" thick and made of frosted polycarbonate. Internally, white, side kicking reflectors guide the light through the lens. The EPDO suits moderate climate environments.

#### Asymmetric Soft Direct Optic (ASDO)

The Asymmetric Soft Direct Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. This extruded snap-in lens has a gasket to ensure proper sealing. The lens is 1/16" thick and made of frosted polycarbonate. Internally, white, side kicking reflectors specifically angled to guide the light through the lens to create a nice asymmetric distribution. The ASDO suits moderate climate environments.

#### LIGHT SOURCE

#### Static white

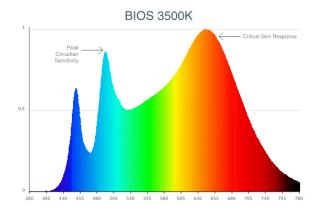
Custom linear array of mid-flux LEDs are cartridge-mounted with quick-connect wiring to facilitate service and thermal management. Available in 2700K, 3000K, 3500K, 4000K, and 5000K with a minimum 80+ CRI and an option for 90+ CRI with elevated R9 value. Color consistency maintained to within 3 SDCM. 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.

#### Full spectrum static white

The full spectrum LED option offers improved color particularly in the cyan region that is beneficial in both healthcare and circadian lighting strategies. The cyan region in full spectrum LED is richer at the 480 nm range.

#### **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 deepred (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.

#### WELL BUILDING STANDARD



**WELL for Light**: The WELL building standard focuses on light quality in several features. There are three categories that are fully attributed to the construction and features of a luminaire. In WELL V1, it's Feature 54 Circadian Lighting, Feature 55 Glare Control, and Feature 58 Color Quality. In WELL V2, it's Feature L03 Circadian Lighting, Feature L04 Glare Control, and Feature L07 Electric Light Quality.

#### This fixture meets Features:

- Feature 54 or LO3 when BIOS LED is selected
- Feature 55 or LO4 meets WELL glare category (c-d) (not applicable with 1000 lm/ft)
- Feature 58 or L07 when 90+ CRI is selected

All LED drivers used at Lumenwerx are deemed to have a low risk level of flicker, of 5% or less below 90Hz operational as defined by IEEE standard 1789-2015 LED.



**WELL for Mind**: This luminaire meets WELL for mind as it is a human centric luminaire offering quality light, excellent color, and smooth optics. If any of these features are incorporated in a luminaire, it can improve the ability to focus, concentrate, and persist longer on a given task. This fixture harmoniously operates in a space to assist the mind.

For more information, please contact well@lumenwerx.com





#### SEALWERX SERIES

#### **LUMINAIRE LENGTH**

Via 3 Seal 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 joiner kits 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.

#### TEMPERATURE VARIATION PROTECTION

The intergrated pressure equalization and moisture control GORE® protective vent allows air to flow while blocking water, dust, and contaminants. It reduces internal condensation, supports thermal stability, and preserves the fixture's sealed performance over time.



Location may vary.

#### **ELECTRICAL**

Factory-set, adjustable output current LED driver with universal (120-277 VAC) 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% Ecosystem, eldoLED 1% ECOdrive 0-10V, eldoLED 0.1% SOLOdrive 0-10V, and DALI protocol drivers. All of our standard 0-10V drivers are NEMA 410 compliant. An optional low-temperature 10% 0-10V driver, suitable for temperatures down to -40°C/F is also available.

#### 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 light (#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 light 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-lon 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. Suited for ambient temperatures of  $0^{\circ}$ C (32°F) to  $55^{\circ}$ C (131°F).

#### **Generator Transfer Device (GTD)**

A UL924 listed shunt relay that can bypass both line voltage (120-277V) and 0-10V dimming signal. Suited for ambient temperatures of 0°C (32°F) to 60°C (140°F).

#### MOUNTING

Pendant fixtures can be mounted with stem. See page 3 for details. Additional bracing by others required for wind and earthquake exposure.

#### **FINISH**

**Interior**: 95%, reflective matte powder coated white paint **Exterior**: Powder-coat paint in matte white, matte black, or aluminum. Custom finishes are also available. Optional antimicrobial finish.

#### CONSTRUCTION

**Housing**: Extruded aluminum, up to 90% recycled content **Interior brackets**: Die-formed cold rolled sheet steel

Gaskets: closed-cell silicone foam

Reflectors: Die-formed cold rolled sheet steel, 95% reflective

matte white painted

End cap: Die-cast aluminum

### WEIGHT

**4**': 12.8 lbs - 5.8 kg **8**': 23.6 lbs - 10.7 kg **12**': 34.4 lbs - 15.6 kg





#### SEALWERX SERIES

#### **CERTIFICATIONS**

**ETL**: IP44-Rated environment option is rated for dry/damp locations. IP66-Rated, IP65-Rated Electrical Components, and IP54-Rated environment options are ETL Wet Listed. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0. During the installation of Wet Listed fixtures, the contractor is responsible for properly sealing all mounting and electrical connection points.

IK08: Impact resistance rated to IK08

#### WARRANTY

Lumenwerx provides a five-year limited warranty on 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.