

POP COLOR ROUND 48

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

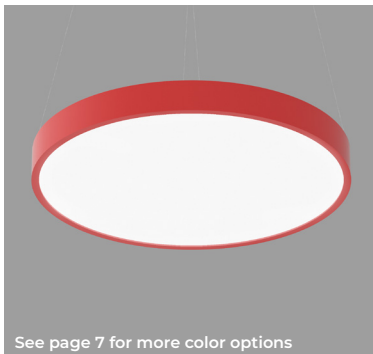


LUMENWERX



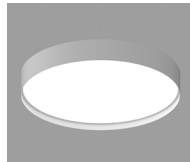
Project: _____

Type: _____



See page 7 for more color options

Flush lens



2" regressed lens

DESCRIPTION

POP Color features a painted housing with a uniformly luminous diffuser that sits flush or regressed. The diffuser and light engine form a fully enclosed unit secured by a twist-and-lock mechanism for easy maintenance with no exposed hardware. POP Color delivers up to 117 LPW and is available in nine standard housing colors. POP Color is an ideal vehicle for Chromawerx white tuning in education, office, and healthcare applications where modular luminaires are used.

Order Guide

Up to 117 lm/W performance

LUMINAIRE ID	SIZE	OPTIC	LENS POSITION	LIGHT SOURCE ¹	CRI	DIRECT LUMEN PACKAGE
PCROPDI	48	ULO				
PCROPDI - Pop Color Round Pendant Direct/Indirect	48 - 48" diameter	ULO - Uniform Lambertian Optic	FH - Flush 2R - 2" regressed	SOLA - Dim-to-warm single channel control 35K to 22K DUO - Tunable white 2-channel control 65K to 27K ¹ Static white also available. Consult other spec sheet.	80 - 80 CRI 90 - 90 CRI	7000 - Min. low output 7000lm 10000 - Medium output 10000lm 14000 - Max. high output 14000lm #### - Other required lm

INDIRECT LUMEN PACKAGE	VOLTAGE	DRIVER ²	ELECTRICAL	MOUNTING
			1	5WAC36
2500 - Min. low output 2500lm 3500 - Medium output 3500lm 4500 - Max. high output 4500lm #### - Other required lm	120 - 120V 277 - 277V UNV - 120V-277V	SOLA SD1 - Single 0-10V input DUO DMX ³ - DMX, to specify see pages 9 to 14 DA ³ - DALI DD1 - Dual 0-10V input for CCT/intensity PSQ0 ³ - Lutron T-Series 1% Tunable White ² PoE (Power-over-Ethernet) compatible. Consult factory for details. ³ On-site commissioning is required.	1 - 1 circuit	5WAC36 - Power 5" white canopy (36" aircraft cable) For all other options refer to our Pendant Mounting Guide

POWER CORD COLOR	FINISH	OPTIONS
BPC - Black power cord WPC - White power cord	W - Matte white AL - Aluminum BK - Black RAL 1028 - Yellow RAL 2004 - Orange RAL 3020 - Red RAL 4010 - Magenta RAL 5002 - Blue RAL 6018 - Green CF# - Custom finish specify RAL#	FU120 - Fuse 120V FU277 - Fuse 277V NA - None

Accessories

Optional, order separately

DMX WALL CONTROLLER ⁴

WCW - Wall controller white
WBW - Wall controller black

⁴ Available with DMX only. For more information, see pages 9 to 14, or consult factory.

POP COLOR ROUND 48

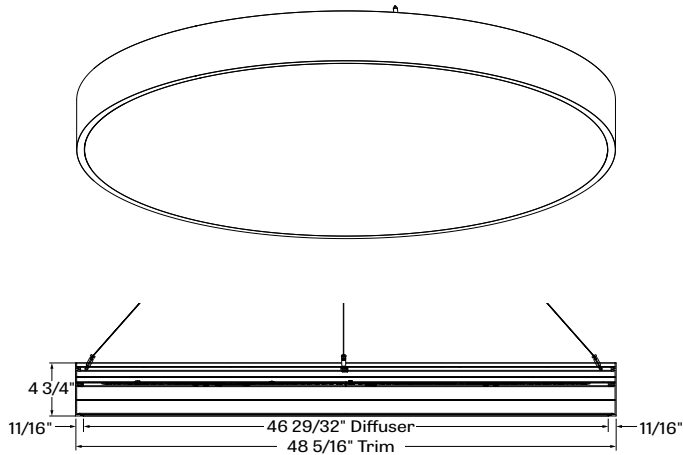


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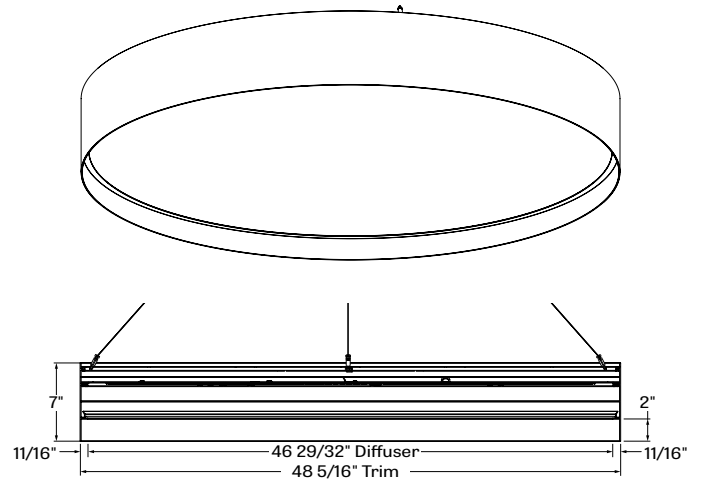
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Dimensions

POP COLOR FH - FLUSH



POP COLOR 2R - 2" REGRESSED



POP COLOR ROUND 48

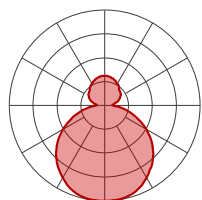


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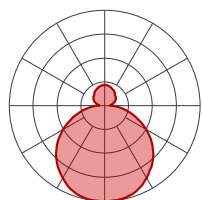
Photometrics

Performance at Indirect 2500 Lumen



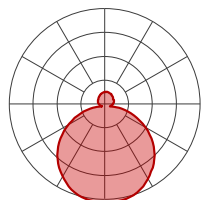
7000 LUMEN AT 80 CRI - LOW OUTPUT

LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Low output	2700K	88.3	7000	2500	9500	108
Low output	3000K	86.5	7000	2500	9500	110
Low output	3500K	84	7000	2500	9500	113
Low output	4000K	81	7000	2500	9500	117
Low output	5000K	78	7000	2500	9500	122



10000 LUMEN AT 80 CRI - MEDIUM OUTPUT

LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Medium output	2700K	119.4	10000	2500	12500	105
Medium output	3000K	117	10000	2500	12500	107
Medium output	3500K	113.5	10000	2500	12500	110
Medium output	4000K	109.5	10000	2500	12500	114
Medium output	5000K	105	10000	2500	12500	119



14000 LUMEN AT 80 CRI - HIGH OUTPUT

LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
High output	2700K	160.2	14000	2500	16500	103
High output	3000K	157	14000	2500	16500	105
High output	3500K	153	14000	2500	16500	108
High output	4000K	147.5	14000	2500	16500	112
High output	5000K	142	14000	2500	16500	116

POP COLOR ROUND 48

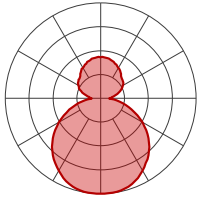


LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

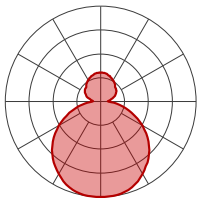
Performance at Indirect 3500 Lumen

7000 LUMEN AT 80 CRI - LOW OUTPUT



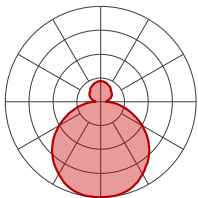
LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Low output	2700K	98.5	7000	3500	10500	107
Low output	3000K	96.5	7000	3500	10500	109
Low output	3500K	93.5	7000	3500	10500	112
Low output	4000K	90.5	7000	3500	10500	116
Low output	5000K	87	7000	3500	10500	121

10000 LUMEN AT 80 CRI - MEDIUM OUTPUT



LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Medium output	2700K	128.6	10000	3500	13500	105
Medium output	3000K	126	10000	3500	13500	107
Medium output	3500K	122.5	10000	3500	13500	110
Medium output	4000K	118.5	10000	3500	13500	114
Medium output	5000K	114.5	10000	3500	13500	118

14000 LUMEN AT 80 CRI - HIGH OUTPUT



LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
High output	2700K	171.4	14000	3500	17500	102
High output	3000K	168	14000	3500	17500	104
High output	3500K	162	14000	3500	17500	108
High output	4000K	157.5	14000	3500	17500	111
High output	5000K	151	14000	3500	17500	116

POP COLOR ROUND 48

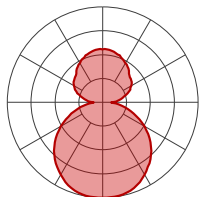


LUMENWERX

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CHROMAWERX - SOLA AND DUO

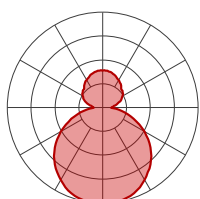
Performance at Indirect 4500 Lumen

7000 LUMEN AT 80 CRI - LOW OUTPUT



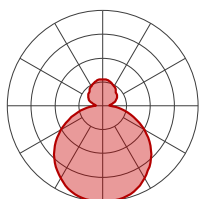
LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Low output	2700K	111.7	7000	4500	11500	103
Low output	3000K	109.5	7000	4500	11500	108
Low output	3500K	102.5	7000	4500	11500	112
Low output	4000K	100	7000	4500	11500	115
Low output	5000K	96	7000	4500	11500	120

10000 LUMEN AT 80 CRI - MEDIUM OUTPUT



LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Medium output	2700K	139.8	10000	4500	14500	104
Medium output	3000K	137	10000	4500	14500	106
Medium output	3500K	133	10000	4500	14500	109
Medium output	4000K	128.5	10000	4500	14500	113
Medium output	5000K	123	10000	4500	14500	118

14000 LUMEN AT 80 CRI - HIGH OUTPUT



LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
High output	2700K	181.6	14000	4500	18500	102
High output	3000K	178	14000	4500	18500	104
High output	3500K	171.5	14000	4500	18500	108
High output	4000K	166.5	14000	4500	18500	111
High output	5000K	159.5	14000	4500	18500	116



PENDANT DIRECT/INDIRECT
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Technical Specifications

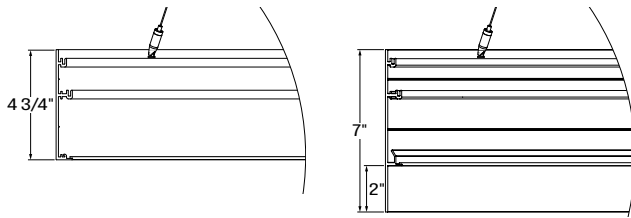
OPTIC

Uniform Efficiency Lambertian Optic (ULO)

Made of formed impact modified white PMMA, the optic provides an even light distribution with up to 88% transmission. Its unique enclosed shell design protects LEDs against Electrostatic Discharge and dust while its back surface project a soft glow on the mounting surface.

LENS POSITION

Pop Color Round 48 pendant is available in 2 lens configurations.



PCROPDI + FH - Flush lens

PCROPDI + 2R - 2" regressed lens

LIGHT SOURCE

Custom array of alternating color temperature mid-flux LED's 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 3SDCM. LEDs are operated at reduced drive current to optimize efficacy and lumen maintenance.

All LED's 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 - TUNABLE WHITE

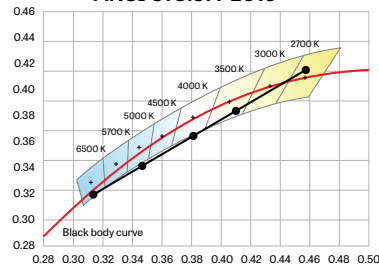
Chromawerx Sola

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 PSQ0) 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.

ANSI C78.377-2015



POP COLOR ROUND 48



LUMENWERX

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ELECTRICAL

SOLA

SDI

Factory-set, adjustable output current LED driver with universal (120-277VAC) 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 120-277V AC 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 120-277V AC 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. 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%.

DDI

Factory-set adjustable output current LED driver with universal (120-277VAC) 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.

PSQ0

Lutron T-Series 2-Channel tunable white drivers enable high-performance human centric lighting (HCL) applications. Digital control of color temperature (CCT) and intensity are achieved when used with the ESN T-Series tunable white controller as a part of a Lutron Quantum System.

PoE

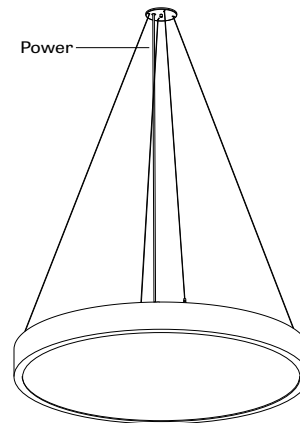
Depending on the PoE manufacturer selected, Lumenwerx will install the node in factory as either integral to the luminaire, or as a remote module. Factory programming of the PoE node may or may not enable the following functionalities: lumen package, Duo (tunable white), emergency battery backup, and sensor integration. These must be addressed and evaluated on a case-by-case basis.

MOUNTING OPTION

Fixtures are pendant-mounted, using aircraft cables. Unless otherwise specified, Lumenwerx provides the following hardware:

For cable-mounted fixtures - 5WAC36, 5" white canopy with a 36" cable.

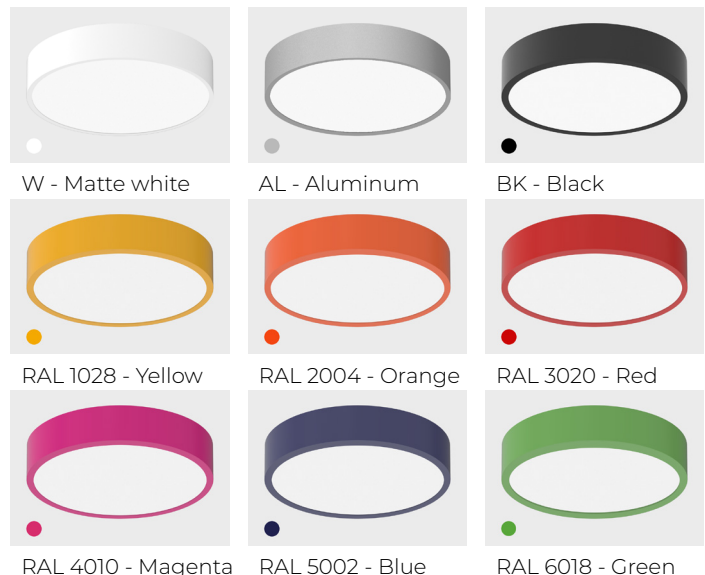
[For all other options, see our website for a detailed Pendant Mounting Guide](#)



FINISH

Interior - 95%, reflective, matte white powder coating

Exterior - Side trim is offered in a range of vibrant color powder coating.



POP COLOR ROUND 48



LUMENWERX

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CONSTRUCTION

Housing - Rolled and seamlessly welded aluminum extrusion
.125in thick, wide variety of colored powder coating

Diffuser - Uniform Lambertian Optic, thermoformed impact
modified acrylic, completely enclosed

WEIGHT

RD 48 Flush, 2R - 53.38lbs - 24.24kg

CERTIFICATION

ETL - Rated for Indoor Dry/Damp locations. Conforms to UL
Standard 1598 and certified to CAN/CSA Standard C22.2 No. 250.0.

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.

Wall controllers are covered by the manufacturer warranty.



PENDANT DIRECT/INDIRECT
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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

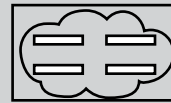
Do you require a wall controller provided by Lumenwerx?

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:

per 4' fixture	per 4' fixture
Driver 1x driver Direct only	Driver Driver 2x driver Direct high output

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. ✓

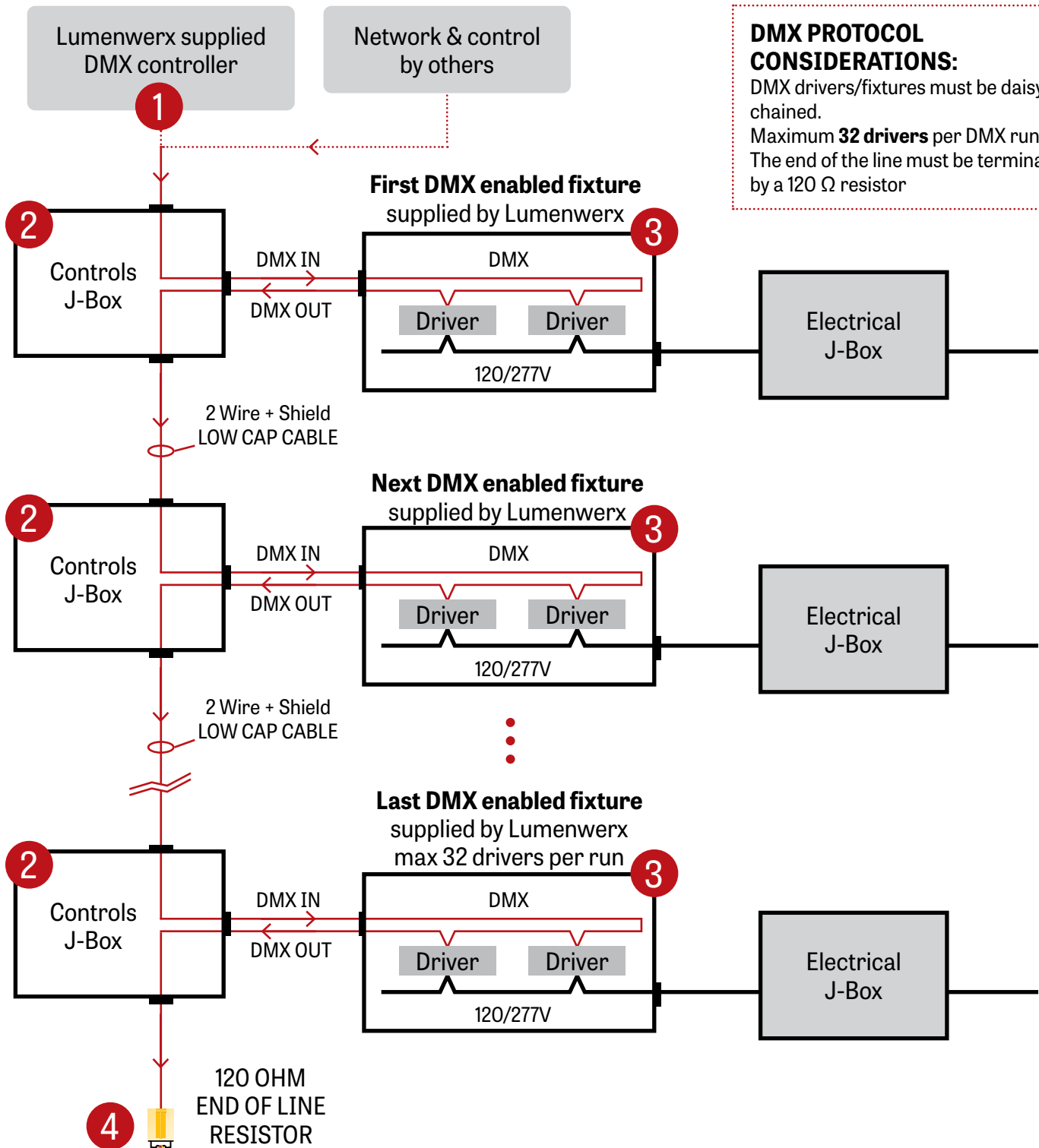
Subject to factory evaluation. Please contact our controls specialist at controls@lumenwerx.com. Additional cost and equipment will be required. ✓

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



PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

GENERIC DMX NETWORK ARCHITECTURE



DMX PROTOCOL

CONSIDERATIONS:

DMX drivers/fixtures must be daisy chained.

Maximum **32 drivers** per DMX run.

The end of the line must be terminated by a 120 Ω resistor

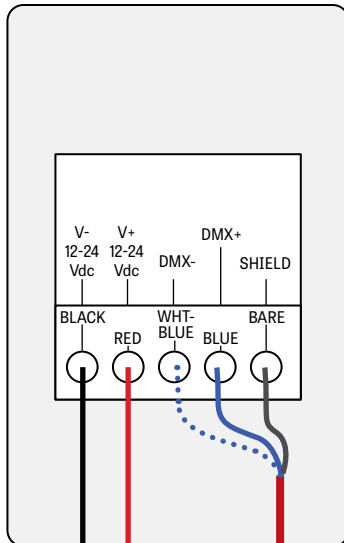
PENDANT DIRECT/INDIRECT CHROMAWERX - SOLA AND DUO

1 LUMENWERX SUPPLIED DMX CONTROLLER

To the first fixture

2 Wire + Shield Low Cap Cable

Back Panel

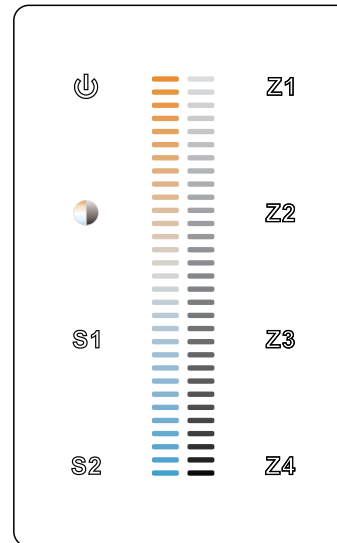


I.E.: Cerco Cable 7539-10
Belden 9841
Belden 8241

DC out

Power Supply
120-277VAC / 24VDC

Front Panel



Controller image may differ

WALL BOX SUPPLIED BY OTHERS

Neutral

DC in
BROWN

Line

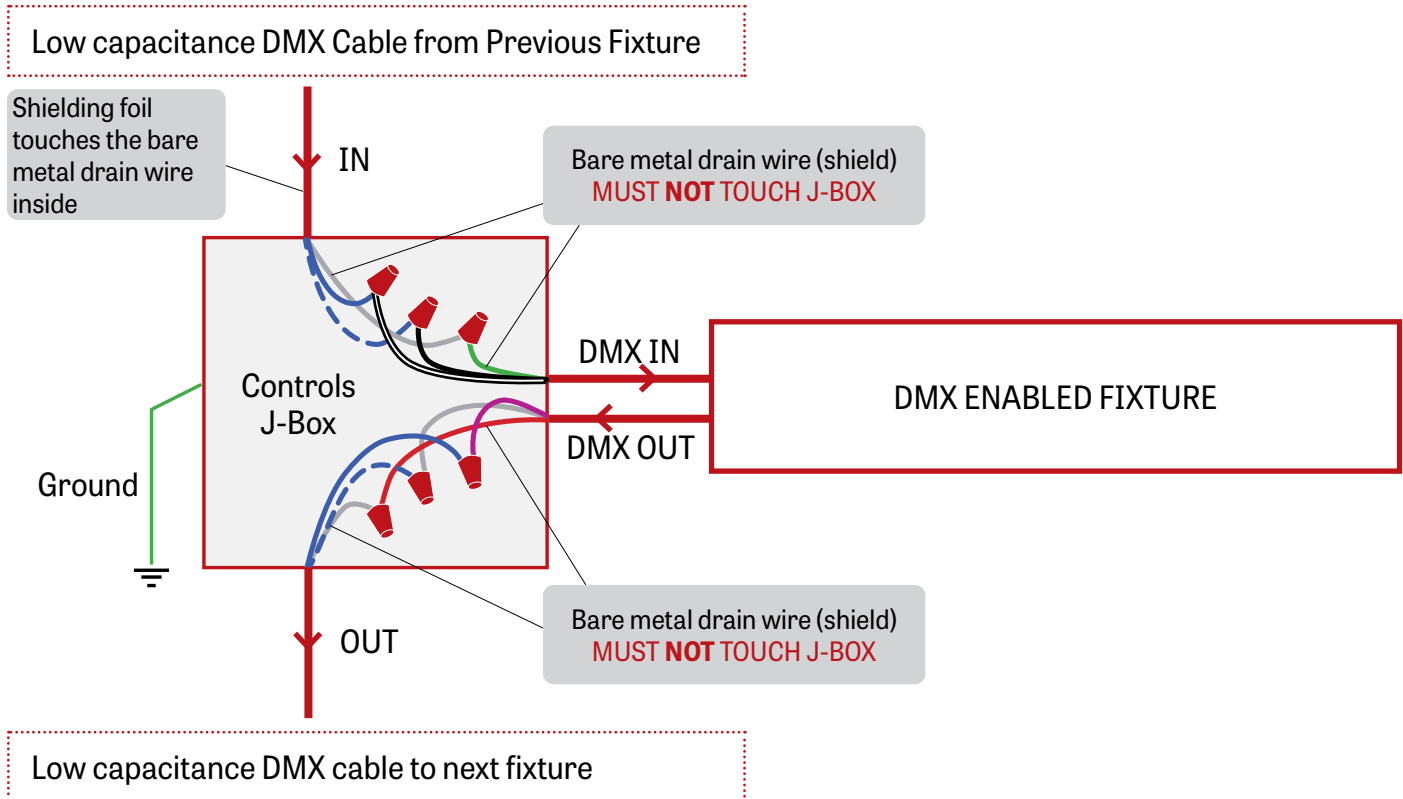
Ground

Electrical J-Box

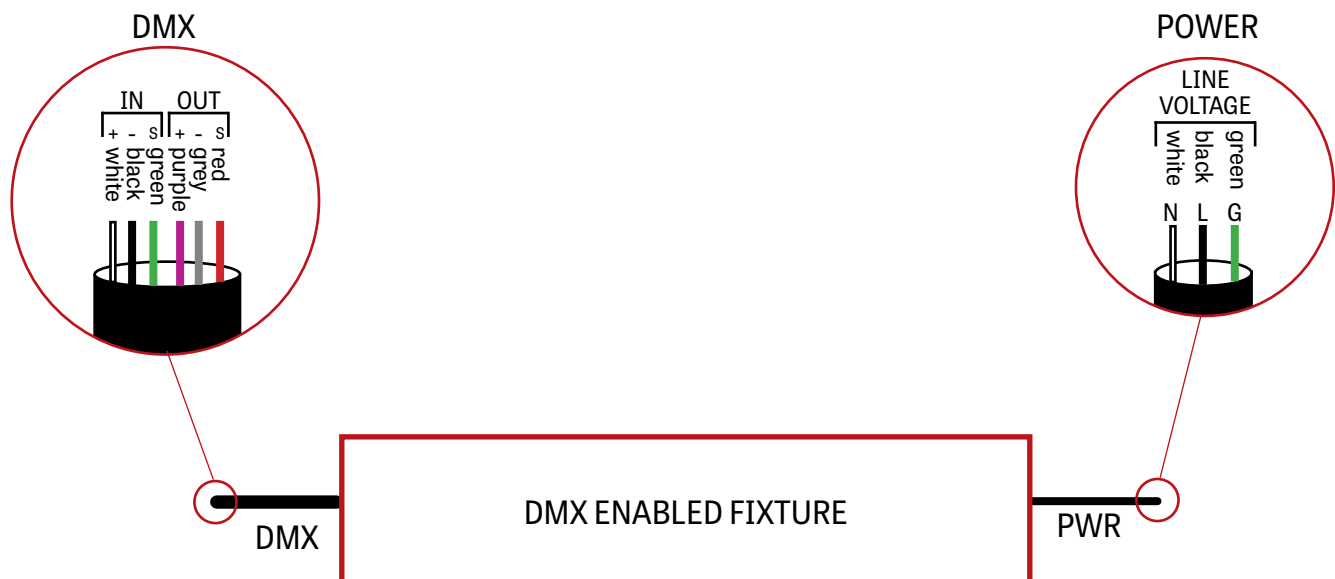


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2 J-BOX DMX DAISY CHAIN DETAIL

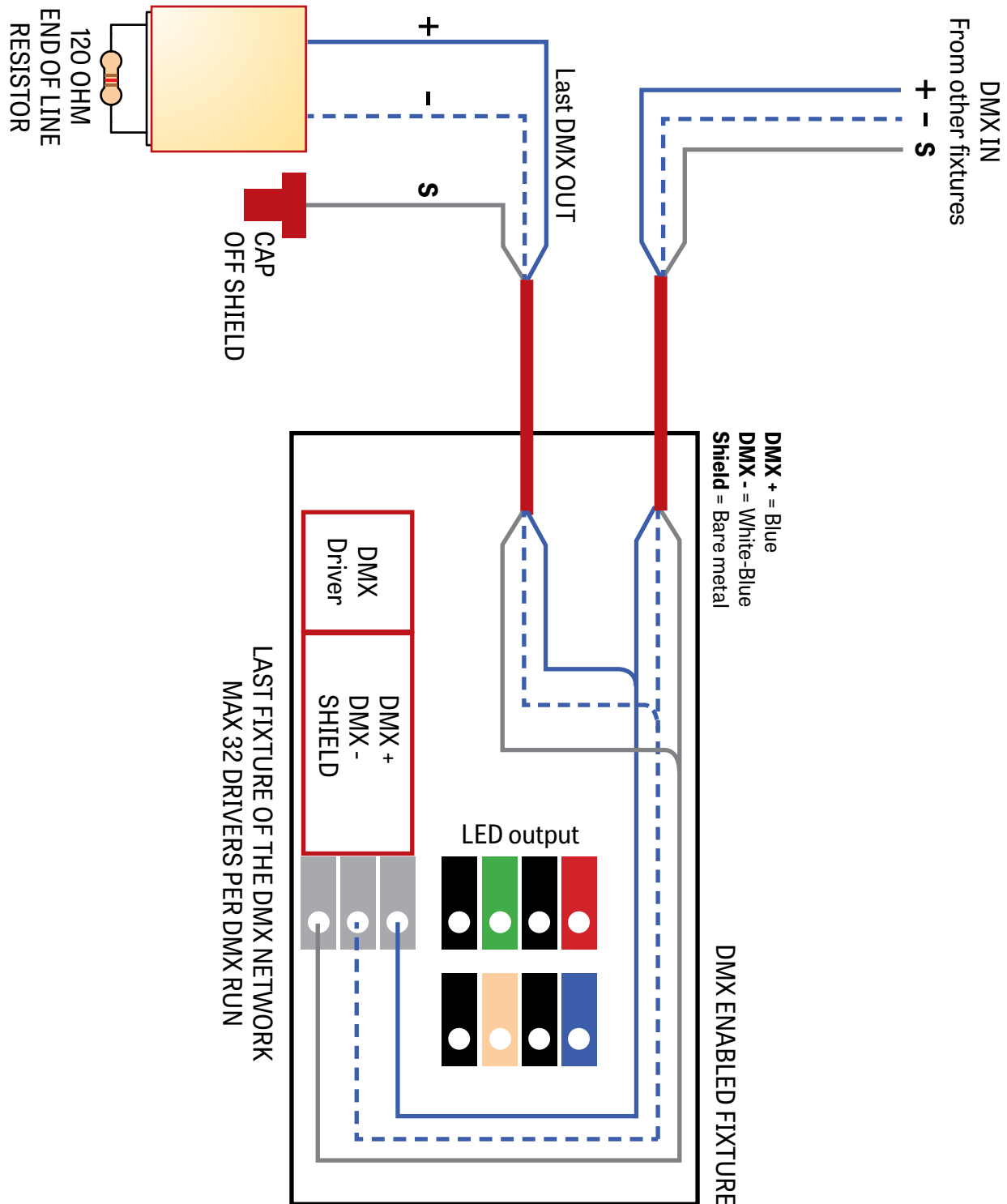


3 DMX CONNECTION PENDANT & WALL



PENDANT DIRECT/INDIRECT CHROMAWERX - SOLA AND DUO

4 DMX LAST FIXTURE DETAIL

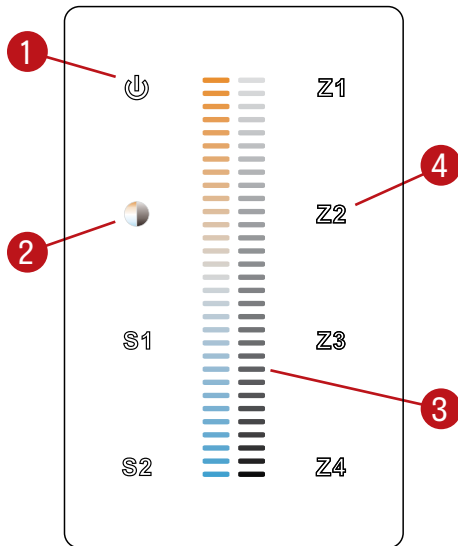




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DMX WALL CONTROLLER

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