VIA 3 PERIMETER
RECESSED
CHROMAWERX - QUADRO - RGBW

Lumenwerx

Project: _____

Type: _____

Via 3 Perimeter Deep

DESCRIPTION

Via 3 Perimeter creates a continuously illuminated "slot" at the wall/ceiling intersection. Lighted corners with adjustable end sleeves are available. Via Perimeter installs in grid or drywall ceilings in a choice of three arrangements: level, shallow 1", and deep 3 ¼".

5 YEAR WARRANTY

Order Guide

IC RATED

LUMINAIRE ID	OPTIC	LIGHT SOURCE [2]	WHITE CRI Specify NA for solid colors	OUTPUT WATTAGE [3]	WHITE COLOR TEMP. Specify NA for solid colors	LUMINAIRE LENGTH
V3PERL - Via 3 Perimeter Level **V3PERS** - Via 3 Perimeter Shallow **V3PERD** - Via 3 Perimeter Deep	**HLO** - High-Efficiency Lambertian Optic **ARFO**[1] - Asymmetric Room Fill Optic [1] Not available with Deep fixtures.	**QUADRO** - RGBW 4-channel control **RS** - Red solid **GS** - Green solid **BS** - Blue solid [2] Static white, Chromawerx SOLA and DUO also available. Consult other spec sheets.	**80CRI** - 80 CRI **90CRI** - 90 CRI **NA** - Not applicable	**8WF** - 8 W/ft output **10WF**[4] - 10 W/ft output **12WF**[4] - 12 W/ft output [3] See page 3 for dedicated white channel lumen outputs. [4] Not available with solid colors.	**27K** - 2700K **30K** - 3700K **35K** - 3500K **40K** - 4000K **50K** - 5000K **NA** - Not applicable	**#FT#IN** - Specify nominal length (#) in 1' and/or 6" increments **Standard nominal lengths:** Single units: 4' to 12' Continuous runs: lengths over 12'

VOLTAGE	DRIVER [5]		ELECTRICAL	MOUNTING	FINISH	OPTIONS [8]	ADJUSTABLE SLEEVE (optional) [10]
			1C				
120V - 120V **277V** - 277V **UNV** - 120V-277V	QUADRO **DMX**[6,7] - DMX [5] PoE (Power-over-Ethernet) compatible. Consult factory for details. [6] To specify, see pages 6 to 11. [7] On-site commissioning is required.	Solid colors **D1** - 1% 0-10V **DA**[7] - DALI	**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	**W** - Matte white **CF#** - Custom finish, specify RAL#	**NEF**[9] - No end flanges **FU120** - Fuse 120V **FU277** - Fuse 277V **FWC** - Flexible whip cable (6' std) **CP** - Chicago Plenum **NA** - None [8] Separate codes with a "+" if more than one is specified. [9] For wall-to-wall installations.	**TES** - Adjustable end sleeve **NA** - None [10] See page 3 for details.

Accessories
Optional, order separately

DMX WALL CONTROLLER [11]

WC1W - Single zone wall controller white
WC1B - Single zone wall controller black
WC2W - 3 zone wall controller white
WC2B - 3 zone wall controller black

[11] Available with DMX only. For more information, see pages 6 to 11, or consult factory.

TECHZONE™ & USG Compatible with 4" ceiling
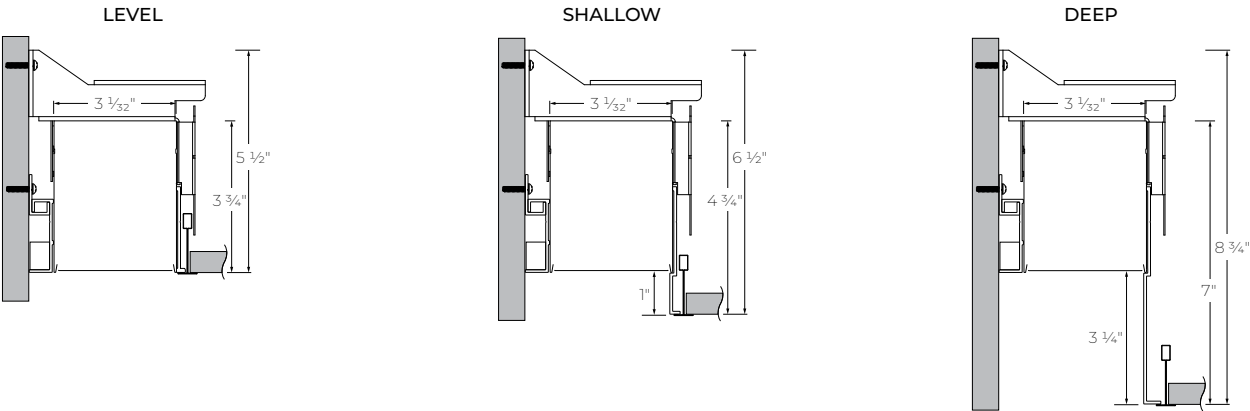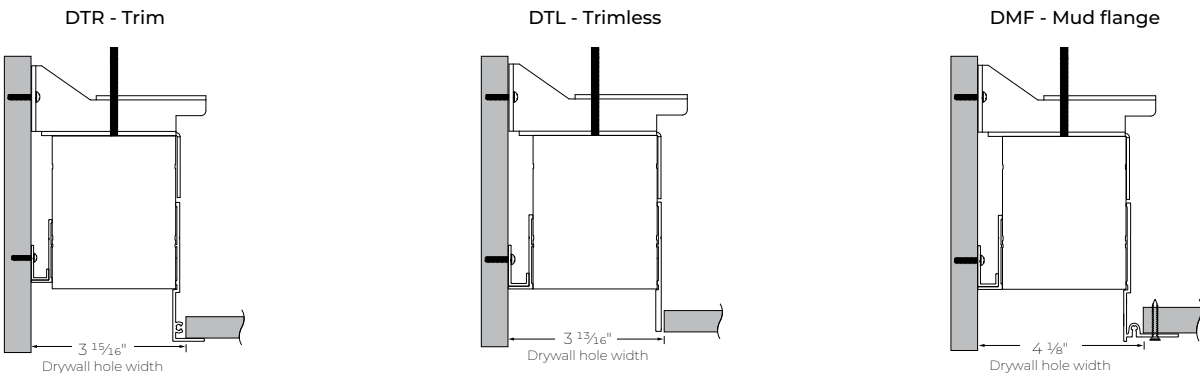
PoE Power-over-Ethernet

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Dimensions

LEVEL

3 1/32"
5 1/2"
3 3/4"

SHALLOW

3 1/32"
6 1/2"
4 3/4"
1"

DEEP

3 1/32"
8 3/4"
7"
3 1/4"

DRYWALL

DTR - Trim

3 15/16"
Drywall hole width

DTL - Trimless

3 13/16"
Drywall hole width

DMF - Mud flange

4 1/8"
Drywall hole width

GRID

3 9/16"
wall to inside flange
A
B
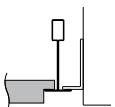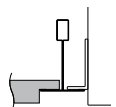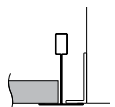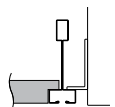
	TG9	TB9	TG15	TB15	ST
	Tegular 9/16"	T-bar 9/16"	Tegular 15/16"	T-bar 15/16"	Screw slot T-bar
A wall to flange	3 13/16"		3 15/16"		3 13/16"
B wall to T-bar	3 7/8"		4"		3 7/8"

ETL LISTED Intertek

PoE Power over Ethernet

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Photometrics

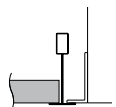Dedicated white channel lumen outputs are calculated with only white light on, and based on a 4' fixture at 3500K and 80 CRI.

OPTIC	W/FT	LM/FT
HLO - Level	8	350
	10	425
	12	525
HLO - Shallow	8	350
	10	425
	12	500
HLO - Deep	8	325
	10	400
	12	475

OPTIC	W/FT	LM/FT
ARFO - Level	8	160
	10	200
	12	240
ARFO - Shallow	8	150
	10	190
	12	230

Adjustable end sleeve - TES

Adjustable end sleeve (TES) is designed to provide on-site luminaire adjustability of +2.5" to -4.5". A sleeve accommodates an easy installation and maintenance. Please refer to the End Sleeve Adjustment Installation Instructions for more details.

End sleeve
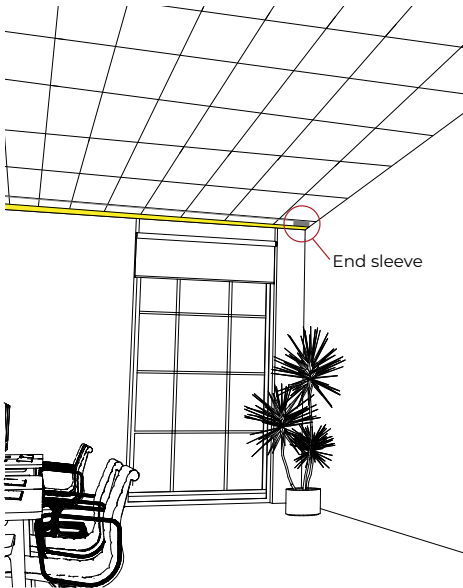
X = Fixture measure provided by client.
X + 2.5" = Measurement built and supplied.
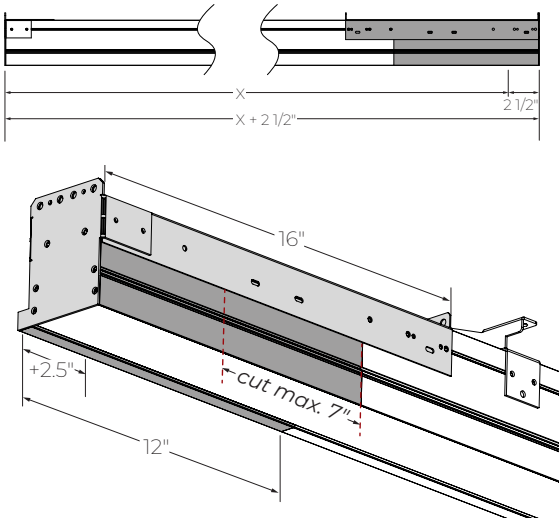
Technical Specifications

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. Luminaire brightness is controlled by the flux-to-shielding area ratio.

Asymmetric Room Fill Optic (ARFO)
Our Asymmetric Room Fill Optic employs an advanced optical system to illuminate rooms and corridors from the perimeter, providing a direct distribution of light with precision and minimal glare.

LIGHT SOURCE
Custom linear array of mid-flux LEDs, comprised of an alternation of an RGB and a dedicated white LED. The white LED is used for when a static white CCT is required in the space. RGB LEDs are tightly binned for excellent color control between fixtures. The white 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 QUADRO
Chromawerx QUADRO is a four-channel control that operates an RGBW LED array and addresses the need for more expressive color in architectural applications. The DMX driver supports familiar programming tools for both dynamic multi-hued color and precise white color point control. While a typical user interface will be a DMX controller by others, Lumenwerx also offers a simple control station for stand-alone color changing applications.
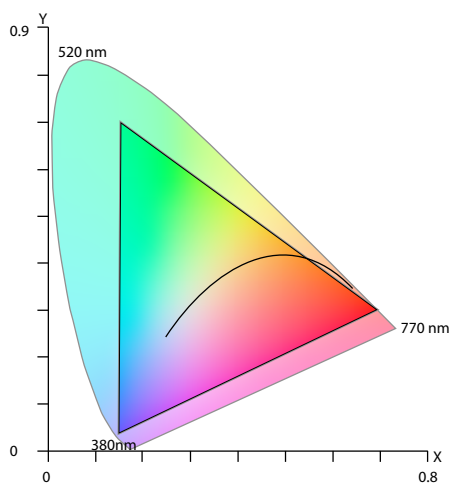
The above diagram overlays the full gamut of colors attainable with the RGBW on top of the CIE 1931 color space. Any color point inside of the triangle can be obtained by setting the correct output levels for each of the individual red, green, blue, and white channels.

LUMINAIRE LENGTH
Via 3 Perimeter is made up of standard 4' to 12' sections that may be joined together to create longer continuous run lengths. Exact run lengths must be noted in the product code. The minimum individual section available is 4'.

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

DMX
Factory-set, adjustable output current, multi-channel LED driver with universal (120-277 VAC) input. Using DMX wall controls (optionally supplied by Lumenwerx) or an existing DMX control system, four channels of LEDs (Red/Green/Blue/White) are independently adjustable. Each DMX driver has multiple output channels that can be independently addressed at the factory or on-site using built-in RDM (Remote Device Management) functionality. Dimming range from 100%-0%. At maximum driver load, efficiency<89%, PF>0.9, THD<20%.

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 powder coating.
Custom finishes are also available.

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CONSTRUCTION
Housing: Extruded aluminum, up to 90% recycled content
Interior brackets: Die-formed cold rolled sheet steel
Joining system: Die-cast zinc
Reflectors: Flat rolled aluminum sheet or die-formed cold rolled steel, 95% reflective matte white painted
Lens: Acrylic
Recessed flanges: Extruded aluminum, up to 90% recycled content
End plate: Die-formed cold rolled sheet steel

MAINTENANCE
LED boards are housed in a removable cartridge for easy replacement. Driver is accessible from below.

WEIGHT
4': 11.12 lbs - 5.05 kg
8': 22.25 lbs - 10.1 kg
12': 33.48 lbs - 15.2 kg

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

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 controlers are covered by the manufacturer warranty.

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Lumenwerx

QUADRO 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**
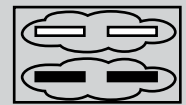
DMX controller supplied by Lumenwerx

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
Driver
1x driver
Less than 12.5W/ft, direct only

per 4' fixture
Driver Driver
2x driver
Above 12.5W/ft or for all direct/indirect fixture

To Calculate # of drivers ←

1 Zone | **2 to 3 Zones** | **4 or more Zones**

Do you have more than 32 drivers in total?

NO **YES** — — — **NO** **YES**

Order a standard Lumenwerx wall controller <u>type 1</u>.

WALL CONTROLLER

WC1W - Single zone wall controller white
WC1B - Single zone 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. ✓

Order a standard Lumenwerx wall controller <u>type 2</u>.

WALL CONTROLLER

WC2W - 3 zone wall controller white
WC2B - 3 zone 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 ans approval. Please contact our controls specialist at controls@lumenwerx.com
Additional cost and equipment will be required. ✓

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PoE

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Lumenwerx

GENERIC DMX NETWORK ARCHITECTURE

Lumenwerx supplied
DMX controller

1

Network & control
by others
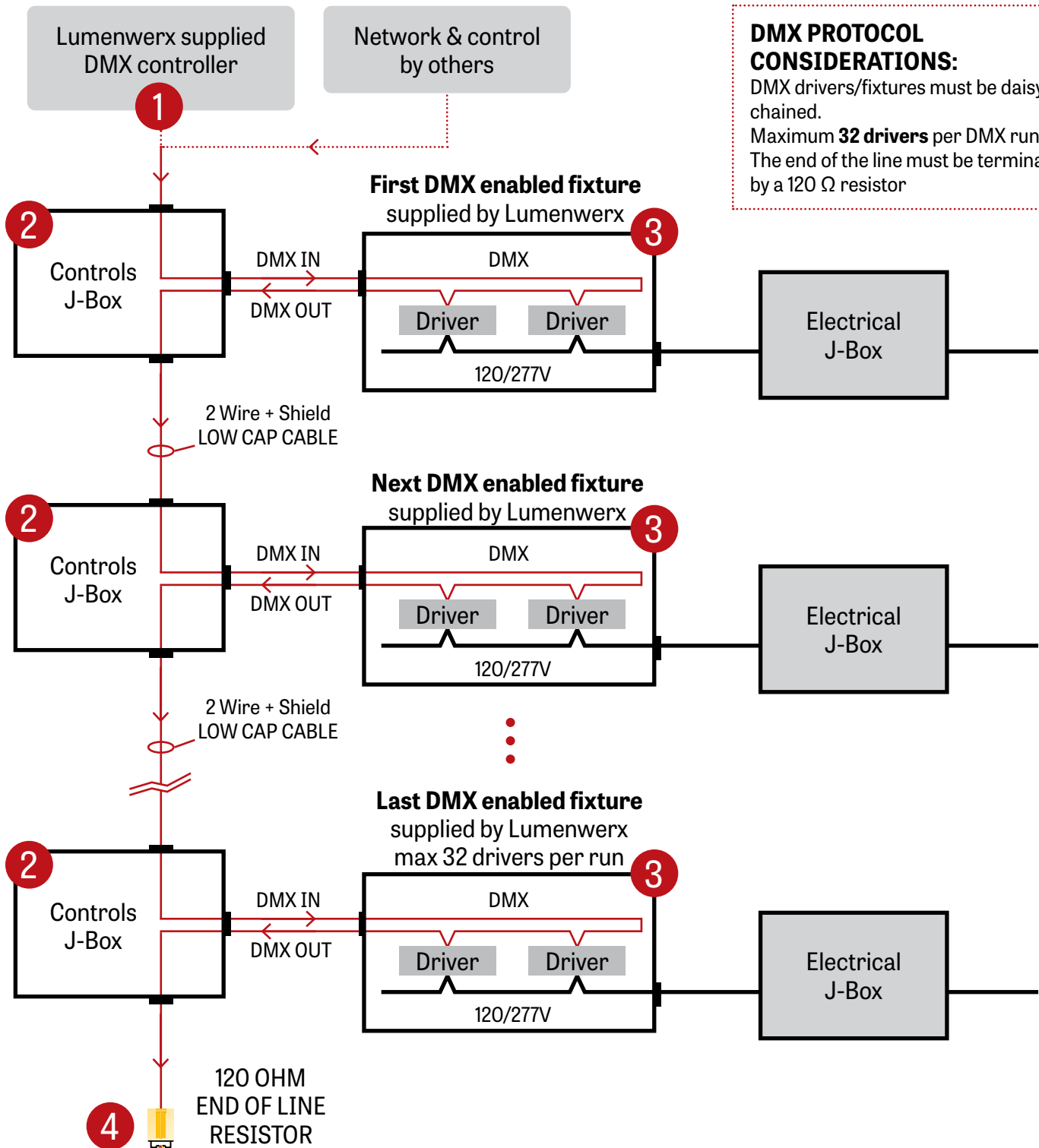
**DMX PROTOCOL
CONSIDERATIONS:**
DMX drivers/fixtures must be daisy chained.
Maximum **32 drivers** per DMX run.
The end of the line must be terminated by a 120 Ω resistor

2

Controls
J-Box

First DMX enabled fixture
supplied by Lumenwerx

3

DMX IN

DMX OUT

DMX

Driver   Driver

120/277V

Electrical
J-Box

2 Wire + Shield
LOW CAP CABLE

2

Controls
J-Box

Next DMX enabled fixture
supplied by Lumenwerx

3

DMX IN

DMX OUT

DMX

Driver   Driver

120/277V

Electrical
J-Box

2 Wire + Shield
LOW CAP CABLE

2

Controls
J-Box

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

3

DMX IN

DMX OUT

DMX

Driver   Driver

120/277V

Electrical
J-Box

4

120 OHM
END OF LINE
RESISTOR

cETLus LISTED
Intertek

PoE

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Lumenwerx

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1 LUMENWERX SUPPLIED DMX CONTROLLER

To the first fixture

WALL BOX SUPPLIED BY OTHERS

2 Wire +
Shield Low Cap Cable

Back Panel

V-
12-24
Vdc

V+
12-24
Vdc

DMX-

DMX+

SHIELD

BLACK

RED

WHT-
BLUE

BLUE

BARE

Front Panel

S1   S2   S3

Controller image may differ

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

DC out

**Power Supply
120-277VAC / 24VDC**

N

L

BLUE

BROWN

DC in

Neutral

Line

Ground

**Electrical
J-Box**

ETL LISTED
Intertek

PoE

VIA 3 PERIMETER
RECESSED
CHROMAWERX - QUADRO - RGBW

Lumenwerx

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 ENABLED FIXTURE

DMX OUT

Ground

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

OUT

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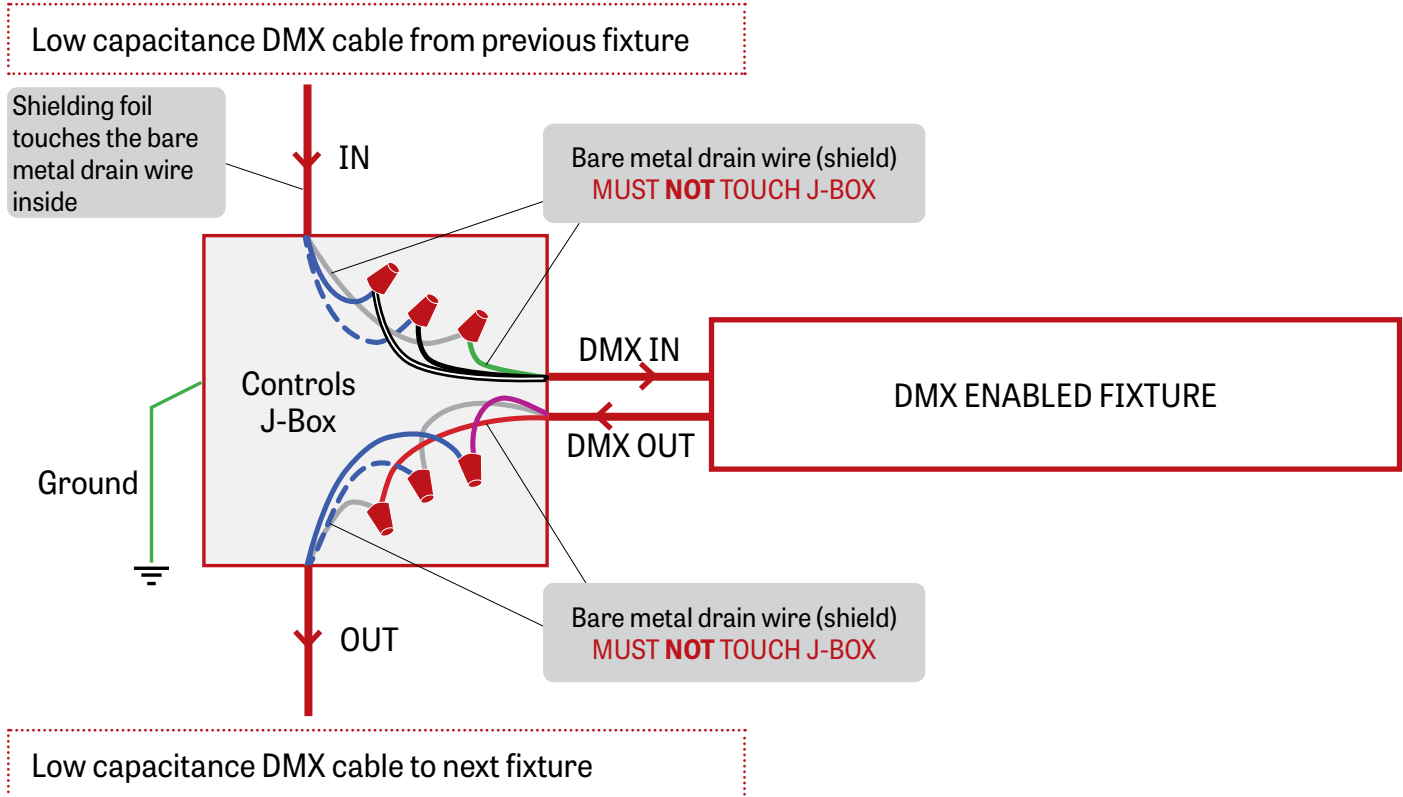
3 DMX CONNECTION PENDANT & WALL

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

c ETL us
LISTED
Intertek

PoE
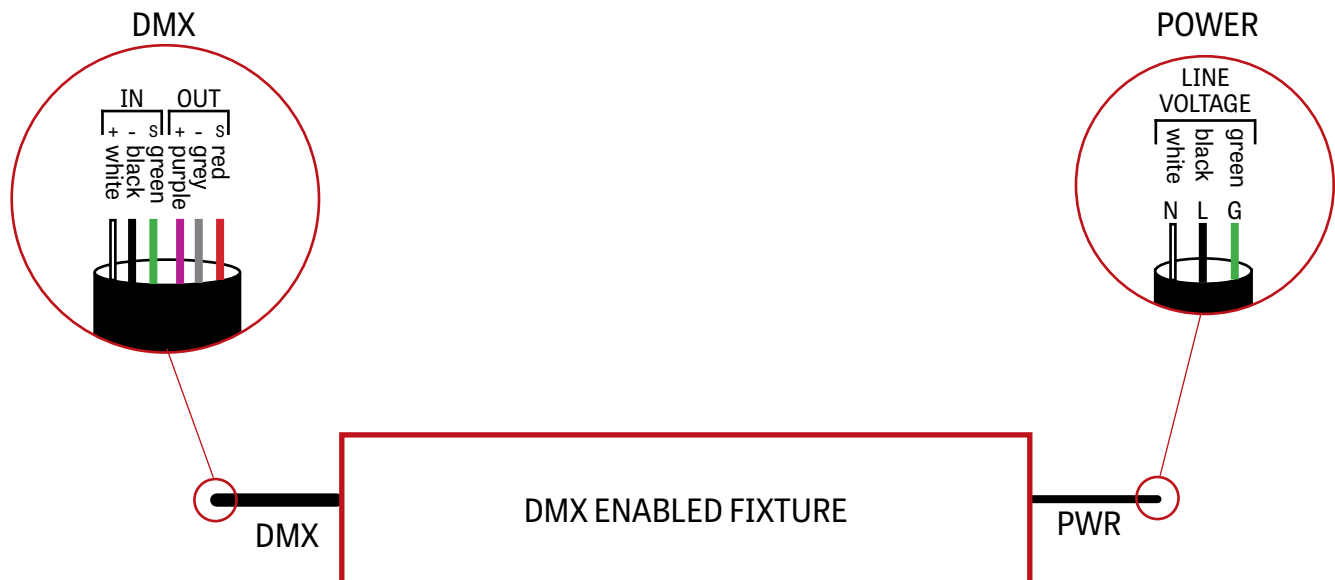
VIA 3 PERIMETER
RECESSED
CHROMAWERX - QUADRO - RGBW

4 DMX LAST FIXTURE DETAIL

120 OHM
END OF LINE
RESISTOR

+

-

Last DMX OUT

S

CAP
OFF SHIELD

DMX IN
From other fixtures

+

-

S

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

cETLus LISTED
Intertek

PoE
Power over Ethernet

VIA 3 PERIMETER
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Lumenwerx
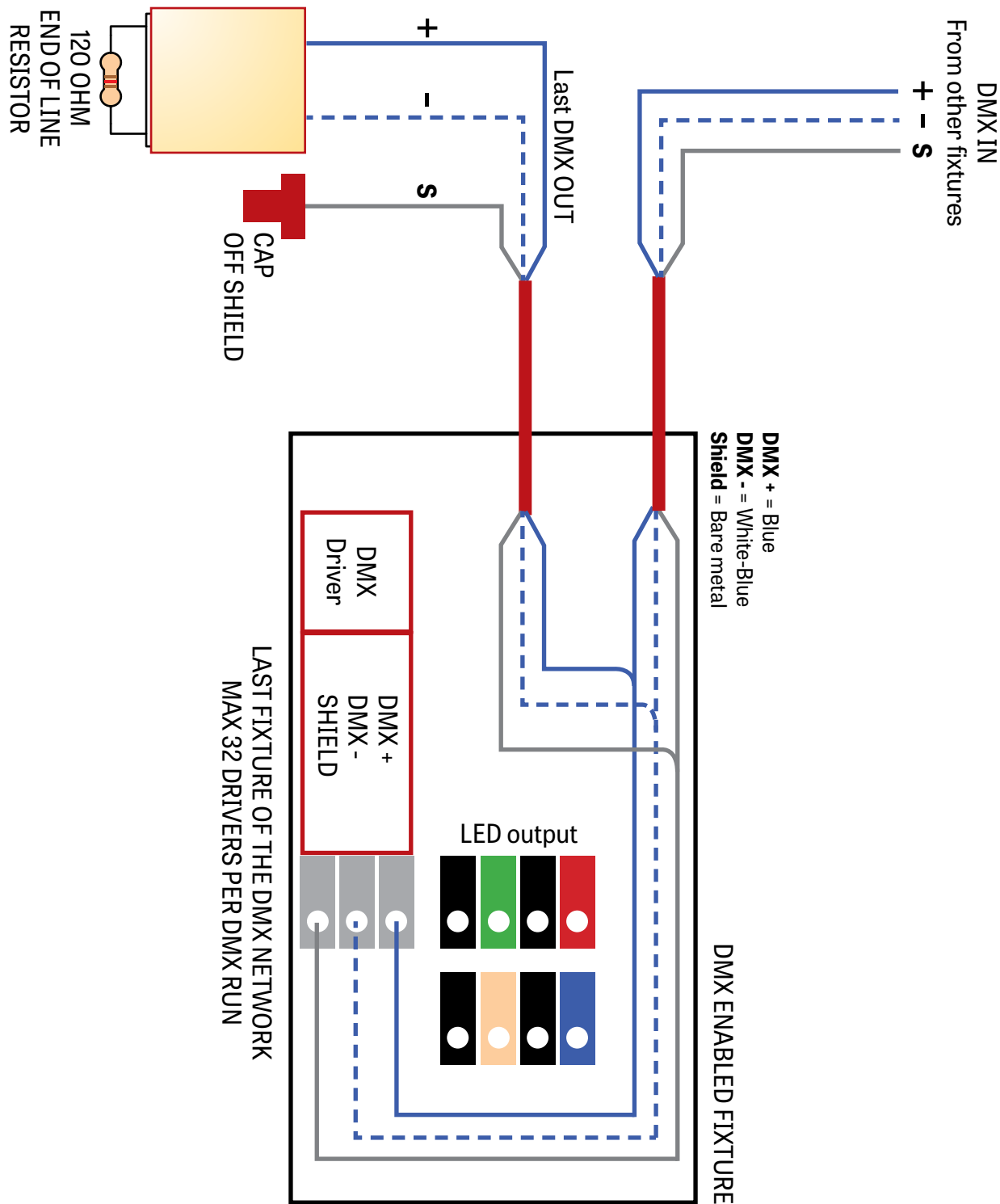
DMX WALL CONTROLLER

WC1
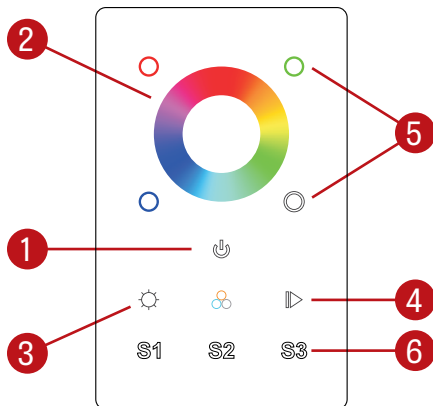
(1) Power:	Use this button to turn ON or OFF the RGBW fixture.
(2) Color Wheel:	The wheel is used to rapidly select a color (RGB colors only).
(3) Brightness (RGB):	Hold down this button to either increase or decrease the brightness of the current RGB selection. White will not be affected by the RGB brightness button.
(4) Color Cycle:	This button will start an animation, rotating between Reds Greens and Blues, the arrows allow the user to speed up or slow down the animation.
(5) Individual Colors:	By pressing and holding a color it will be possible to brighten or dim it. Quickly pressing a color will turn it OFF or turn it ON to its previous dim level. White: In order to activate or deactivate and dim the White channel, the White button needs to be used.
(6) Scenes:	By holding down one of the scenes button, the current color selection is saved. It can be later accessed by quickly pressing on one of the Scene buttons.

WC2
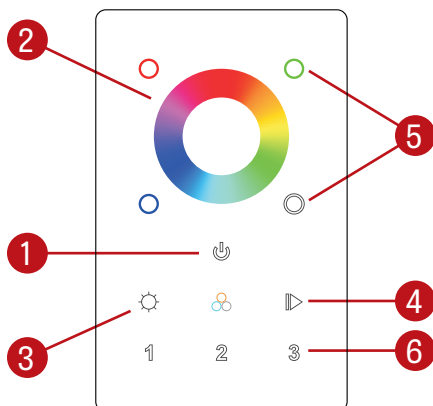
(1) Power:	Use this button to turn ON or OFF the RGBW fixture.
(2) Color Wheel:	The wheel is used to rapidly select a color (RGB colors only).
(3) Brightness:	Hold down this button to either increase or decrease the brightness of the current RGB selection. White will not be affected by the RGB brightness button.
(4) Color Cycle:	This button will start an animation, rotating between Reds Greens and Blues, the arrows allow the user to speed up or slow down the animation.
(5) Individual Colors:	By pressing a color it will be possible to brighten or dim that specific color. White: In order to activate or deactivate and dim the White channel, the White button needs to be used.
(6) Zone:	By holding down one of the zone buttons, a zone can be selected and controlled.

Default DMX Addresses:
1 Red
2 Green
3 Blue
4 White

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PoE Power over Ethernet