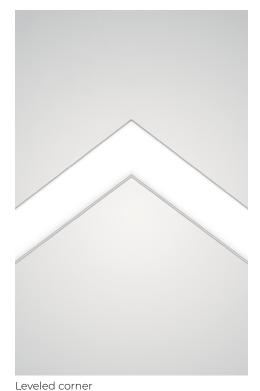
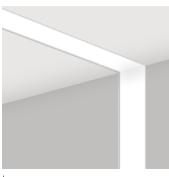


DIRECT CHROMAWERX - SOLA, DUO

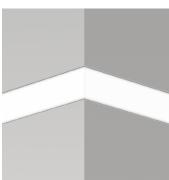








Inner corner

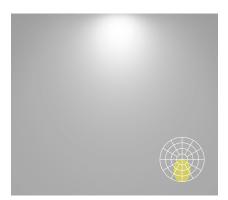


Outer corner

#### 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 2 Recessed is offered with Lambertian, asymmetric, or wall wash optics.

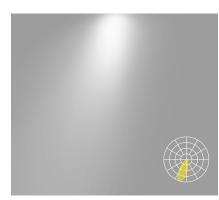
Declare. IC RATED



High-Efficiency Lambertian Optic



Asymmetric Refractive Optic



WRO2 Wall Wash Refractive Optic







Lumenwerx	7
Lumenwerz	L

DIRECT CHROMAWERX - SOLA, DUO

Project:	
Туре:	

### 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 <sup>2</sup>	CRI
LOMINAIRE ID	DISTRIBUTION	OFTIC	EEINS FOSITION	EIGITI 300RCE	CKI
VIA2RPAT	D				
VIA2RPAT - Via 2" Recessed Pattern	<b>D</b> - Direct	HLO - High-Efficiency Lambertian Optic ARO2 - Asymmetric Refractive Optic WRO2 - Wall Wash Refractive Optic	<b>FH</b> <sup>1</sup> - Flush <b>0.5D</b> <sup>1</sup> - 0.5" drop <b>1.0D</b> <sup>1</sup> - 1.0" drop	SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K	<b>80CRI</b> - 80+ CRI <b>90CRI</b> - 90+ CRI
			For HLO, specify FH, 0.5D, or 1.0D.     For ARO2 and WRO2, specify FH.	<sup>2</sup> Static white, BIOS, and Chromawerx QUADRO also available. Consult other spec sheets.	

LUMEN PACKAGE	PATTERN LENGTH	CORNER TYPE <sup>6</sup>	VOLTAGE
200LMF <sup>3</sup> - Hypo output 200 lm/ft 350LMF - Low output 350 lm/ft 500LMF - Medium output 500 lm/ft 750LMF - High output 750 lm/ft 1000LMF - Ultra high output 1000 lm/ft 1200LMF <sup>4</sup> - Hyper output 1200 lm/ft <sup>3</sup> Minimum <sup>4</sup> fixture. <sup>4</sup> Fixture will be very bright. Use in suitable applications.	##FT##IN(#X#FT#IN-#X#FT#IN) 5 - ##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'  5 Minimum 2'.     Minimum 4' for DMX.	#LEV2C(A##) - 2-way leveled corner #LEV3C(A##) <sup>7,8</sup> - 3-way leveled corner #LEV4C(A##) <sup>7,8</sup> - 4-way leveled corner #LEV4C(A##) <sup>7,8</sup> - 4-way leveled corner #INN2C(A90) <sup>8,9</sup> - 2-way inner corner #OUT2C(A90) <sup>8,9</sup> - 2-way outer corner <sup>6</sup> Specify quantity (#) and angle (A##) for each required cc <sup>7</sup> Separate angles with a "+" if more than one type is requi ILEV4C(A60+Al20). <sup>8</sup> Not available with ARO2/WRO2. <sup>9</sup> Available with 90° only. Consult factory for other angles. <sup>10</sup> Minimum angle is 30°.  For ARO2/WRO2, minimum angle is 75°.	120V - 120V 277V - 277V UNV - 120V-277V

DRIVER 11	ELECTRICAL	MOUNTING CEILING 14	MOUNTING WALL	FINISH	OPTIONS 16
	1C				
SOLA SDI - Single 0-10V input  DUO DMX <sup>12,13</sup> - DMX DDA <sup>13</sup> - DALI DT6 DDA8 <sup>13</sup> - DALI DT8 DDI - Dual 0-10V input for CCT/intensity LD2 <sup>13</sup> - Lutron DALI-2 digital	1C - 1 circuit	TG9 - 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 NA - Not applicable	DTR - Drywall trim DTL - Drywall trimless DMF - Drywall mud flange NA - Not applicable	W - Matte white B - Matte black CF# - Custom finish, specify RAL#	FU120 - Fuse 120V FU277 - Fuse 277V FWC - Flexible whip cable (6' std) CP - Chicago Plenum NA - None
<sup>™</sup> PoE (Power-over-Ethernet) compatible. Consult factory for details. <sup>™</sup> For more information, see pages 9 to 14.		MFM <sup>15</sup> - Multiple flange mounting <sup>14</sup> Transition mounting options also available			specified.
<sup>18</sup> On-site commissioning is required.		(e.g. Recessed to Pendant/Surface), consult factory for details.  15 See page 4 for details.			

### Accessories

WALL CONTROLLER

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Optional, order separately

DMX	DD1
WCW <sup>17</sup> - DMX wall controller white WCB <sup>17</sup> - DMX wall controller black	TWCW <sup>18</sup> - Dual 0-10V wall controller white TWCB <sup>18</sup> - Dual 0-10V wall controller black
<sup>17</sup> Available with DMX only. For more information, see pages 9 to 14, or consult factory.	<sup>18</sup> Available with DD1 only. For more information, see page 15, or consult factory.





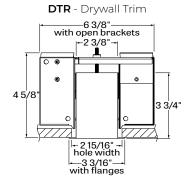




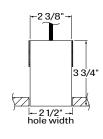
DIRECT

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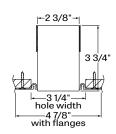
### **Dimensions**

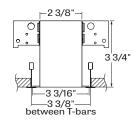


DTL - Drywall Trimless

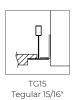


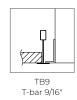
DMF - Drywall Mud Flange







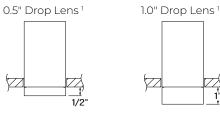








LENS POSITIONS



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





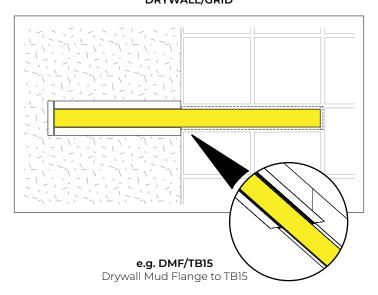
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### Multiple Flange Mounting Details

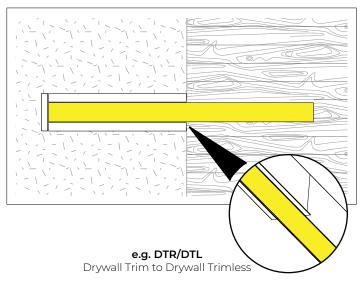
Multiple flange mounting can be specified when a fixture run needs to have a multiple flange recessed mounting detail. A drawing is required to clearly illustrate the application.

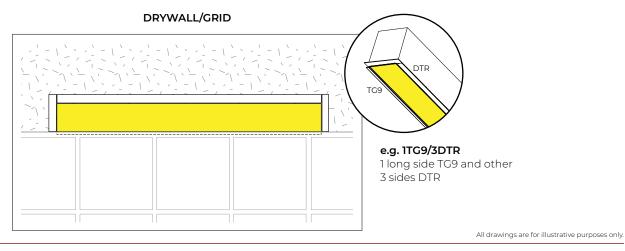
CEILING CONDITION EXAMPLES (consult factory for project specific ceiling conditions)

#### DRYWALL/GRID



#### DRYWALL/WOOD

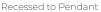




#### TRANSITION MOUNTING OPTIONS (consult factory for details)

Mounting condition alters along the run of the fixture.







Surface to Pendant



Surface to Recessed in corner



Surface to Pendant in corner









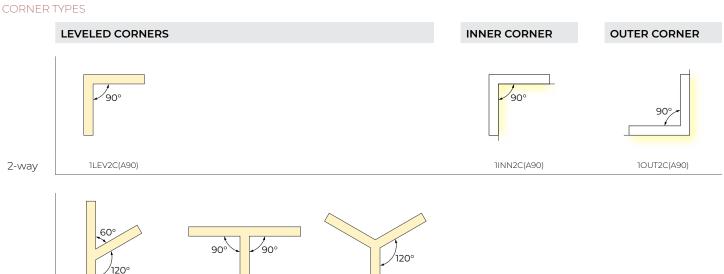
1LEV3C(A90+A90)

1LEV4C(A60+A120)

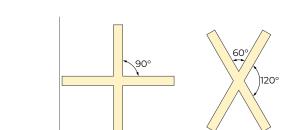


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### Pattern Layout



1LEV3C(A120)



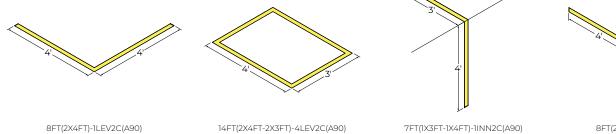
1LEV3C(A60+A120)

1LEV4C(A90)

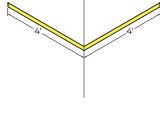
4-way

3-way

### **EXAMPLES**













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### Photometrics

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

HLO (Flush lens)



LM/FT	W/FT	LM/W
200	1.8	109
350	3.2	109
500	4.7	107
750	7.2	104
1000	9.9	101
1200	12.2	98



LM/FT	W/FT	LM/W
200	1.7	119
350	3.0	116
500	4.4	113
750	7.0	107
1000	9.7	103
1200	12.1	99

WRO2



LM/FT	W/FT	LM/W
	1.5	770
200	1.7	119
350	3.0	116
500	4.4	112
750	7.0	107
1000	9.8	102
1200	12.2	99

#### **MULTIPLIER TABLES**

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

SOLA

CCT		
	+ CRI 80+ CRI 90+	CRI
7500K	100 0	9/
3500K	1.19 1.00	0.

DUO

сст	WA	TTS	LP	w
CCI	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

Multiplier - Drop lens

DIRECT LENS	WATTS	LPW
Flush lens	1.00	1.00
Drop lens 0.5"	0.99	1.00
Drop lens 1.0"	0.95	1.05



DIRECT CHROMAWERX - SOLA, DUO

### 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 1.06.

#### Asymmetric Refractive Optic (ARO2)

The Asymmetric Refractive Optic (ARO2) uses a sophisticated reflector combined with a matte beam-shaping film to create a smooth, effective downward light component without shadows or hot spots. It provides directional Gaussian light distribution with peak intensity at 20° above nadir and a 55° Full Width at Half Maximum (FWHM) beam angle. Microstructure material applied to the snap-in lens provides the precise refractive power and visual comfort, while achieving a high luminous efficacy.

#### Wall Wash Refractive Optic (WRO2)

The Wall Wash Refractive Optic (WRO2) delivers smooth vertical illumination with a gentle gradient and soft visual cut-off. Its exacting configuration creates a strong downward light component without shadows or hot spots and provides light distribution with peak intensity at 21° above nadir. Microstructure material applied to the snap-in lens provides the precise refractive power and visual comfort, while achieving a high luminous efficacy.

#### LIGHT SOURCE

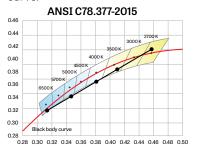
Custom linear array of alternating color temperature mid-flux LEDs are mounted directly to the housing for optimal thermal performance. For the DUO products, a color temperature range from 6500K-2700K is achievable with color points on or below the black body curve. For the SOLA products, a color temperature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

#### 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.



#### 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.

#### **ELECTRICAL**

#### SOLA

SD1

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%.

#### DUO

<u>DMX</u>

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%.







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#### DALI

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%.

#### <u>DD1</u>

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

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.

#### 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

Recessed flanges: Extruded aluminum, up to 90% recycled

content

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) when

specified with CP option.

IC rated: Suitable for direct contact with insulation

Declare: LBC Red List Approved

#### 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.

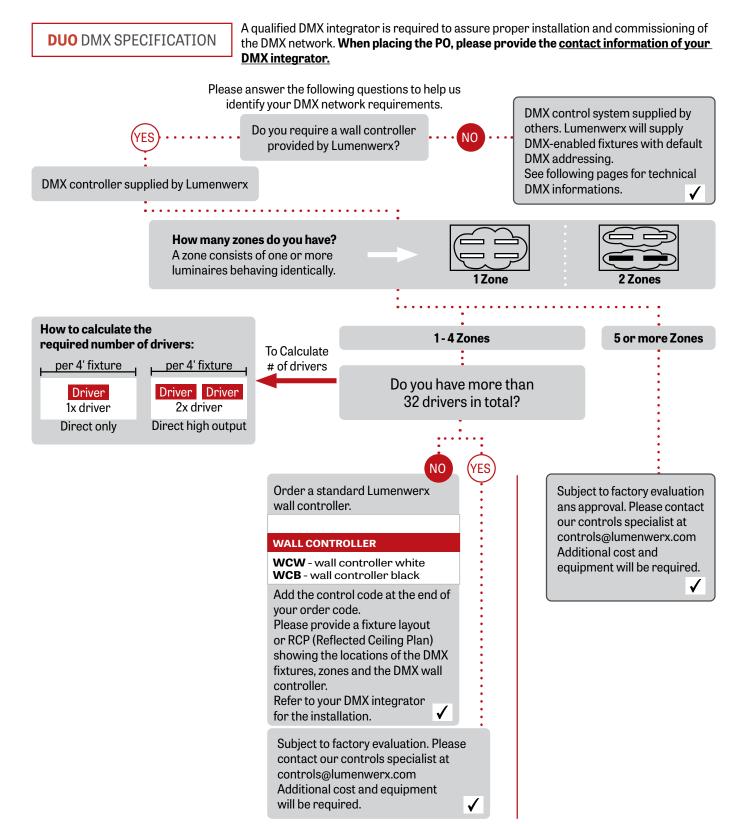
Wall controllers are covered by the manufacturer warranty.







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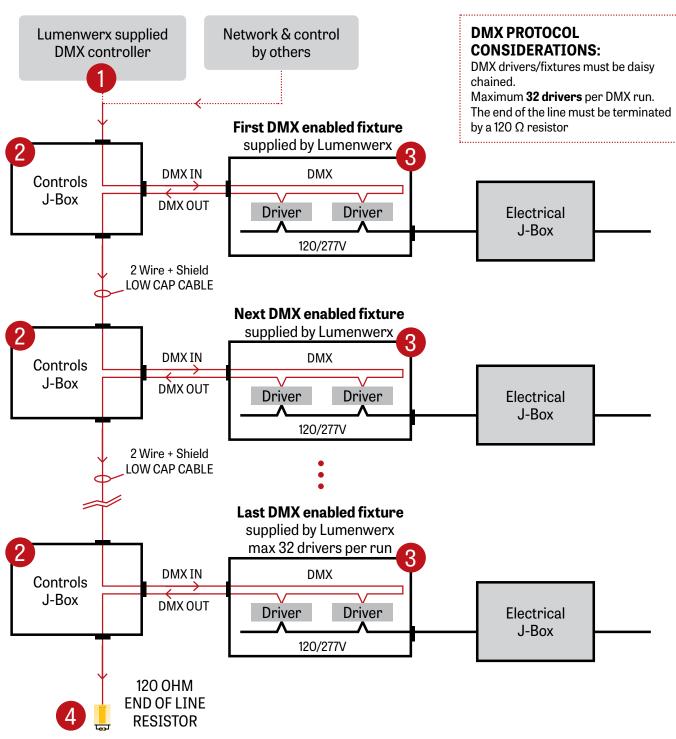


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DIRECT CHROMAWERX - SOLA, DUO

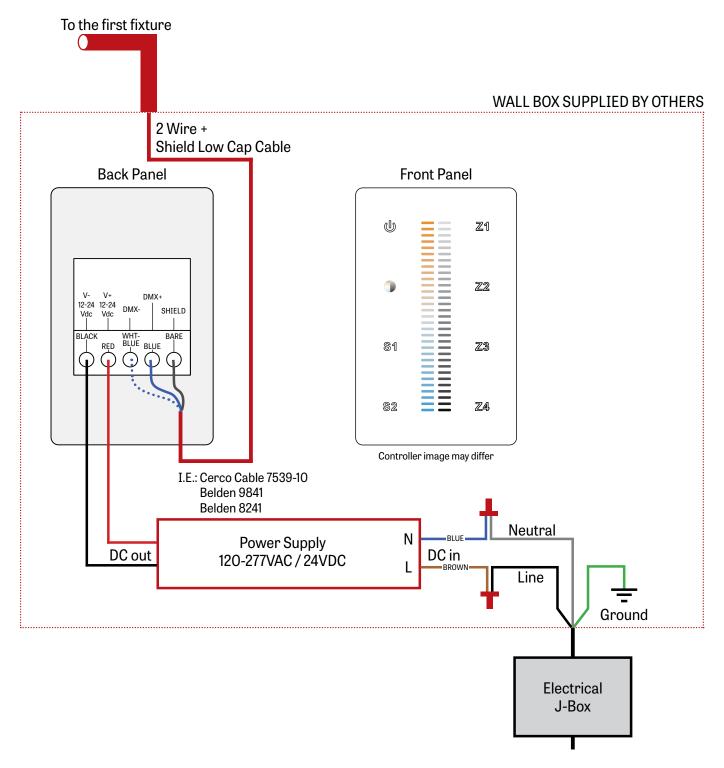
# GENERIC DMX NETWORK ARCHITECTURE





DIRECT CHROMAWERX - SOLA, DUO

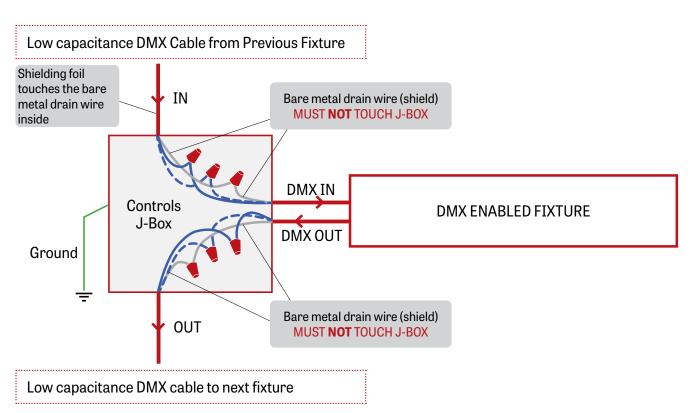
### LUMENWERX SUPPLIED DMX CONTROLLER



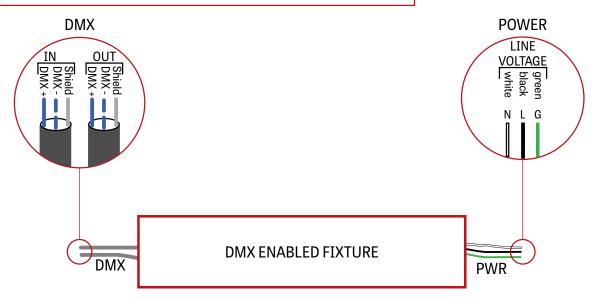


DIRECT CHROMAWERX - SOLA, DUO





### **DMX CONNECTION RECESSED & SURFACE**

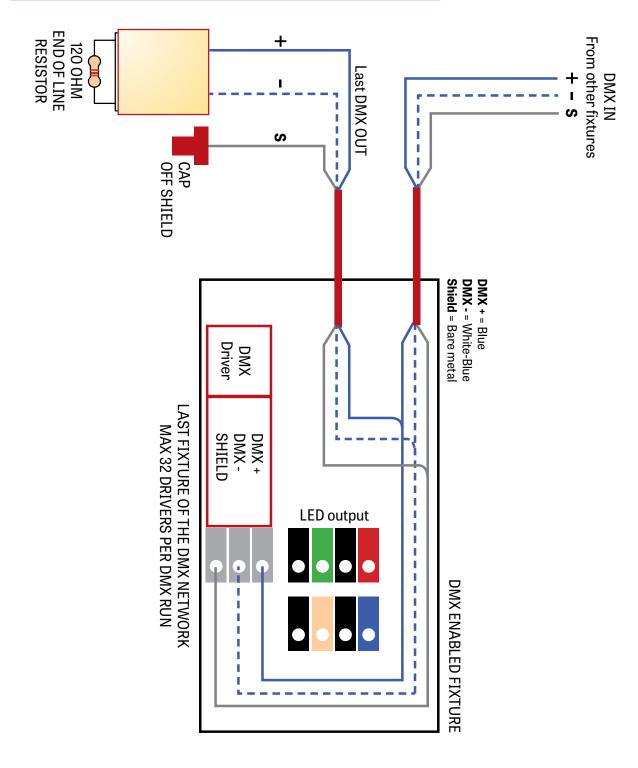






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# 4 DMX LAST FIXTURE DETAIL

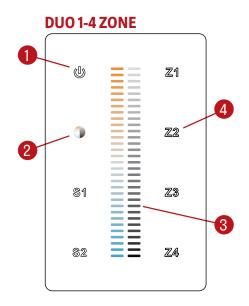






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#### DMX WALL CONTROLLER



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

(2) Brightness/CCT: Use the color/brightness toggle button to choose between

color/brightness. When Blue: brightness is selected, when

Yellow: color is selected.

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

the user to set desired color or brightness.

Up to 4 zones can be selected either independently or together. Once selected, the commands will be sent to the zone identified (4) Zone select:

by a Blue LED.

**Default DMX Addresses:** 

1Warm 2 Cool





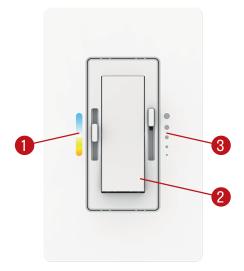




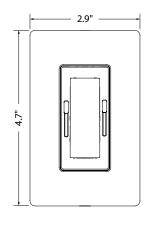
DIRECT CHROMAWERX - SOLA, DUO

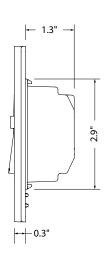
#### **DUAL 0-10V WALL CONTROLLER**

#### 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

