POP COLOR ROUND 48

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO
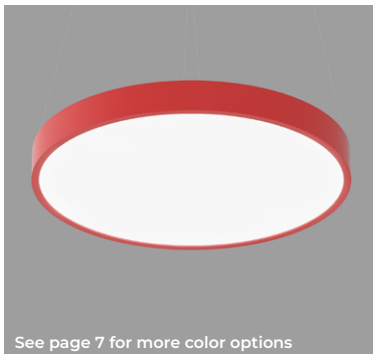
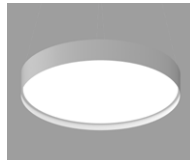**LUMENWERX**

Project: _____

_____

Type: _____

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.

See page 7 for more color options

Flush lens

2" regressed lens

Order Guide

Up to 117 lm/W performance

LUMINAIRE ID	SIZE	OPTIC	LENS POSITION	LIGHT SOURCE [1]	CRI	DIRECT LUMEN PACKAGE
PCROPDI	**48IN**	**ULO**				
PCROPDI - Pop Color Round Pendant Direct/Indirect	**48IN** - Ø 48"	**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	<u>SOLA</u> **SD1** - Single 0-10V input <u>DUO</u> **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) <u>For all other options refer to our Pendant Mounting Guide</u>

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

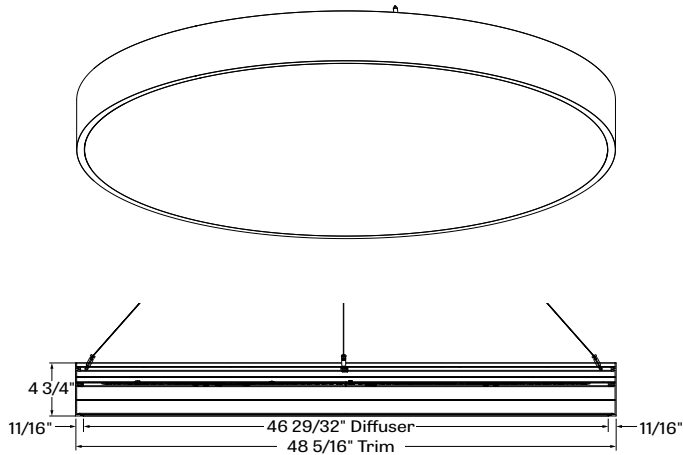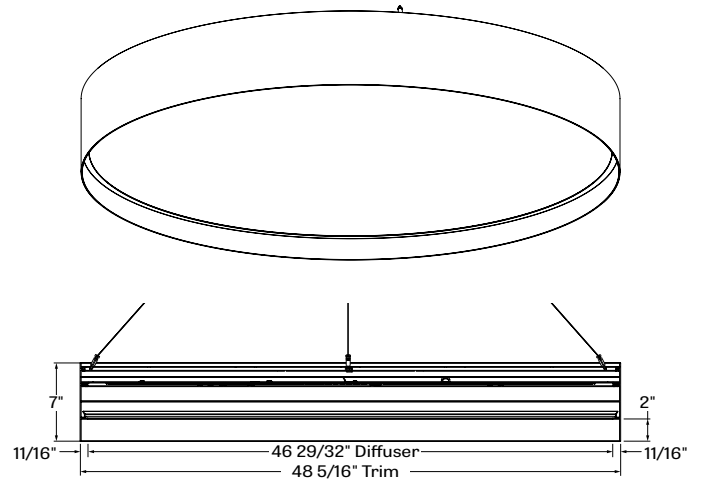[4] Available with DMX only. For more information, see pages 9 to 14, or consult factory.

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POPCOLOR-48-TW-ROUND-PENDANT-DIRECT-INDIRECT-SPEC-REV2   February 6 2024

PoE Power over Ethernet

POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

Dimensions

POP COLOR FH - FLUSH

4 3/4"
11/16"
46 29/32" Diffuser
48 5/16" Trim
11/16"

POP COLOR 2R - 2" REGRESSED

7"
11/16"
46 29/32" Diffuser
48 5/16" Trim
11/16"
2"

ETL LISTED c us
Intertek
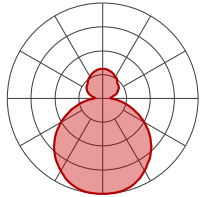
PoE

POP COLOR ROUND 48

PENDANT DIRECT/INDIRECT
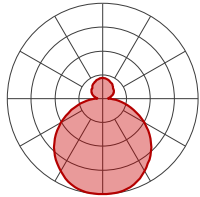## CHROMAWERX - SOLA AND DUO

Photometrics

Performance at Indirect 2500 Lumen

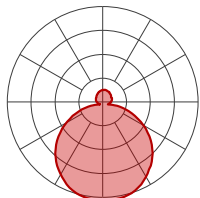### 7000 LUMEN AT 80 CRI - LOW OUTPUT

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

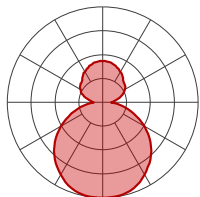| LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
High output	2700K	160.2	14000	2500	16500	103
High output	3000K	157	14000	2500	16500	105
High output	3500K	153	14000	2500	16500	108
High output	4000K	147.5	14000	2500	16500	112
High output	5000K	142	14000	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
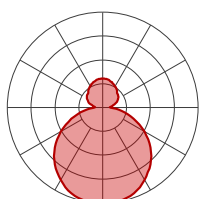
LED OUTPUT	COLOR TEMP	WATTS	DIR. LUMENS	IND. LUMENS	TOTAL NOMINAL DELIVERED LUMENS	EFFICACY LPW
Medium output	2700K	128.6	10000	3500	13500	105
Medium output	3000K	126	10000	3500	13500	107
Medium output	3500K	122.5	10000	3500	13500	110
Medium output	4000K	118.5	10000	3500	13500	114
Medium output	5000K	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

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PoE

POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

Performance at Indirect 4500 Lumen
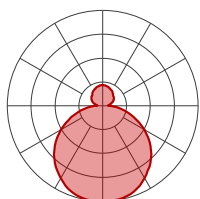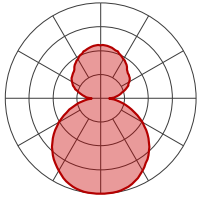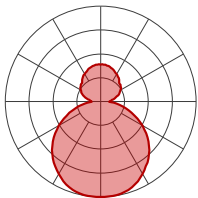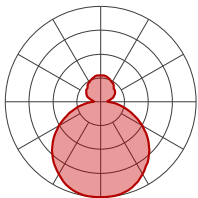
7000 LUMEN AT 80 CRI - LOW OUTPUT

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

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Intertek

PoE
Power over Ethernet

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

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.

4 3/4"

7"

2"
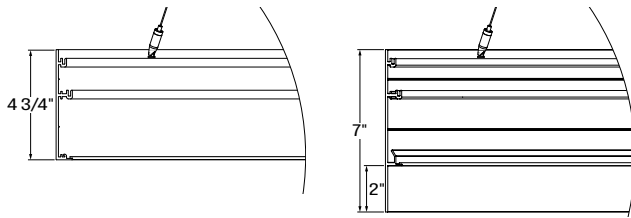
PCROPDI + FH - Flush lens   PCROPDI + 2R - 2" regressed lens

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

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PoE
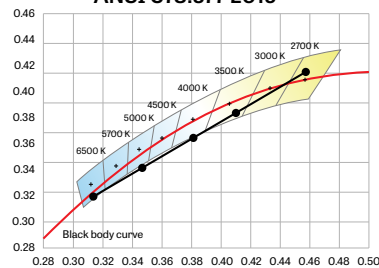
POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

ELECTRICAL

SOLA
SD1
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%.

DD1
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

Power
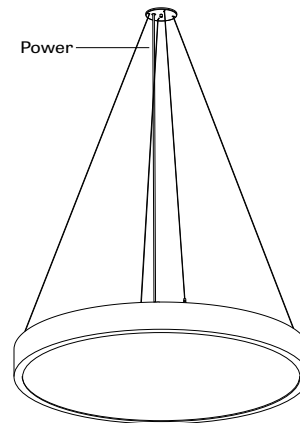
FINISH
Interior - 95%, reflective, matte white powder coating
Exterior - Side trim is offered in a range of vibrant color powder coating.

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

3737 Cote Vertu St-Laurent, Quebec, Canada H4R 2C9
T (514) 225-4304 F (514) 931 -4862
www.lumenwerx.com

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POPCOLOR-48-TW-ROUND-PENDANT-DIRECT-INDIRECT-SPEC-REV2   February 6 2024

PoE Power over Ethernet
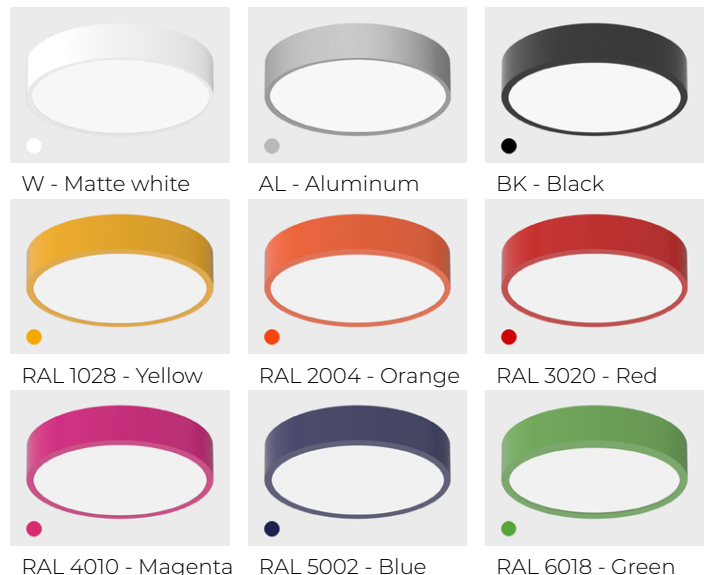
POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

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.

ETL Listed Intertek

PoE Power over Ethernet

POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND 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 <u>contact information of your DMX integrator.</u>**

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 controller supplied by Lumenwerx

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

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	Driver Driver
1x driver	2x driver
Direct only	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 ans approval. Please contact our controls specialist at controls@lumenwerx.com Additional cost and equipment will be required. ✓

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POPCOLOR-48-TW-ROUND-PENDANT-DIRECT-INDIRECT-SPEC-REV2   February 6 2024

PoE Power over Ethernet

POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

GENERIC DMX NETWORK ARCHITECTURE

Lumenwerx supplied
DMX controller
1

Network & control
by others

**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

First DMX enabled fixture
supplied by Lumenwerx
3

2
Controls
J-Box

DMX IN
DMX OUT

DMX

Driver   Driver

120/277V

Electrical
J-Box

2 Wire + Shield
LOW CAP CABLE

Next DMX enabled fixture
supplied by Lumenwerx
3

2
Controls
J-Box

DMX IN
DMX OUT

DMX

Driver   Driver

120/277V

Electrical
J-Box

2 Wire + Shield
LOW CAP CABLE

Last DMX enabled fixture
supplied by Lumenwerx
max 32 drivers per run
3

2
Controls
J-Box

DMX IN
DMX OUT

DMX

Driver   Driver

120/277V

Electrical
J-Box

4 120 OHM
END OF LINE
RESISTOR

ETL Intertek
c US LISTED

PoE
Power over Ethernet

POP COLOR ROUND 48

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

1 LUMENWERX SUPPLIED DMX CONTROLLER

To the first fixture

2 Wire +
Shield Low Cap Cable

WALL BOX SUPPLIED BY OTHERS

Back Panel

V-
12-24
Vdc

V+
12-24
Vdc

DMX-

DMX+

SHIELD

BLACK

RED

WHT-BLUE

BLUE

BARE

Front Panel

Z1

Z2

Z3

Z4

S1

S2

Controller image may differ

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

DC out

Power Supply
120-277VAC / 24VDC

N   BLUE   Neutral

L   BROWN   Line

DC in

Ground

Electrical
J-Box

ETL
Intertek

PoE

POP COLOR ROUND 48
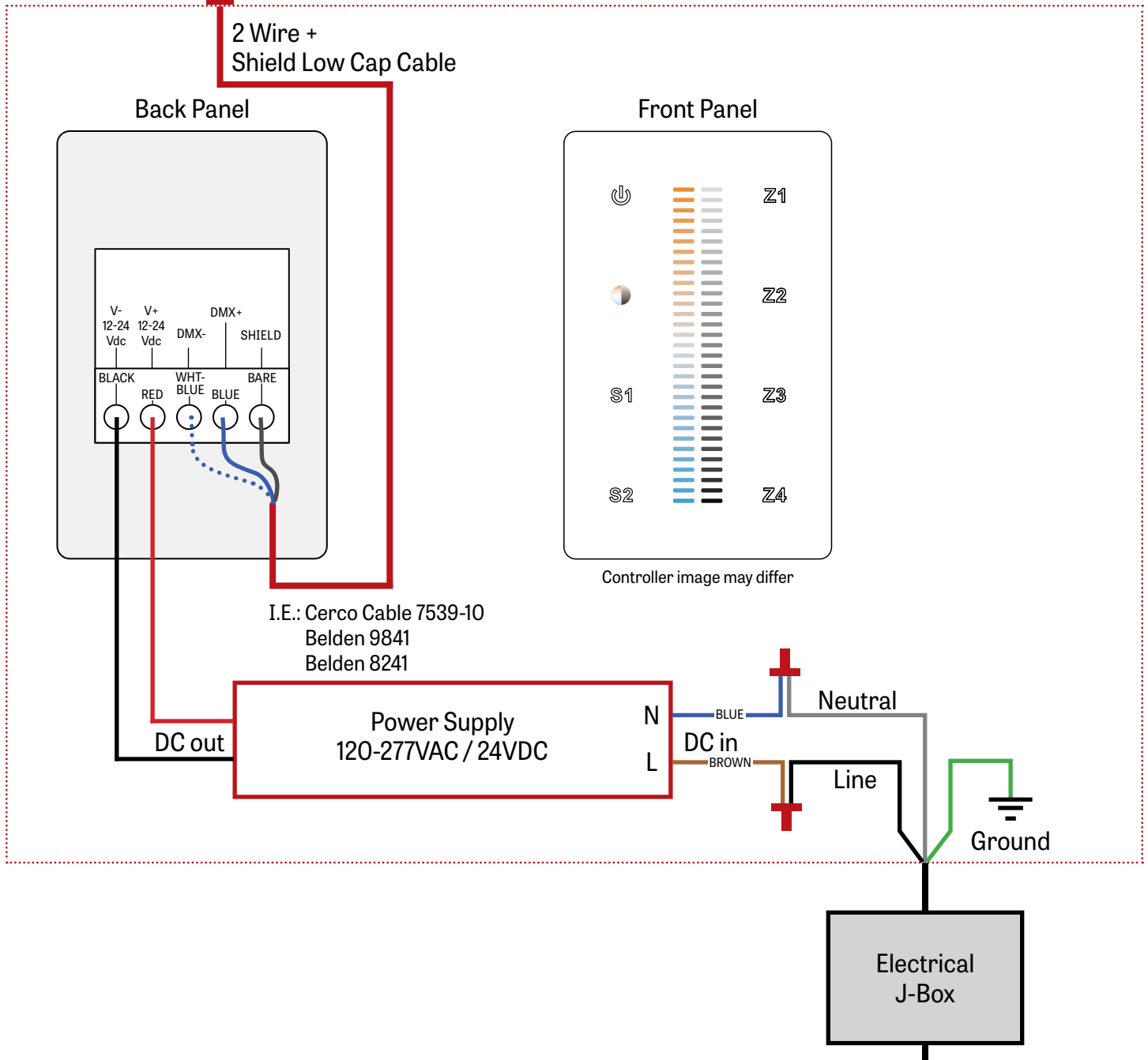
LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

2 J-BOX DMX DAISY CHAIN DETAIL

Low capacitance DMX Cable from Previous Fixture

Shielding foil touches the bare metal drain wire inside

IN

Bare metal drain wire (shield)
MUST **NOT** TOUCH J-BOX

Controls J-Box

DMX IN

DMX OUT

DMX ENABLED FIXTURE

Ground

Bare metal drain wire (shield)
MUST **NOT** TOUCH J-BOX

OUT

Low capacitance DMX cable to next fixture
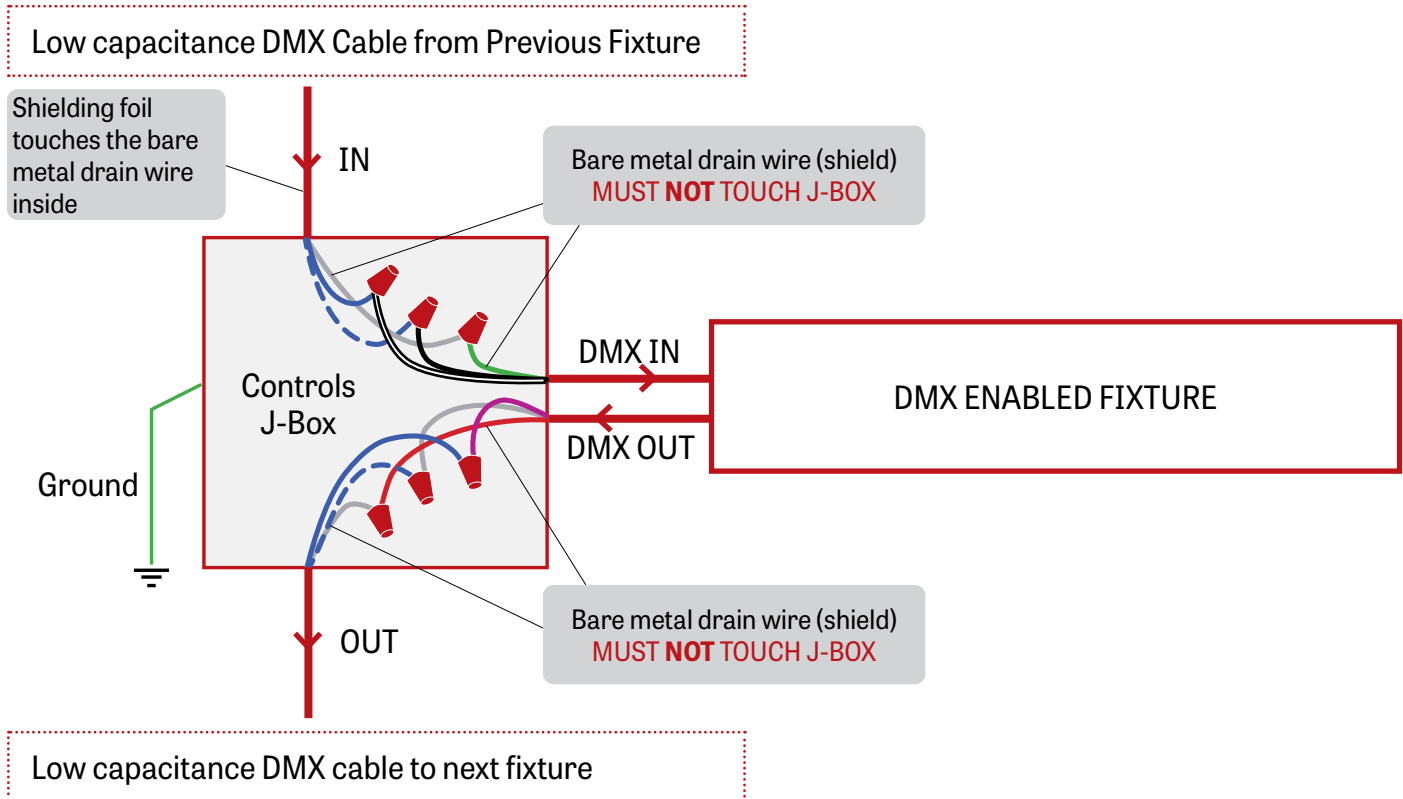
3 DMX CONNECTION PENDANT & WALL

DMX

IN   OUT
+ - s   + - s
white
black
green
purple
grey
red

POWER

LINE VOLTAGE
white
black
green

N   L   G

DMX

DMX ENABLED FIXTURE

PWR

cETLus LISTED
Intertek

PoE
Power over Ethernet
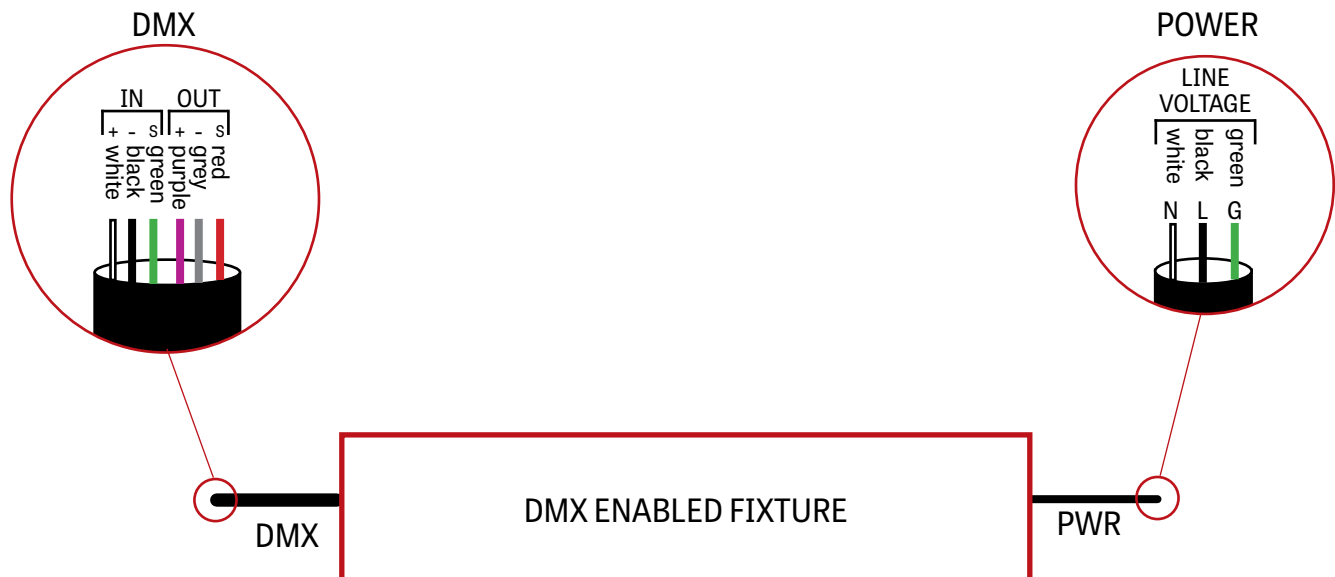
POP COLOR ROUND 48

LUMENWERX

PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

4 DMX LAST FIXTURE DETAIL

120 OHM
END OF LINE
RESISTOR

CAP
OFF SHIELD

Last DMX OUT

DMX IN
From other fixtures

DMX + = Blue
DMX - = White-Blue
Shield = Bare metal

DMX
Driver

DMX +
DMX -
SHIELD

LAST FIXTURE OF THE DMX NETWORK
MAX 32 DRIVERS PER DMX RUN

LED output

DMX ENABLED FIXTURE

Intertek
ETL

PoE
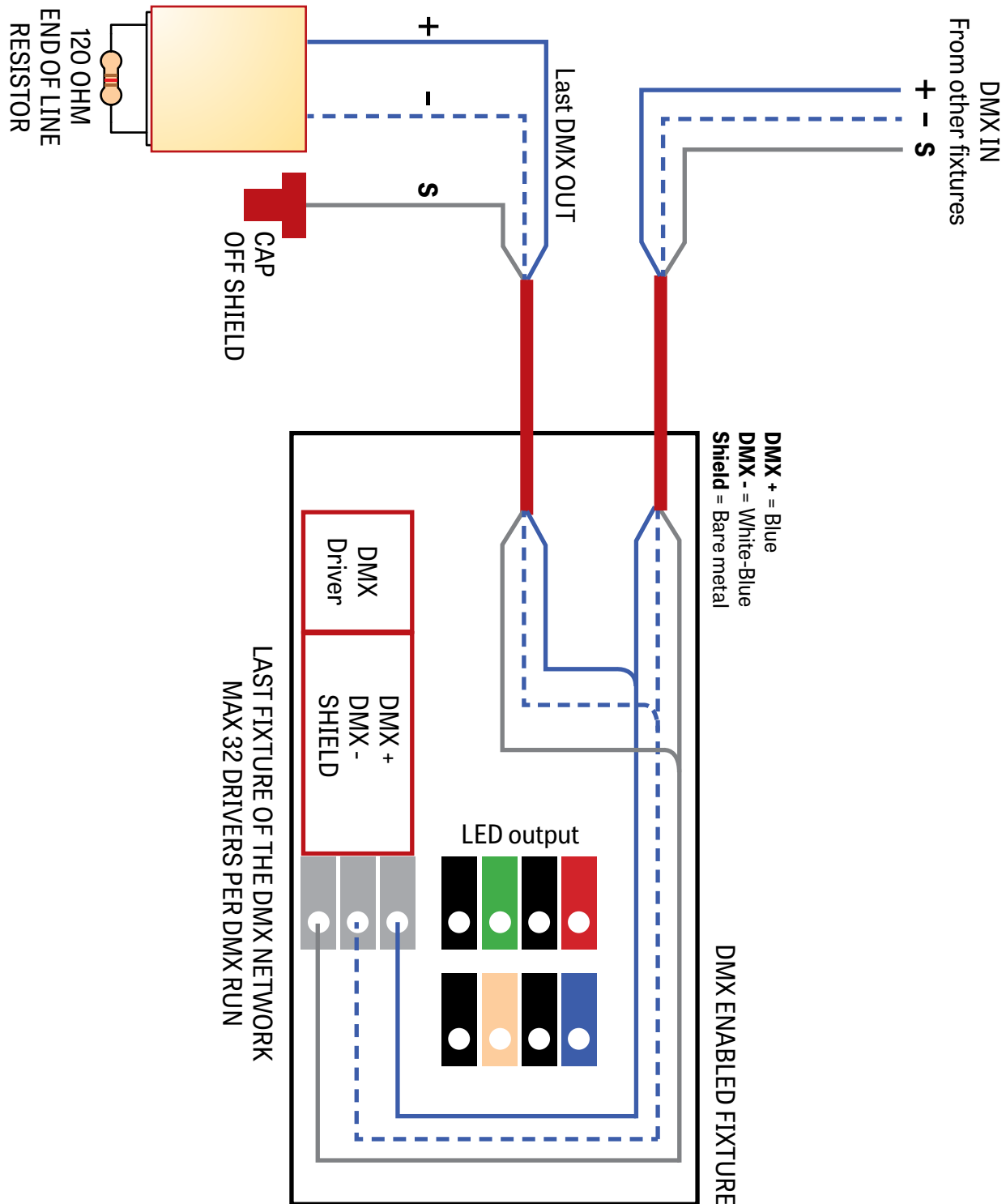
PENDANT DIRECT/INDIRECT
CHROMAWERX - SOLA AND DUO

DMX WALL CONTROLLER

DUO 1-4 ZONE

Default DMX Addresses:
1 Warm
2 Cool
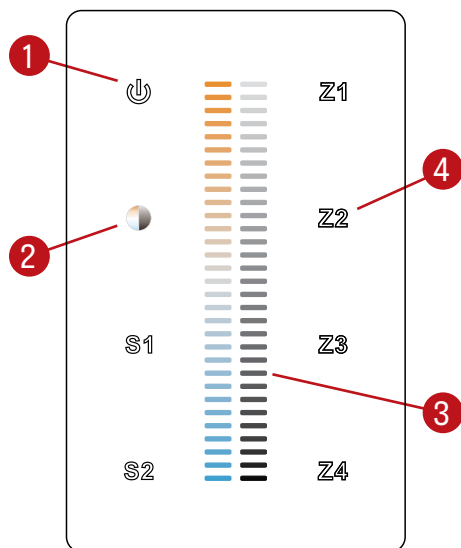
(1) Power: Use this button to turn ON or OFF the fixture.

(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.