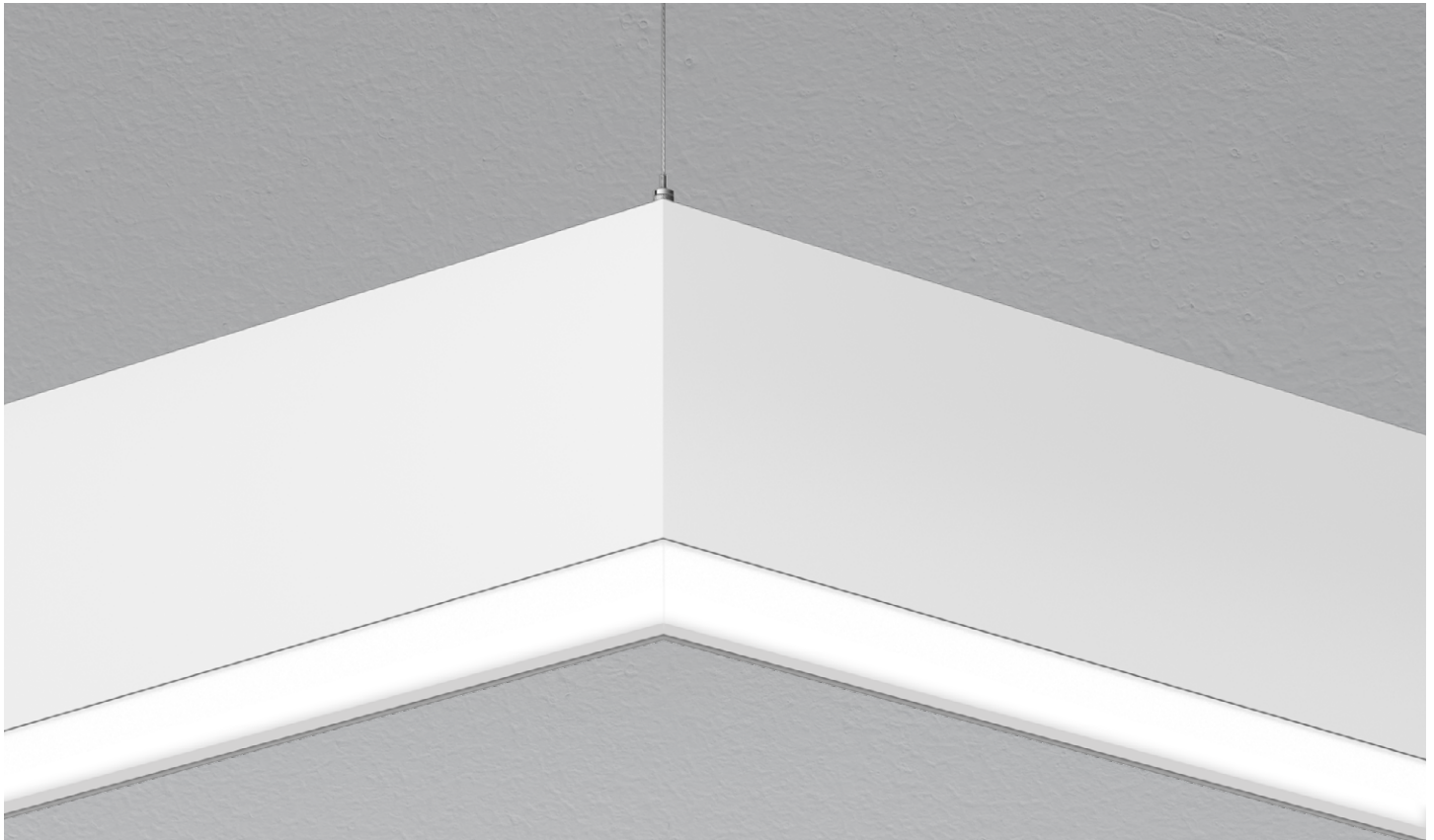


VIA 1.5 PENDANT PATTERN

DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

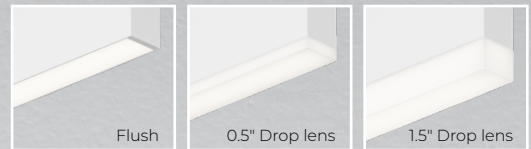


Declare.



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

Lens Positions



DIRECT



HLO

INDIRECT



WIO2

CLO

WAI2

HLO

VIA 1.5 PENDANT PATTERN



DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

Project: _____

Type: _____

Order Guide

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

LUMINAIRE ID	DISTRIBUTION	DIRECT OPTIC Specify NA for Indirect fixture	LENS POSITION Specify NA for Indirect fixture	INDIRECT OPTIC Specify NA for Direct fixture	LIGHT SOURCE ³	CRI
VIA1.5PPAT						
VIA1.5PPAT - Via 1.5" Pendant Pattern	DI - Direct/Indirect D - Direct I - Indirect	HLO - High-Efficiency Lambertian Optic NA - Not applicable	FH - Flush 0.5D - 0.5" drop 1.5D - 1.5" drop NA - Not applicable	WIO2 - Widespread Indirect Optic CLO ¹ - Clear Lambertian Optic WAI2 - Widespread Asymmetric Indirect Optic HLO ² - High-Efficiency Lambertian Optic NA - Not applicable	SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K	80CRI - 80+ CRI 90CRI - 90+ CRI
				¹ Available only with Direct/Indirect. ² Not available with Direct/Indirect.	³ Static white, BIOS, and Chromawerx QUADRO also available. Consult other spec sheets.	

DIRECT LUMEN PACKAGE Specify NA for Indirect fixture	INDIRECT LUMEN PACKAGE Specify NA for Direct fixture	PATTERN LENGTH	CORNER TYPE ¹⁰	VOLTAGE
200LMF ⁴ - Hypo output 200 lm/ft 350LMF - Low output 350 lm/ft 500LMF - Medium output 500 lm/ft 750LMF ⁵ - High output 750 lm/ft 900LMF ^{6,7} - Hyper output 900 lm/ft NA - Not applicable	350LMF ⁴ - Low output 350 lm/ft 500LMF - Medium output 500 lm/ft 750LMF ⁸ - High output 750 lm/ft 900LMF ^{6,7} - Hyper output 900 lm/ft NA - Not applicable	##FT##IN(##X##FT##IN-##X##FT##IN-...) ⁹ - ##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' ⁹ - Minimum 2' for Direct or Indirect. - Minimum 3' for Direct/Indirect. - Minimum 4' for DMX.	#LEV2C(A##) - 2-way leveled corner #LEV3C(A##) ¹¹ - 3-way leveled corner #LEV4C(A##) ¹¹ - 4-way leveled corner	120V - 120V 277V - 277V UNV - 120V-277V
⁴ Minimum 4' fixture. ⁵ For Direct/Indirect, Indirect must not exceed 500 lm/ft. ⁶ For Direct fixture only or Indirect fixture only.	⁷ Fixture will be very bright. Use in suitable applications. ⁸ For Direct/Indirect, Direct must not exceed 500 lm/ft.		ANGLE (A##): (A60) - 60° (A90) - 90° (A120) - 120° (A##) ¹² - Custom	
			¹⁰ Specify quantity (#) and angle (A##) for each required corner type. If more than one option is specified, separate codes with a "+", e.g. 1LEV2C(A90)+2LEV2C(A60). ¹¹ Separate angles with a "+" if more than one type is required, e.g. 1LEV4C(A60+A120). ¹² Minimum angle is 30°.	

DRIVER ¹³	ELECTRICAL	MOUNTING ¹⁶	FINISH	OPTIONS ¹⁸
SOLA SD1 - Single 0-10V input DUO DMX ^{14,15} - DMX DDA ¹⁵ - DALI DT6 DDA8 ¹⁵ - DALI DT8 DD1 - Dual 0-10V input for CCT/intensity LD2 ¹⁵ - Lutron DALI-2 digital	1C - 1 circuit	ACS - Aircraft cable, standard STS ¹⁷ - Stem, standard ACC() - Aircraft cable, custom STC() ¹⁷ - Stem, custom	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL#	FU120 - Fuse 120V FU277 - Fuse 277V CTB9 ¹⁹ - T-bar caddy clip, 9/16" CTB15 ¹⁹ - T-bar caddy clip, 15/16" CTG9 ¹⁹ - Tegular caddy clip, 9/16" CTG15 ¹⁹ - Tegular caddy clip, 15/16" CST ¹⁹ - Screw slot caddy clip NA - None
¹³ PoE (Power-over-Ethernet) compatible. Consult factory for details. ¹⁴ For more information, see pages 8 to 13. ¹⁵ On-site commissioning is required.		¹⁶ Standard canopies are black for black fixtures, and white for all other finishes. See page 3 for full details on standard and custom options. ¹⁷ Not available with DMX.		¹⁸ Separate codes with a "+" if more than one is specified. ¹⁹ Available with aircraft cable only.

Accessories

Optional, order separately

WALL CONTROLLER ²⁰	
DMX	DD1
WCW##FT ²¹ - DMX wall controller white WCB##FT ²¹ - DMX wall controller black	TWCW##FT ^{22,23} - Dual 0-10V wall controller white TWCB##FT ^{22,23} - Dual 0-10V wall controller black
²⁰ Specify wire length (##) in feet. ²¹ Available with DMX only. For more information, see pages 8 to 13, or consult factory. ²² Available with DD1 only. For more information, see page 14, or consult factory. ²³ Only available with 120V.	



VIA 1.5 PENDANT PATTERN



DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

Pendant Mounting Code

Aircraft Cable

Standard

ACS - Aircraft cable, standard

- Ø 5" for power canopy
- Ø 3" for non-power canopy
- Canopies are black for black fixtures, and white for all other fixture finishes
- Power cord is black for black fixtures, and white for all other fixture finishes
- Aircraft cable length is 36"

Stem

Standard

STS - Stem, standard

- Ø 5" for power canopy
- 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

Custom

Example: ACC(3NPC-72IN-W-PCB-NA)

ACC() - Aircraft cable, custom

NON-POWER CANOPY SIZE	AIRCRAFT CABLE LENGTH	CANOPY FINISH	POWER CORD COLOR	OPTION
3NPC - Ø 3" non-power canopy 5NPC - Ø 5" non-power canopy	36IN - 36" 72IN - 72" 120IN - 120" #IN ¹ - Other lengths, specify in inches	W - Matte white AL - Aluminum B - Matte black CF# - Custom finish, specify RAL#	PCW - White PCB - Black	SEM ² - Seismic mounting SLC ² - Sloped ceiling for aircraft cable NA - None
	¹ Maximum length is 288". For longer lengths, please consult factory.			² Not available with the Ø 3" non-power canopy size.

Custom

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

STC() - Stem, custom

NON-POWER CANOPY SIZE	STEM LENGTH	CANOPY FINISH	STEM COLOR	OPTION
5NPC - Ø 5" non-power canopy	18IN - 18" 36IN - 36" #IN ³ - Specify length in inches	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
	³ Minimum length is 6". Maximum length is 72". Stem is not field adjustable.			

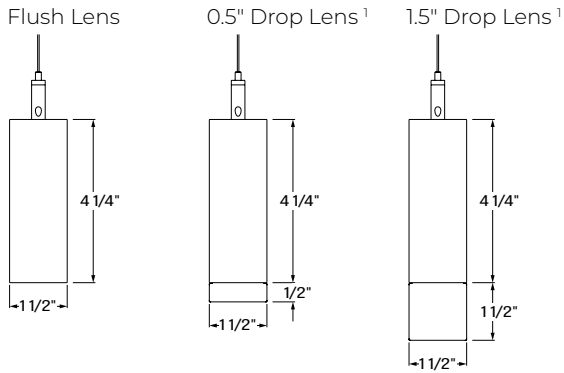
VIA 1.5 PENDANT PATTERN



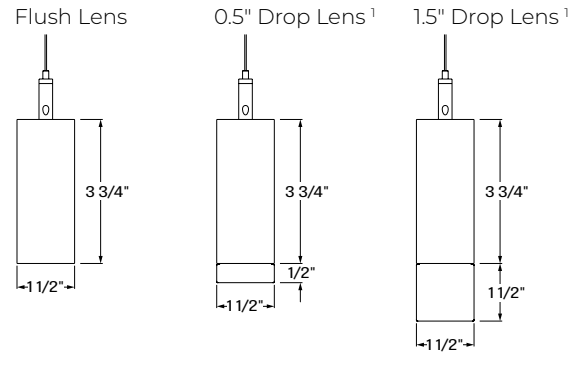
DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

Dimensions

DIRECT/INDIRECT



DIRECT or INDIRECT

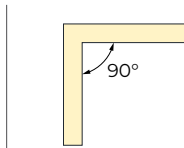


¹Only available with HLO direct lens.

Pattern Layout

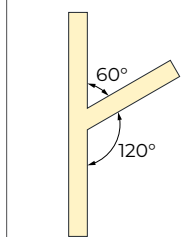
CORNER TYPES

LEVELED CORNERS



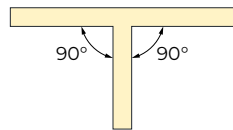
2-way

1LEV2C(A90)

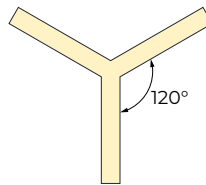


3-way

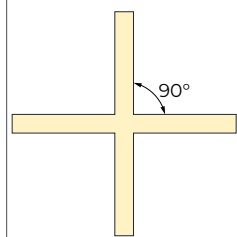
1LEV3C(A60+A120)



1LEV3C(A90+A90)

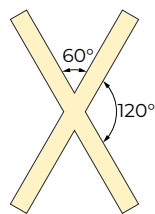


1LEV3C(A120)



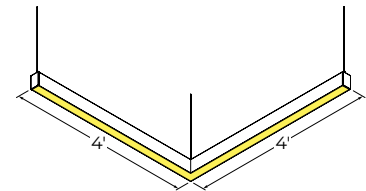
4-way

1LEV4C(A90)

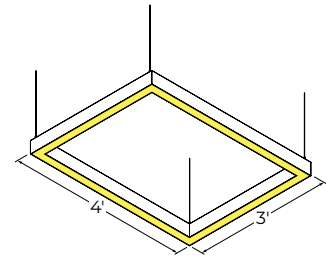


1LEV4C(A60+A120)

EXAMPLES



8FT(2X4FT)-1LEV2C(A90)



14FT(2X4FT-2X3FT)-4LEV2C(A90)

VIA 1.5 PENDANT PATTERN

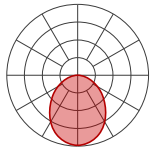
DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

Photometrics

Values calculated based on a 4' fixture at 3500K for all optics.

DIRECT OPTIC

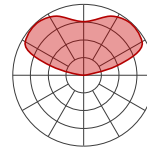
HLO (Flush lens)



LM/FT	W/FT	LM/W
200	2.2	90
350	4.0	87
500	5.8	85
750	9.0	84
900	10.9	82

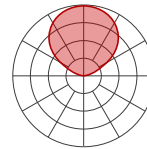
INDIRECT OPTICS

WIO2



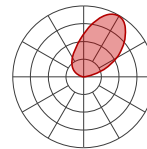
LM/FT	W/FT	LM/W
350	2.4	145
500	3.5	141
750	5.5	136
900	6.8	132

CLO



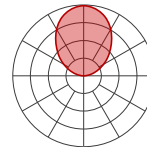
LM/FT	W/FT	LM/W
350	2.3	154
500	3.3	150
750	5.2	144
900	6.4	141

WAI2



LM/FT	W/FT	LM/W
350	2.5	139
500	3.7	135
750	5.8	130
900	7.1	126

HLO



LM/FT	W/FT	LM/W
350	4.0	87
500	5.8	85
750	9.0	84
900	10.9	82

MULTIPLIER TABLES

Use these tables to get results for different color temperatures and lens positions for all photometric tables.

SOLA

CCT	WATTS	LPW
	80+ CRI / 90+ CRI	80+ CRI / 90+ CRI
3500K	1.00	1.00

DUO

CCT	WATTS	LPW
	80+ CRI / 90+ CRI	80+ CRI / 90+ CRI
2700K	1.05	0.95
6500K	1.00	1.00

Multiplier - Lens position

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

DIRECT/INDIRECT - LPW CALCULATION

For Direct/Indirect performance values, follow the formula.

$$\frac{\left(\begin{array}{c} \text{DIRECT} \\ \text{LM/FT} \end{array} + \begin{array}{c} \text{INDIRECT} \\ \text{LM/FT} \end{array} \right)}{\left(\begin{array}{c} \text{DIRECT} \\ \text{W/FT} \end{array} + \begin{array}{c} \text{INDIRECT} \\ \text{W/FT} \end{array} \right)} = \text{LPW}$$

VIA 1.5 PENDANT PATTERN



DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

Technical Specifications

DIRECT OPTIC

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 with different lens position options, HLO has a spacing criterion of 1.12.

INDIRECT OPTICS

Widespread Indirect Optic (WIO2)

The Widespread Indirect Optic (WIO2) is a horizontal LED array with a widespread indirect micro prismatic optic that 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.

Uniformity [max/min]

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

Mounting height from ceiling	Spacing (Center to center)		
	8'	10'	12'
12"	5.5	10.0	9.0
18"	3.5	6.0	6.0
24"	2.5	4.0	4.5

Clear Lambertian Optic (CLO)

The Clear Lambertian Optic (CLO) uses a single horizontal LED array and a clear acrylic cover to provide simple uplight with high efficiency.

Widespread Asymmetric Indirect Optic (WAI2)

The Widespread Asymmetric Indirect Optic (WAI2) offers an upward grazing effect with a 45° forward throw. It softly highlights the ceiling in the up-light while distributing the required illumination of the rest of an interior space. For avoiding glare and enjoying visual comfort, WAI2 is an ideal solution.

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. HLO has a spacing criterion of 1.12.

LIGHT SOURCE

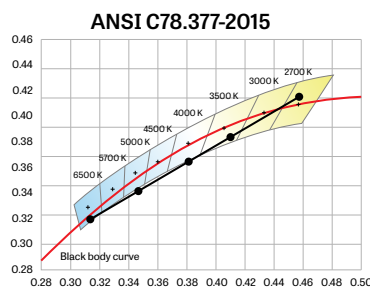
Custom linear array of alternating color temperature mid-flux LEDs are mounted directly to the housing for optimal thermal performance. For the DUO products, a color temperature range from 6500K-2700K is achievable with color points on or below the black body curve. For the SOLA products, a color temperature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



VIA 1.5 PENDANT PATTERN



DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

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

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%.

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%.

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 either with aircraft cable or with stem. See page 3 for details.

FINISH

Interior: 95% reflective matte powder coated white paint

Exterior: Matte white, matte black or aluminum powder coating. Custom finishes are also available.

CONSTRUCTION

Housing: Extruded aluminum

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

End caps: Die-cast aluminum

Hanger: Chromed griplock securely attached in end caps and/or joiners with stainless steel hardware

Aircraft cable suspension: Ø 1/16" stainless steel aircraft cable

Stem: Ø 1/2" threaded steel tube

CERTIFICATIONS

ETL: Rated for indoor dry/damp locations. Conforms to UL Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

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.

VIA 1.5 PENDANT PATTERN



DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

DUO DMX SPECIFICATION

A qualified DMX integrator is required to assure proper installation and commissioning of the DMX network. **When placing the PO, please provide the contact information of your DMX integrator.**

Please answer the following questions to help us identify your DMX network requirements.

YES

Do you require a wall controller provided by Lumenwerx?

NO

DMX control system supplied by others. Lumenwerx will supply DMX-enabled fixtures with default DMX addressing. See following pages for technical DMX informations. ✓

DMX controller supplied by Lumenwerx

How many zones do you have?

A zone consists of one or more luminaires behaving identically.

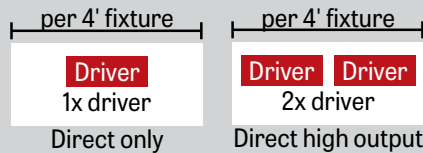


1 Zone



2 Zones

How to calculate the required number of drivers:



To Calculate # of drivers

1 - 4 Zones

5 or more Zones

Do you have more than 32 drivers in total?

NO

YES

Order a standard Lumenwerx wall controller.

WALL CONTROLLER

WCW - wall controller white
WCB - wall controller black

Add the control code at the end of your order code.

Please provide a fixture layout or RCP (Reflected Ceiling Plan) showing the locations of the DMX fixtures, zones and the DMX wall controller. Refer to your DMX integrator for the installation. ✓

Subject to factory evaluation. Please contact our controls specialist at controls@lumenwerx.com. Additional cost and equipment will be required. ✓

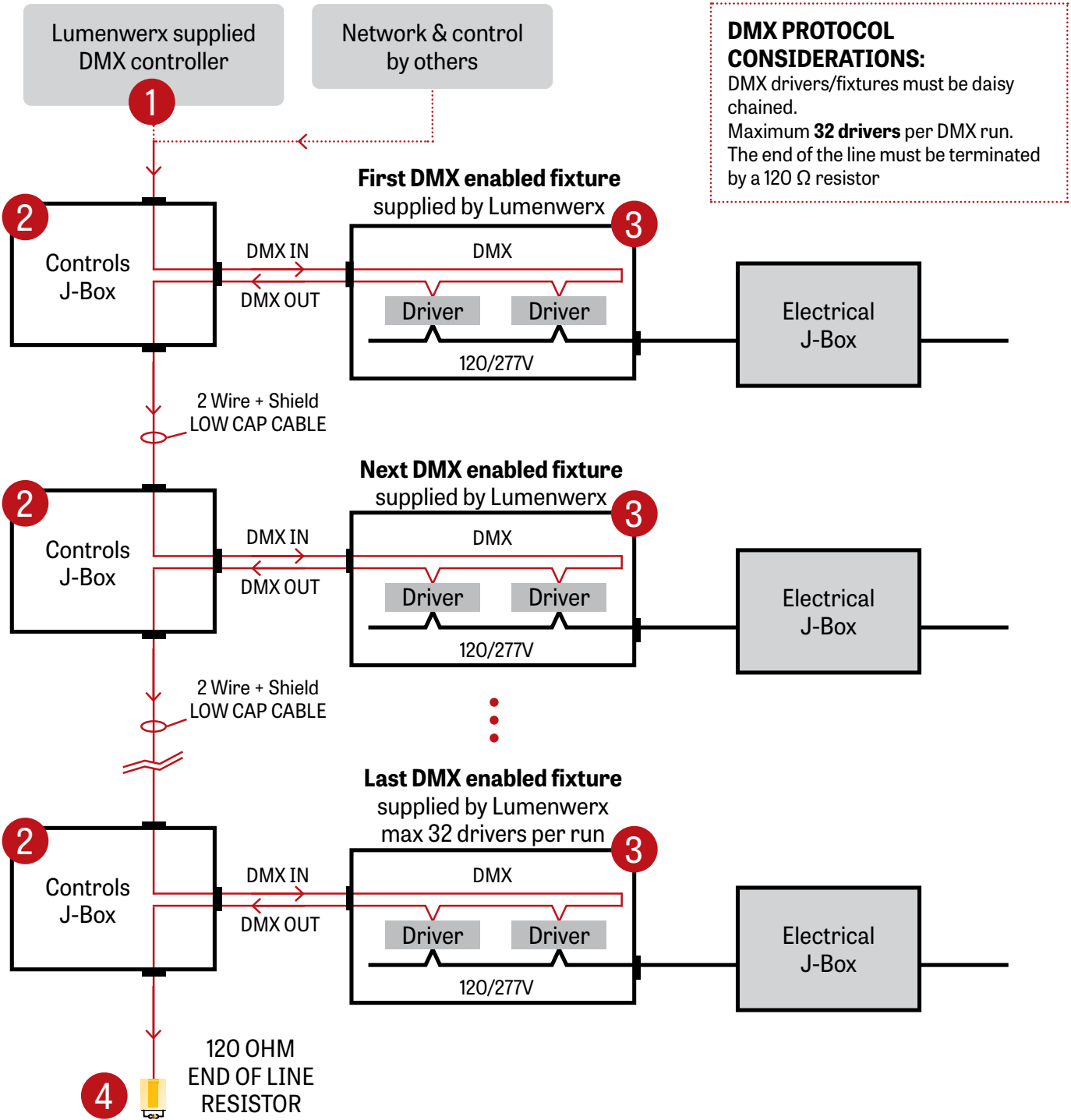
Subject to factory evaluation and approval. Please contact our controls specialist at controls@lumenwerx.com. Additional cost and equipment will be required. ✓

VIA 1.5 PENDANT PATTERN

DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO



GENERIC DMX NETWORK ARCHITECTURE



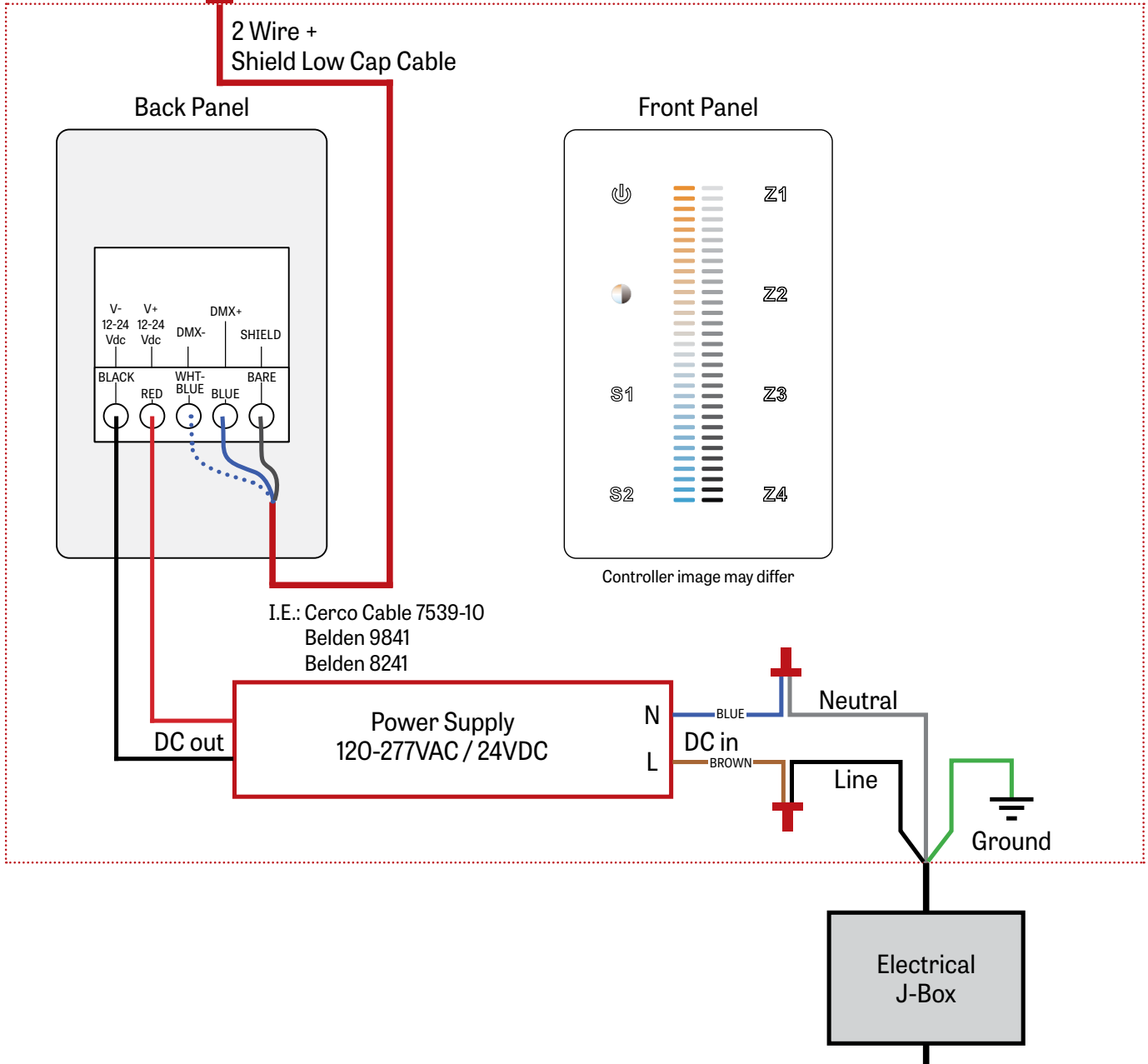
VIA 1.5 PENDANT PATTERN

DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

1 LUMENWERX SUPPLIED DMX CONTROLLER

To the first fixture

WALL BOX SUPPLIED BY OTHERS



I.E.: Cerco Cable 7539-10
Belden 9841
Belden 8241

Controller image may differ

Power Supply
120-277VAC / 24VDC

DC out

N
L

Neutral

DC in
BROWN

Line

Ground

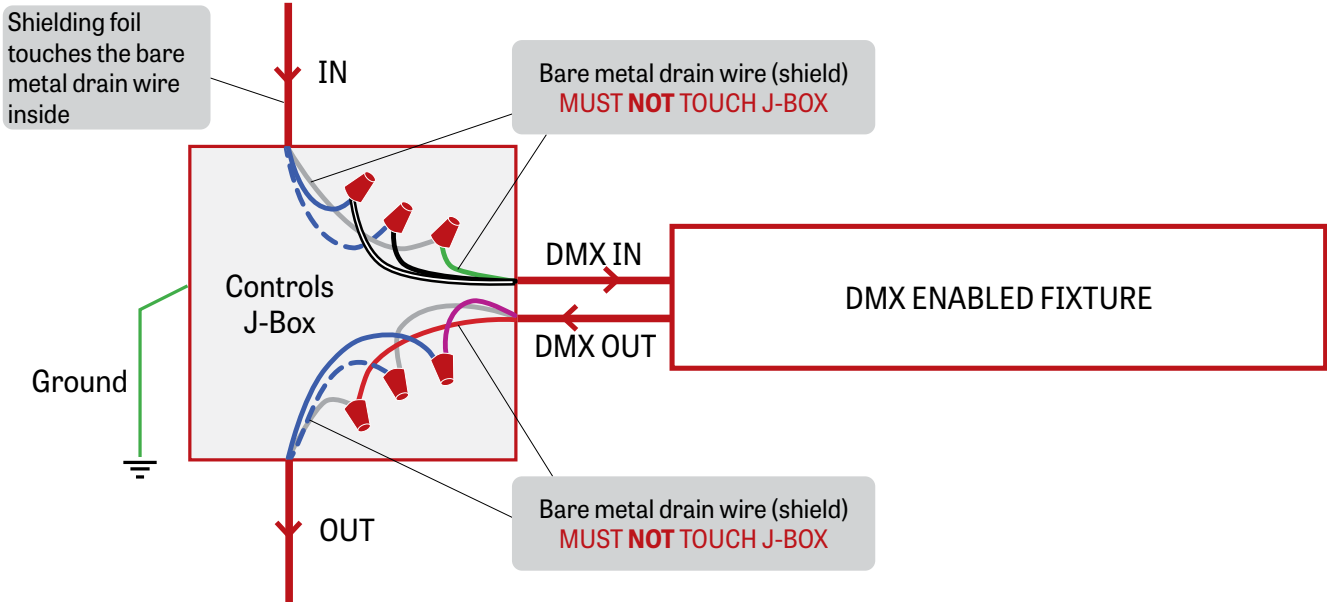
Electrical
J-Box

VIA 1.5 PENDANT PATTERN

DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

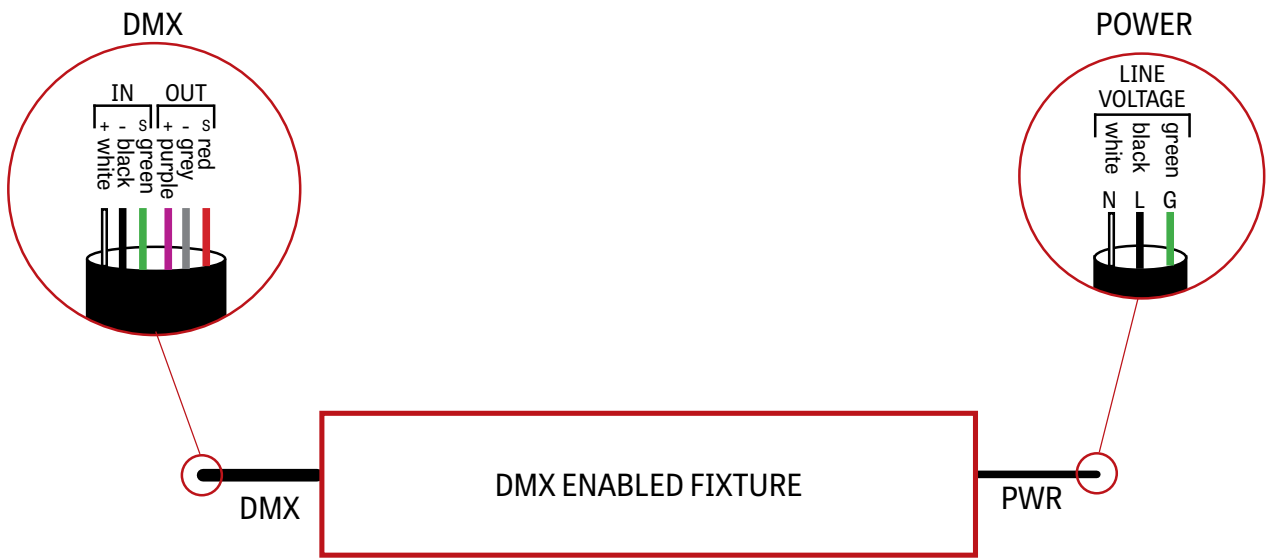
2 J-BOX DMX DAISY CHAIN DETAIL

Low capacitance DMX Cable from Previous Fixture



Low capacitance DMX cable to next fixture

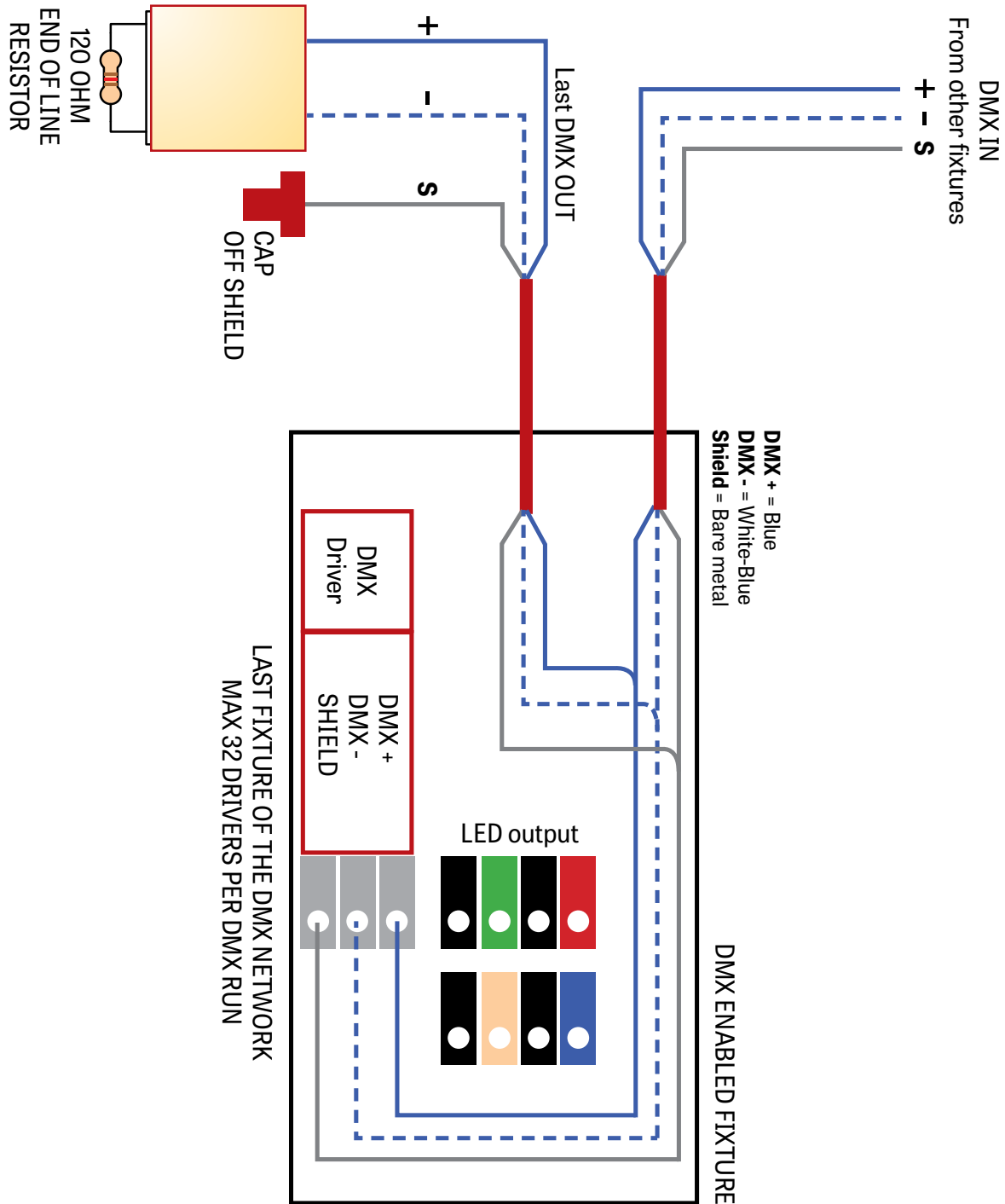
3 DMX CONNECTION PENDANT & WALL



VIA 1.5 PENDANT PATTERN

DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

4 DMX LAST FIXTURE DETAIL

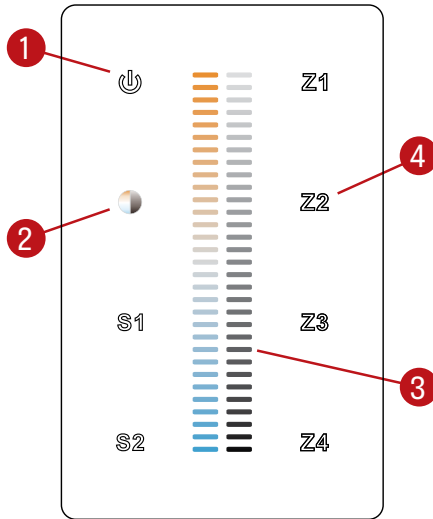


VIA 1.5 PENDANT PATTERN

DIRECT/INDIRECT, DIRECT, INDIRECT
CHROMAWERX - SOLA, DUO

DMX WALL CONTROLLER

DUO 1-4 ZONE



- (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.
- (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:

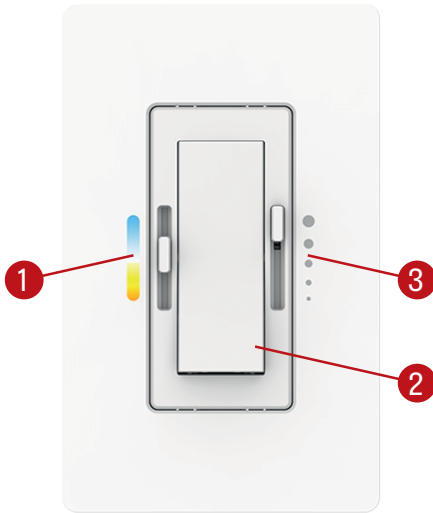
- 1 Warm
- 2 Cool

VIA 1.5 PENDANT PATTERN

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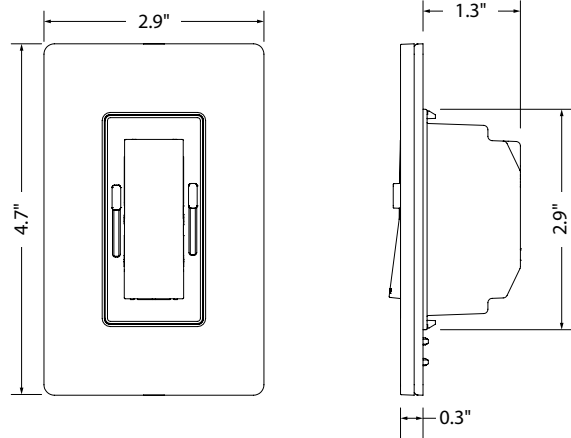
DUAL 0-10V WALL CONTROLLER

Front Panel



Controller image may differ

Dimensions



- (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

