# VIA 2 SEAL

PENDANT PATTERN DIRECT, DIRECT/INDIRECT

## SEALWERX SERIES











PENDANT PATTERN DIRECT, DIRECT/INDIRECT

# SEALWERX SERIES

Lumenwerx
Lumenwerk

Project:	
	-
Туре:	

# Order Guide

LUMINAIRE ID	DISTRIBUTION	ENVIRONMENT 1		DIRECT OPTIC	INDIRECT OPTIC Specify NA for Direct fixture	LIGHT SOURCE <sup>3</sup>
V2SEALPPAT						
V2SEALPPAT - Via 2" Seal Pendant Pattern	D - Direct DI - Direct/ Indirect	Direct: IP66 - IP65-Rated IP65EC - IP65-Rated Electrical Components IP44 <sup>2</sup> - IP44-Rated  1 See page 5 for more information on the feadetails for each environment option. 2 Fixture must be installed with direct lens fe		EPDO - Environmentally Protected Direct Optic ASDO - Asymmetric Soft Direct Optic	EPIO - Environmentally Protected Indirect Optic ASIO - Asymmetric Soft Indirect Optic WIO2 - Widespread Indirect Optic NA - Not applicable	SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K  3 Static white and BIOS also available. Consult factory for RGBW.

CRI	DIRECT LUMEN PACK.	INDIRECT LUMEN PACK. Specify NA for Direct fixture	PATTERN LENGTH	CORNER TYPE 5		VOLTAGE
80CRI - 80+ CRI 90CRI - 90+ CRI	350LMF - Low output 350 lm/ft 500LMF - Medium output 500 lm/ft 750LMF - High output 750 lm/ft	350LMF - Low output 350 Im/ft 500LMF - Medium output 500 Im/ft 750LMF - High output 750 Im/ft NA - Not applicable	##FT##IN(#X#FT#IN-#X#FT#IN) 4 - ##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' 4 · Minimum 2' for Direct.	#LEV2C(A##) - 2-way leveled corner  Specify quantity (#) and ang required corner type. If more is specified, separate codes 1LEV2C(A90)+2LEV2C(A60). Minimum angle is 45°.	e than one option	120V - 120V 277V - 277V UNV - 120V-277V

DRIVER 7	ELECTRICAL	POWER FEED	MOUNTING 10	FINISH	OPTION
	1C	TF			
SOLA SD1 - Single 0-10V input  DUO DMX <sup>8,9</sup> - DMX DDA <sup>9</sup> - DALI DT6 DDA8 <sup>9</sup> - DALI DT8 DD1 - Dual 0-10V input for CCT/intensity LD2 <sup>9</sup> - Lutron DALI-2 digital  7See page 5 for driver temperature ranges. 8For more information, see pages 11 to 16. 9On-site commissioning is required.	1C - 1 circuit	<b>TF</b> - Top feed	STS - Stem, standard STC() - Stem, custom  **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

# Accessories

Optional, order separately

WALL CONTROLLER 11	
DMX	DDI
WCW##FT <sup>12</sup> - DMX wall controller white WCB##FT <sup>12</sup> - DMX wall controller black	TWCW##FT <sup>13</sup> - Dual 0-10V wall controller white TWCB##FT <sup>15</sup> - Dual 0-10V wall controller black
<sup>11</sup> Specify wire length (##) in feet. <sup>12</sup> Available with DMX only. For more information, so <sup>13</sup> Available with DD1 only. For more information, se	, ,







# Pendant Mounting Code

#### Standard

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

#### MOUNTING

#### STS - Stem, standard

- Ø 5" for power capon
- •Ø 5" for non-power canopy
- 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	18IN - 18" 36IN - 36" #IN ¹ - Specify length in inches  ¹Minimum length is 6". Maximum length is 72". Stem is not field adjustable.	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL#	STW - Matte white STAL - Aluminum STB - Matte black STCF# - Custom finish, specify RAL#	SLS - Sloped ceiling for stem NA - None





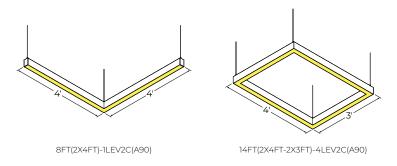


# Pattern Layout

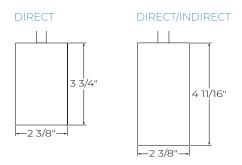
## CORNER TYPES



#### **EXAMPLES**



# Dimensions



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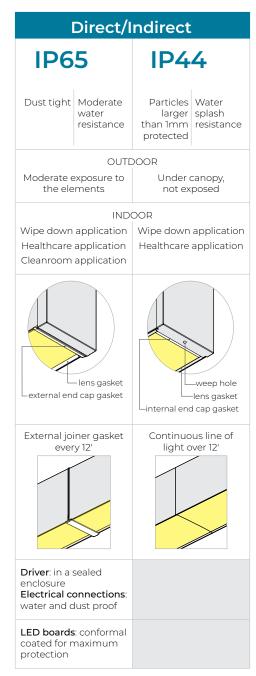
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# **Environment Options**

	Direct					
IP6	6		<b>5EC</b> Components	IP4	4	
Dust tight	High water resistance	Dust tight	Moderate water resistance	Particles larger than 1mm protected	Water splash resistance	
		OUTE	DOOR			
	oosed to the nents		exposure to ements		canopy, posed	
		IND	OOR			
	application			application		
	application application		Healthcare	application		
	lens gasket external end cap gasket internal end cap gasket					
External joiner gasket every 12'  Continuous line of light over 12'						
Driver: in a sealed enclosure Electrical connections: water and dust proof						
LED boards protection	s: conformal c	coated for ma	aximum			



Ambient Temperature Range  based on driver selection					
	LD2	SD1 / DMX / DDA / DDA8	DDI		
Minimum temperature:	0 °C / 32 °F	-20 °C / -4 °F	-25 °C / -13 °F		
Maximum temperature:	40 °C / 104 °F				





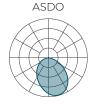
# Photometrics

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

#### DIRECT



LM/FT	W/FT	LM/W
350	3.5	99
500	5.2	97
750	8.2	92



W/FT	LM/W
4.3	82
6.3	79
10.0	75
	4.3 6.3

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#### MULTIPLIER TABLES

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

#### SOLA

сст	WATTS		LP	w
	80+ CRI	90+ CRI	80+ CRI	90+ CRI
3500K	1.00	1.19	1.00	0.84

# DUO

ССТ	WATTS		LP	w
	80+ CRI	90+ CRI	80+ CRI	90+ CRI
2700K	1.05	1.27	0.95	0.79
6500K	1.00	1.14	1.00	0.88



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# Photometrics

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

#### DIRECT/INDIRECT



EPDO - EPIO



EPDO - ASIO



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EPDO - WIO2

LM/FT		TOTAL	W/FT	LM/W
D	- 1	LM/FT		
EPDO	EPIO			
	350	700	7.0	100
350	500	850	8.7	98
	750	1100	11.7	94
	350	850	8.7	98
500	500	1000	10.3	97
	750	1250	13.3	94
	350	1100	11.7	94
750	500	1250	13.3	94
	750	1500	16.3	92

LM/F1		IOIAL	W/FI	LM/W
D	- 1	LM/FT		
EPDO	ASIO			
	350	700	6.9	102
350	500	850	8.5	100
	750	1100	11.3	97
	350	850	8.5	100
500	500	1000	10.1	99
	750	1250	13.0	96
	350	1100	11.6	95
750	500	1250	13.2	95
	750	1500	16.0	94

LM/FT		TOTAL	W/FT	LM/W
D	1.0	LM/FT		
EPDO	WIO2			
	350	700	6.5	108
350	500	850	7.9	108
	750	1100	10.3	107
	350	850	8.1	105
500	500	1000	9.5	105
	750	1250	11.9	105
	350	1100	11.1	99
750	500	1250	12.5	100
	750	1500	15.0	100



ASDO - WIO2

LM/FT		TOTAL	W/FT	LM/W
D	1	LM/FT		
ASDO	EPIO			
	350	700	7.8	90
350	500	850	9.4	90
	750	1100	12.4	89
	350	850	9.8	87
500	500	1000	11.5	87
	750	1250	14.5	86
	350	1100	13.6	81
750	500	1250	15.2	82
	750	1500	18.1	83

ASDO - ASIO					
LM,	/FT	TOTAL	W/FT	LM/W	
D	1.0	LM/FT			
ASDO	ASIO				
	350	700	7.6	92	
350	500	850	9.2	92	
	750	1100	12.1	91	
	350	850	9.7	88	
500	500	1000	11.2	89	
	750	1250	14.2	88	
	350	1100	13.4	82	
750	500	1250	15.1	83	
	750	1500	17.9	84	

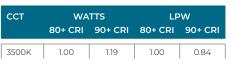
LM	LM/FT		W/FT	LM/W
D	1	LM/FT		
ASDO	WIO2			
	350	700	7.2	97
350	500	850	8.6	99
	750	1100	11.0	100
	350	850	9.2	92
500	500	1000	10.6	94
	750	1250	13.2	95
	350	1100	12.9	85
750	500	1250	14.4	87
	750	1500	16.9	89

# MULTIPLIER TABLES

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

DUO

SOLA



сст	WA	TTS	LF	w
	80+ CRI	90+ CRI	80+ CRI	90+ CRI
2700K	1.05	1.27	0.95	0.79
6500K	1.00	1.14	1.00	0.88



# **Lumenwerx**

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# **Technical Specifications**

#### **DIRECT 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.

#### **INDIRECT OPTICS**

#### **Environmentally Protected Indirect Optic (EPIO)**

The Environmentally Protected Indirect Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. The lens is 1/16" thick and made of frosted polycarbonate. This extruded snap-in lens has a gasket to ensure proper sealing. The EPIO suits moderate climate environments.

### Asymmetric Soft Indirect Optic (ASIO)

The Asymmetric Soft Indirect Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. The lens is 1/16" thick and made of clear polycarbonate. This extruded snap-in lens has a gasket to ensure proper sealing. The total internal reflection and surface scattering optic is specifically angled to guide the light through the lens to create a nice asymmetric distribution. The ASIO suits moderate climate environments.

#### Widespread Indirect Optic (WIO2)

The Widespread Indirect Optic creates a seal that blocks debris and moisture, and withstands UV distortion and moderate impact. The lens is 1/16" thick and made of clear polycarbonate. This extruded snap-in lens has a gasket to ensure proper sealing. The total internal reflection and surface scattering optic offers an impressive 160° spread. WIO2 creates an even illumination for smooth brightness on the ceiling that can achieve uniformity ratios of up to 2:1. The WIO2 suits moderate climate environments.

#### Uniformity [max/min]

Based on 18' continuous runs, in a 20' x 40' room, 10' wall height

Mounting height from	Spacing (Center to center)			
ceiling	8'	10'	12'	
24"	3.0	5.5	8.0	
36"	2.0	3.0	4.5	
48"	2.0	2.0	3.5	

#### LIGHT SOURCE

Custom linear array of alternating color temperature mid-flux LEDs are mounted directly to the housing for optimal thermal performance. For the DUO products, a color temperature range from 6500K-2700K is achievable with color points on or below the black body curve. For the SOLA products, a color temperature range from 3500K-2200K is controlled synchronously with intensity. Color consistency between fixtures is 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.

## **Chromawerx SOLA**

It is a single-channel control that dims output while warming the color temperature in a pre-determined relationship. A simple analog control sends a common signal to dual output digital drivers, which are programmed to adjust a specially populated LED array to emulate the effect of dimming a filament source. Dimming range is programmable but the default option runs from 3500K at 100% of full power to 2200K at 5% of full power. CRI is maintained above 80 throughout the dimming range.



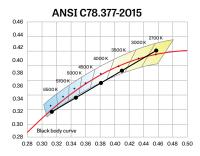
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#### **Chromawerx DUO**

It is a two-channel control. It uses an analog (0-10V) protocol for separate control of luminaire CCT and intensity or a digital (DMX, DALI, and LD2) protocol for synchronous control of both warm and cool LED arrays to enable the user to set color temperature and light output. Commonly called "tunable white", Chromawerx two-channel control provides the range of cool (6500K) to warm (2700K) color that can be useful for helping to entrain circadian rhythms, stimulate alertness for improved educational and work productivity, and compensate for jet lag, among other applications. The Chromawerx drivers are programmed to limit maximum light output and power usage across all color temperatures. CRI is maintained above 80. When paired with DALI drivers (DDA/DDA8), color tuning follows a linear dimming curve.



## 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 DUO is selected
- 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

#### PATTERN LENGTH

Via 2 Seal can be ordered in 1' and/or 1" increments. Continuous runs are available for run lengths over 12'. The minimum length is 2' for Direct fixtures, and 3' for Direct/Indirect fixtures. 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.

#### **WEEP HOLES**

The Direct/Indirect fixtures, with the IP44-Rated option, feature a weep hole situated in the end cap. Water and moisture that enters the fixture will be expelled through this hole.



#### 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

# SOLA

<u>SD1</u>

Factory-set, adjustable output current LED driver with universal (120-277 VAC) input. Using a single 0-10V control signal, the light output warms in color temperature as it dims down to 1% and 2200K. At maximum driver load, efficiency<86%, PF>0.9, THD<20%.



# VIA 2 SEAL

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#### SEALWERX SERIES



DMX

Factory-set adjustable output current electronic driver with 120-277 VAC line input. Using DMX wall controls (optionally supplied by Lumenwerx) or an existing DMX control system, both channels of LEDs are independently adjustable. Each DMX driver can be independently addressed using the built-in RDM (Remote Device Management) in the field. Dimming down to 1% is attainable. Rated life (90% survivorship) of 50,000 hours at 50°C maximum ambient temperature. At maximum driver load, efficiency<84%, PF>0.9, THD<20%.

<u>DALI</u>

Factory-set adjustable output current electronic driver with 120-277 VAC line input. Using an existing DALI control system (supplied by others), one control channel adjusts the fixture color temperature, and the other control channel adjusts fixture brightness. With DALI Type 6, two DALI addresses are required to control both channels. With DALI Type 8, one DALI address is required to control both channels. Dimming down to 1% is attainable. Rated life (90% survivorship) of 50,000 hours at 50°C maximum ambient temperature. At maximum driver load, efficiency<84%, PF>0.9, THD<20%.

DD1

Factory-set adjustable output current LED driver with universal (120-277 VAC) input. Controlled via two individual 0-10V signals, one for setting light output down to a minimum of 1% and the other for adjusting the CCT (default range of 6500K-2700K). Rated life of 50,000 hours at 70°C maximum driver case temperature and 100% load conditions. Typical efficiency of 86%, PF>0.9, THD<20% at 100% load conditions.

LD2

Lutron DALI-2 digital drivers provide a high-performance tunable white solution with single-address digital control. Guaranteed performance and compatibility when used with Lutron DALI-2 controls.

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.

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

CERTIFICATIONS

**ETL**: IP44-Rated environment option is rated for dry/damp locations. IP66-Rated, IP65-Rated, and IP65-Rated Electrical Components 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

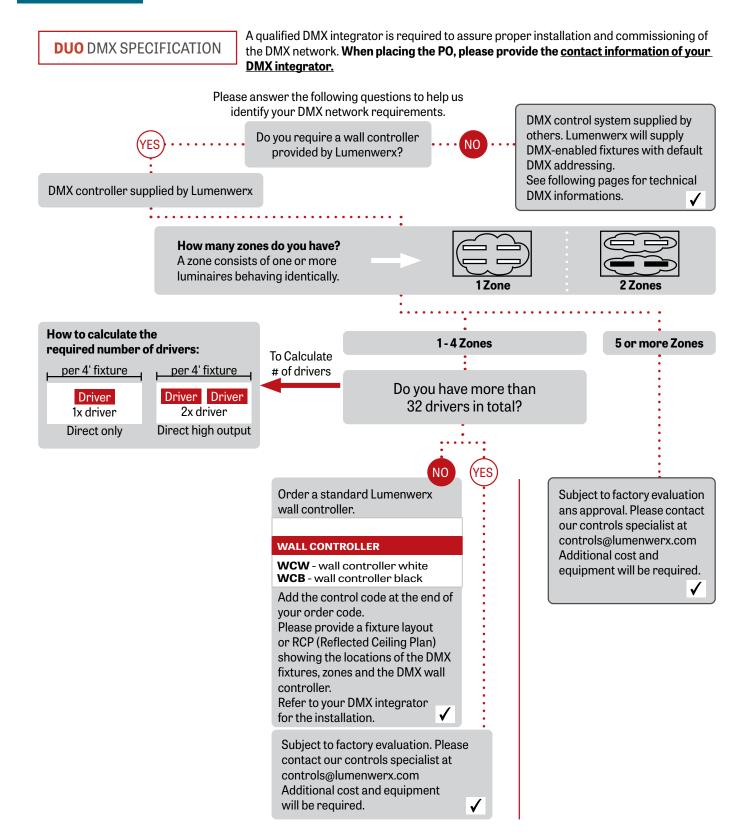
### WARRANTY

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. Wall controllers are covered by the manufacturer warranty.













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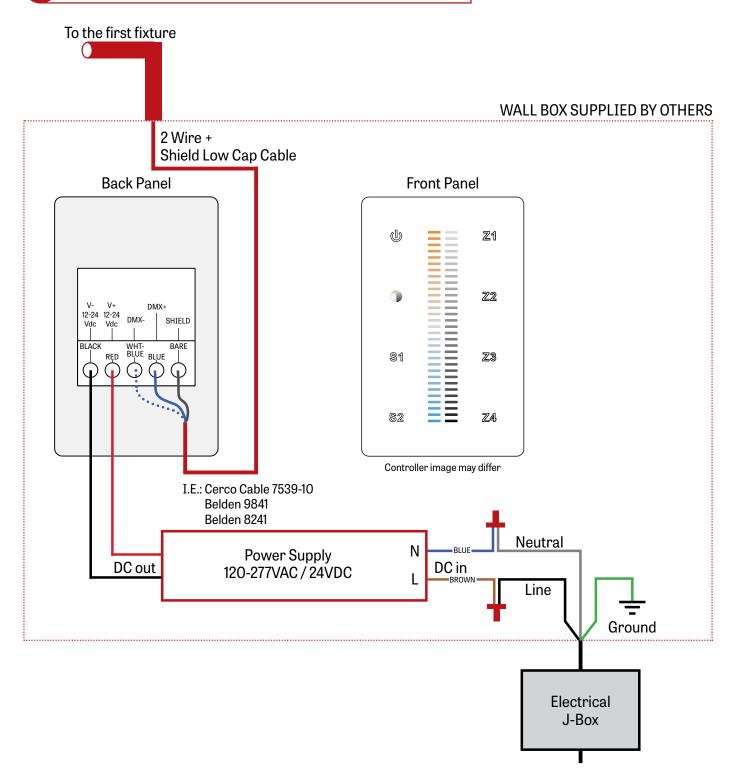
## GENERIC DMX NETWORK ARCHITECTURE Network & control **DMX PROTOCOL** Lumenwerx supplied **CONSIDERATIONS:** DMX controller by others DMX drivers/fixtures must be daisy chained. Maximum 32 drivers per DMX run. The end of the line must be terminated First DMX enabled fixture by a 120 $\Omega$ resistor supplied by Lumenwerx DMX IN DMX Controls J-Box **DMX OUT** Driver Driver Electrical J-Box 120/277V 2 Wire + Shield LOW CAP CABLE **Next DMX enabled fixture** supplied by Lumenwerx DMX IN DMX Controls J-Box **DMX OUT** Driver Driver Electrical J-Box 120/277V 2 Wire + Shield LOW CAP CABLE Last DMX enabled fixture supplied by Lumenwerx max 32 drivers per run DMX IN DMX Controls J-Box **DMX OUT** Driver Electrical Driver J-Box 120/277V 120 OHM END OF LINE

RESISTOR





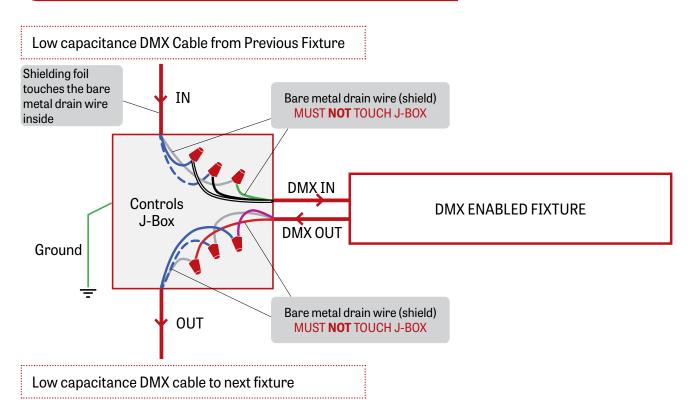
1 LUMENWERX SUPPLIED DMX CONTROLLER



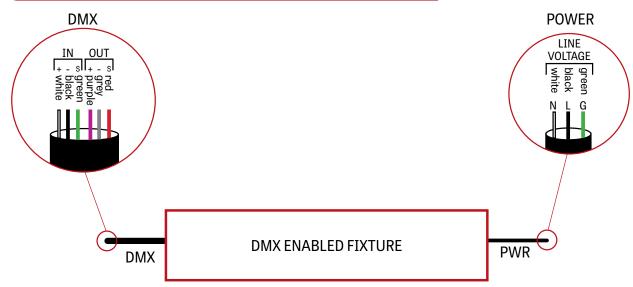




2 J-BOX DMX DAISY CHAIN DETAIL



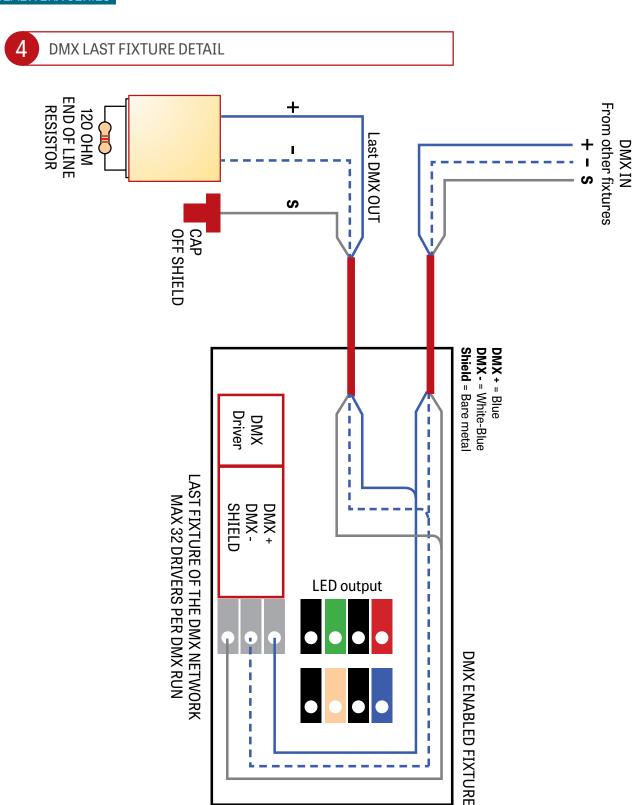








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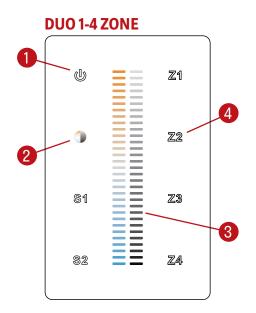




# **Lumenwerx**

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## DMX WALL CONTROLLER



(1) Power: Use this button to turn ON or OFF the fixture.

Use the color/brightness toggle button to choose between color/brightness. When Blue: brightness is selected, when Yellow: color is selected. (2) Brightness/CCT:

Depending on the mode chosen in step 2, the slider will allow (3) Slider:

the user to set desired color or brightness.

(4) Zone select: Up to 4 zones can be selected either independently or together.

Once selected, the commands will be sent to the zone identified

by a Blue LED.

**Default DMX Addresses:** 

1Warm 2 Cool

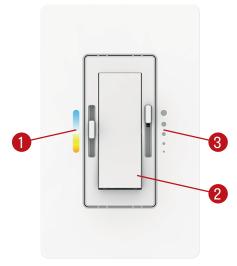




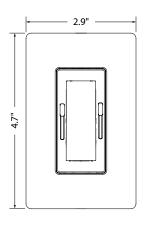


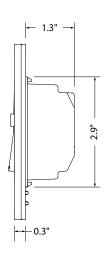
# **DUAL 0-10V WALL CONTROLLER**

# Front Panel



# **Dimensions**





Controller image may differ

(1) CCT control: Use this button to adjust the color temperature.

(2) On/Off switch: Use this button to turn ON or OFF the fixture.

(3) Dimming control: Use this button to adjust the brightness.

# Wiring Diagram

