

## ColourLine Lazer Micro

Part of our **Lazer series**



<b>Date:</b>	<b>Approved:</b>
<b>Type:</b>	
<b>Fixture:</b>	
<b>Project:</b>	

**ColourLine Lazer Micro** (CLZMF) is the newest part of our Lazer Series, featuring high-performance Zero Lumens Compromised, superior optics with long-casting grazer, wall wash, flood and spot flood capabilities in a compact form factor. It's based on our ColourLine RGBW technology that utilizes advanced RDM-DMX protocols combined with a unique optical system to offer one of the most impressive long-throw RGBW lighting solutions in the market. Lazer is equipped with an integrated yoke mount and 180° incremental adjustment setting to direct luminaire lighting. Typical applications include large buildings, arenas, towers, monuments, bridges, tunnels, and more.

### SPECIFICATIONS

color temperature	RGBW / RGBA
<b>PHYSICAL</b>	
<b>beam spread</b>	9°, 10° x 30°, 10° x 60°, 15° x 25°, 30°, 30° x 60°, 50° x 80°, 80°
<b>LEDs</b>	12 LEDs per module
<b>dimensions</b>	7.3"W x 7.3"H x 6.6"D
<b>weight</b>	11 lbs
<b>housing</b>	marine grade, corrosion resistant, low copper, solid die-cast aluminum, extruded 6061 body with captive stainless steel fasteners
<b>lens</b>	anti-reflective-clear, tempered glass w/RTV silicone gasketing
<b>mounting</b>	3G Vibration rated, standard mounting is an integrated steel yoke system, optional accessories available
<b>ingress protection</b>	IP66 rated for dry, damp or wet locations
<b>impact resistance</b>	IK08 lens impact rating, IK10 w/ Rock Guard (RG)
<b>luminaire connections</b>	daisy chain luminaires with male/female twist & lock, 6-pin, IP68 rated connector cables

### PERFORMANCE

<b>lumen output [ all on ]</b>	2500 lm (RGBW - full on)
<b>maximum delivered intensity</b>	52,000 cd @ 8 degrees* (RGBW Full On) *native optical beam
<b>lumen maintenance</b>	L70 > 70,000 hours
<b>operating temperature</b>	-40°F to 122°F (-40°C to 50°C)
<b>protocols</b>	DMX 512, RDM (ANSI E1.20)
<b>ColourFull (CF)</b>	Custom Tooled Native Optic with a collimating color mixing chamber that mixes at the phosphor level enabling unique color combinations
<b>ColourQuick (CQ)</b>	provides uniform beam saturation, instantaneously without scalloping
<b>ColourClone (CC)</b>	manufacturing process uses robotic systems to provide 1 SDCM like consistency between luminaires by calibrating every luminaire to the same exact X, Y, chromaticity coordinates
<b>ColourSoft (CS)</b>	embedded firmware enables 16-bit resolution using only 8-bits of data to enhance the low trim curve for no-flicker at the slowest transition speeds
<b>warranty</b>	5 year limited warranty

### ELECTRICAL

<b>input voltage</b>	Universal 120 - 277 VAC
<b>power supply</b>	integral Class II, electronic high-power factor 99% @ 120V
<b>controls</b>	SSL ColourSelect Controller, 3rd party DMX 512, RDM standard based control system (ANSI E1.20)
<b>certification</b>	ETL / cETL, FCC Part 15
<b>standards</b>	UL-Class I
<b>power consumption</b>	85W @ 120V (per module)

# ColourLine Lazer Micro



## PART NUMBER

<b>CLZMF</b>	<b>UNV</b>		<b>BK</b>		
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MODEL	VOLTAGE	MODE	FINISH	OPTICS nominal	ACCESSORIES
<b>CLZMF</b> ColourLine Lazer Micro	<b>UNV</b> 120 - 277 VAC	<b>RGBW</b> RGBW* <b>RGBA</b> RGBA (Amber)	<b>BK</b> Black	<b>9</b> 9° x 9° Beam† (native optic) <b>1030</b> 10° x 30° Beam† <b>1060</b> 10° x 60° Beam <b>1525</b> 15° x 25° Beam† <b>30</b> 30° x 30° Beam† <b>3060</b> 30° x 60° Beam <b>5080</b> 50° x 80° Beam <b>80</b> 80° x 80° Beam	<b>MFV</b> Full Visor <b>MHV</b> Half Visor <b>MRG</b> Rock Guard†
		*W = 3K			†MRG recommended only with narrow beam optics: 9°, 30°, 1030°, 1525°

## Cable Accessories (order separately)

**REQUIRED:** Each run requires a Starter Cable and Terminator Cap. **Max Run Length** = 9 Modules (120V), 18 Mods (277V)

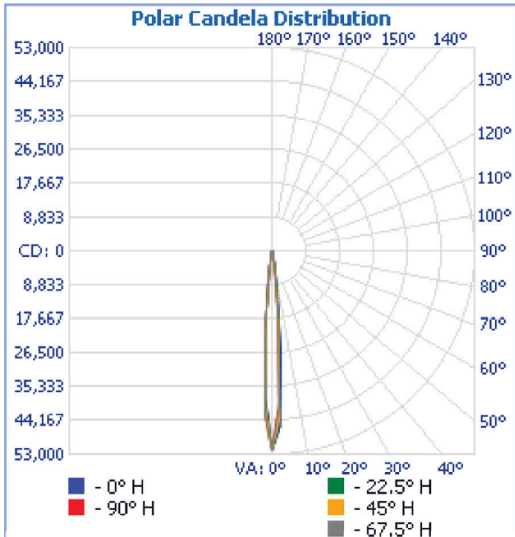
_____ <b>SC10CLZ</b> 10 ft. Starter Connection Cord	_____ <b>TCAPDCLZ</b> Data Terminator Cap	_____ <b>EC120CLZ</b> 120 in. Extension Cord
_____ <b>SC25CLZ</b> 25 ft. Starter Connection Cord	_____ <b>EC24CLZ</b> 24 in. Extension Cord	_____ <b>EC240CLZ</b> 240 in. Extension Cord
_____ <b>SC50CLZ</b> 50 ft. Starter Connection Cord	_____ <b>EC60CLZ</b> 60 in. Extension Cord	

## Control Components (Indicate the quantity needed for each item.)

Controller Data Cables/DMX listed are exterior rated.  
(Belden 3105A or equivalent) CD cables have male XLR at one end.

_____ <b>PHAROS XPT-5-W</b> Expert Touch Panel; 5" Display in White	_____ <b>CSC-E</b> ColourSelect Controller ( <i>2 universe</i> )
_____ <b>PHAROS XPC1</b> Expert Controller; 512 channels of eDMX/DMX	_____ <b>PS-CSC</b> Power Supply AC Adapter for CSC-E ( <i>replacement</i> )
_____ <b>PHAROS XPC2</b> Expert Controller; 1024 channels of eDMX/DMX	_____ <b>DE3BK(WH)</b> Nicolaudie STICK DE-3 Black or White Wall Mount Controller w/color dial
_____ <b>PHAROS XPR</b> Expert Repeat (DMX Splitter with 1 in 4 out, 24V DC)	_____ <b>CW4-WH</b> Nicolaudie STICK White Touch Screen with Internal WIFI
_____ <b>PHAROS TPS-5-B</b> 5" Designer Touch Panel Station	_____ <b>GA2WH(BK)</b> Nicolaudie STICK-GA2 White or Black Wall Mount Controller
_____ <b>PHAROS TPC-BB</b> Touch Panel Controller - Black on Black ( <i>512 Channels EDMX</i> )	_____ <b>DINA-DR1</b> 3072 Channel (DMX, eDMX), DIN Rail
_____ <b>PHAROS TPC-FBB</b> Flush Mount Back Box for drywall installation	_____ <b>DINA-DR1 LITE</b> 1024 Channel (DMX), DIN Rail - upgradeable to DR-1
_____ <b>PHAROS TPC-SBB</b> Surface Mount Back Box for drywall installation	_____ <b>DINA-DR2</b> 1024 Channel (DMX), DIN Rail
_____ <b>PHAROS EXT</b> Extension for TPC Connectivity	_____ <b>DINA-DR2-LITE</b> 512 Channel (DMX), DIN Rail - upgradeable to DR-2
_____ <b>PHAROS LPC1</b> Lighting Playback Controller 1 (512 channels DMX/eDMX)	_____ <b>DINA PS</b> DINA Power Supply (by Nicolaudie)
_____ <b>PHAROS LPC2</b> Lighting Playback Controller 2 (1,024 channels DMX/eDMX)	_____ <b>NATOUCH-1</b> Wall mounted touch screen for remote control
_____ <b>EDN 10</b> 10 Ethernet Data Node (1+1 Ethernet, 10 DMX/RDM)	_____ <b>DXC-25</b> 25 foot Exterior rated DMX cable
_____ <b>EDN 20</b> 20 Ethernet Data Node (1+1 Ethernet, 20 DMX/RDM)	_____ <b>DXC-50</b> 50 foot Exterior rated DMX cable
_____ <b>DMXCat</b> DMX/RDM configuration tool	_____ <b>DXC-100</b> 100 foot Exterior rated DMX cable
_____ <b>PDX2</b> Power Data Wiring Box ( <i>exterior rated</i> )	_____ <b>CD-10</b> 10 foot controller data cable (for CSC only)
_____ <b>PDX-RDS2</b> Power Data Wiring Box w/2-port splitter	_____ <b>CD-25</b> 25 foot controller data cable (for CSC only)
_____ <b>PDX-RDS4</b> Power Data Wiring Box w/4-port splitter	_____ <b>CD-50</b> 50 foot controller data cable (for CSC only)
_____ <b>CL-RS4</b> 4 Port RDM splitter w/120V power supply	_____ <b>CD-100</b> 100 foot controller data cable (for CSC only)
_____ <b>SCSC-2WH</b> White or Black Slim ColourSelect Wall Controller ( <i>2 universe</i> )	_____ <b>MV 5900</b> Multiverse Show Baby DMX Wireless Bridge (Indoor)
_____ <b>PS-SCSC</b> Power Supply for SCSC ( <i>Slim ColourSelect</i> )	_____ <b>7400-5707M</b> Show DMX Vero DMX Wireless Bridge (Exterior)

## PHOTOMETRIC DATA



Flood Summary				
	Efficiency	Lumens	Horizontal Spread	Vertical Spread
Field (10%):	52.5%	1,292.7	16.3	17.7
Beam (50%):	26.8%	660.5	8.5	9.2
Total:	100.8%	2,482.0		

Illuminance at a Distance			
	Center Beam fc	Beam Width	
1.7R	18,007 fc	0.3 ft	0.3 ft
3.3R	4,779 fc	0.5 ft	0.5 ft
5.0R	2,082 fc	0.8 ft	0.7 ft
6.7R	1,159 fc	1.1 ft	1.0 ft
8.3R	755 fc	1.3 ft	1.2 ft
10.0R	520 fc	1.6 ft	1.5 ft

■ Vert. Spread: 9.2°  
■ Horiz. Spread: 8.5°

Zonal Lumen Summary		
Zone	Lumens	% Luminaire
0-30	2,063.6	83.8%
0-40	2,245.9	91.2%
0-60	2,398.0	97.4%
60-90	51.7	2.1%
70-100	19.2	0.8%
90-120	3.1	0.1%
0-90	2,449.7	99.5%
90-180	12.0	0.5%
0-180	2,461.7	100%



RGBW supports up to 4.6 billion colors available to use with ColourLine Lazer Micro.

Like all ColourLine products any controllers that support the latest ESTA RDM and ACN standards will allow optimal control of the huge RGBW color spectrum. Regardless of the surface color you're casting light across, you'll be able to adjust color to capture your specific brand colors or add unique settings for subtle or intense color-changing hues.



Amber is used in place of white in the RGBA color gamut. Adjusting to the lighter color spectrum adds warm tones of amber.

As subjective as color selection is, using amber for a more chromatically warmer color palette allows for a broader yellow color spectrum. The warm rich colors create a more inviting setting for night lighting applications. RGB alone will produce white and yellow but in a smaller color spectrum.

All These Features In A Single Luminaire



**ColourFull**

FULL LUMEN COLOR CHANGING

- Full Power LED with any color transition
- Consistent rich color across the light spectrum
- Full output power with any color

ColourFull luminaires provide maximum output at all times – with all colors, so your application receives the maximum color saturation. Using a Custom Tooled Native Optic with a collimating color mixing chamber that mixes at the phosphor level enabling unique color combinations.



**ColourQuick**

RAPID-MIX COLOR

- Instantaneous Color Mixing – Within 1 inch
- Shortest Distance in Industry for Blending Colors
- 4-in-1 RGBW LED designed to SSL Specifications

ColourLine RGBW luminaires provide the quickest color mixing in the industry. The SSL ColourQuick technology enables our ColourLine Linear Indoor Cove and Graze, as well as, our Outdoor Floods to color-mix almost instantly, within one inch.



**ColourSoft**

SMOOTH LOW-TRIM DIMMING

- Flicker-Free Color Transitions and Dimming
- 16-bit performance (65,536 steps) using *only 8-bit addressing*
- SSL Engineered Custom Software and Firmware

Standard dimming technology uses 8-bit resolution for 256 individual steps. Our 32-bit on-board MCU uses SSL developed software to provide 16-bit resolution that allows 65,536 steps of resolution and only use 8-bits of addressing space! We also use a logarithmic delineation of the resolution to concentrate in the lower third of the dimming curve so the low-end dimming and color transitions have zero flicker.



**ColourClone**

TRU-COLOR RGBW MATCHING

- Robotic Calibration of every luminaire provides 1-Step consistency
- Every luminaire has same X, Y color coordinates
- Perfect match for add-ons and replacements

As part of our manufacturing process, SSL Automated Manufacturing Robots calibrate every luminaire to the exact same X,Y color coordinates to provide Step-1 like consistency. This process enables every luminaire to be an exact clone. At the end of the process, a bar code is generated for every board. This allows for exact matching for job add-ons or warranty replacements.

Scalable

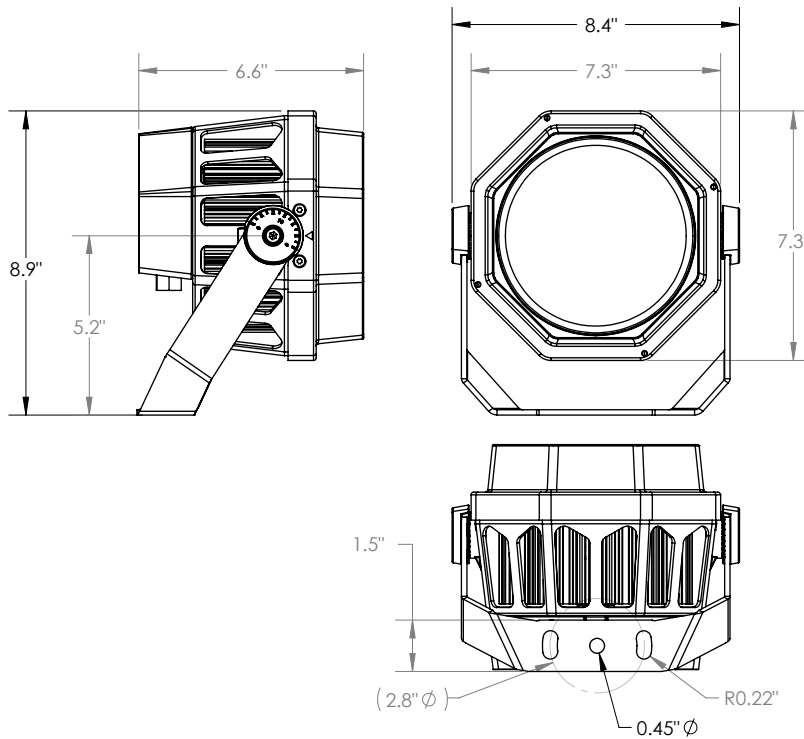
- Full DMX, RDM control capability with latest industry standards
- A wide variety of DMX protocol controls and system accessories
- SSL has many RGBW products utilizing the ColourLine Technology
- Control 1000's of DMX channels with multiple universes & zones
- Powerful luminaires with super optics for long-throw applications
- SSL provides turnkey design and technical integration support

# Dimensions

## ColourLine Lazer Micro

### SINGLE MODULE FIXTURE (1M)

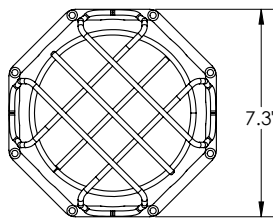
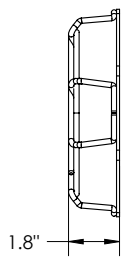
overall length	7.3" L
overall height	7.3" H
overall depth (1M)	6.6" D



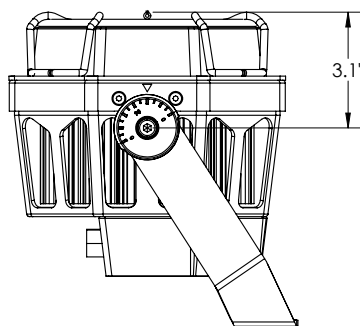
# Accessories

### ROCK GUARD<sup>†</sup>

Part #	MRG
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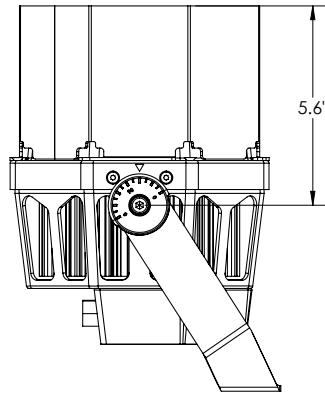
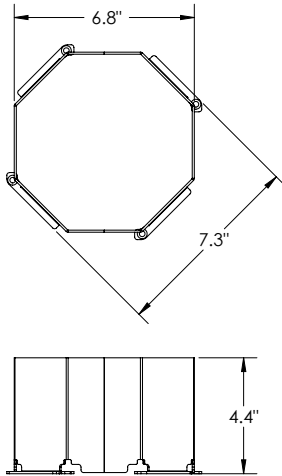


<sup>†</sup>Recommended only with narrow beam optics: 9°, 30°, 1030°, 1525°



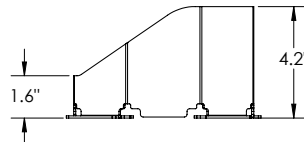
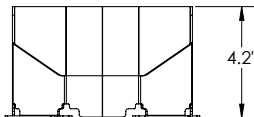
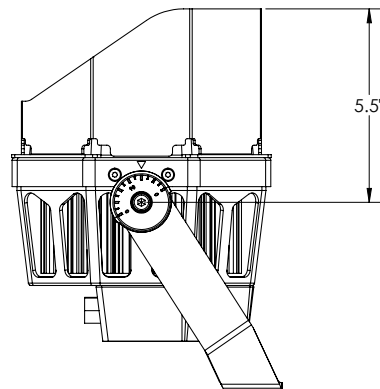
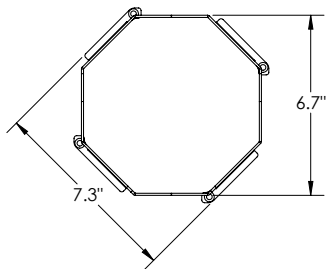
### FULL VISOR

Part #	MFV
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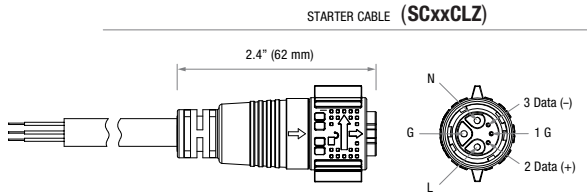
### HALF VISOR

Part #	MHV
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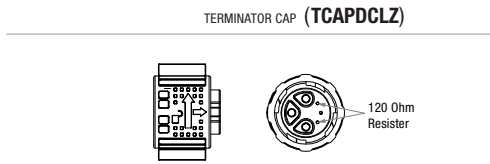
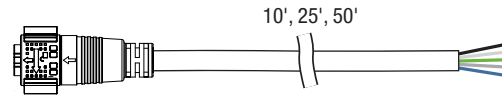
### CONNECTIONS & CABLES

#### 6-PIN CONNECTORS



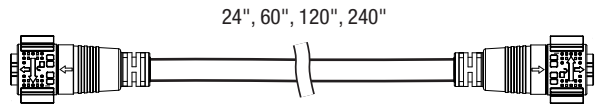
#### STARTER CORD (SCxxCLZ)

Required Starter Cord comes in multiple lengths with a luminaire connector at one end and lead wires at the other end for connecting power & data.



#### EXTENSION CORD (ECxxCLZ)

The Extension Cord comes in multiple lengths with a luminaire connection at each end for power & data and adding space between luminaires in a linear run.

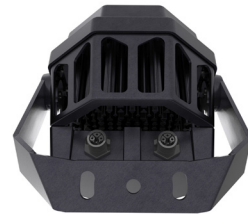


### CLZMF - LAZER CONFIGURATION EXAMPLE

#### Component Identification

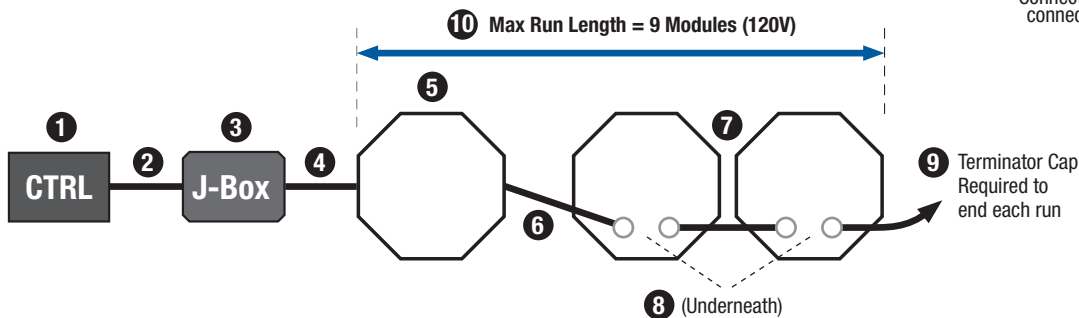
- 1) DMX Color Controller (see last page)
- 2) DMX Data Cable **DXC-xx** or **CD-xx** (CSC only)
- 3) PDX Power Data Wiring Box
- 4) Starter Cord **SCxxCLZ**
- 5) ColourLine Lazer (**CLZMF**)
- 6) Extension Cord **ECxxCLZ** (connect at back of luminaire)
- 7) Connected ColourLine Lazer Micro (**CLZMF**)
- 8) Extension Cords connect luminaires **ECxxCLZ**
- 9) Terminator Cap **TCAPDCLZ** (required at end of run)
- 10) Max Run Length (before adding more power):  
9 Modules (120V), 18 Modules (277V)

#### Back of Luminaire Connections



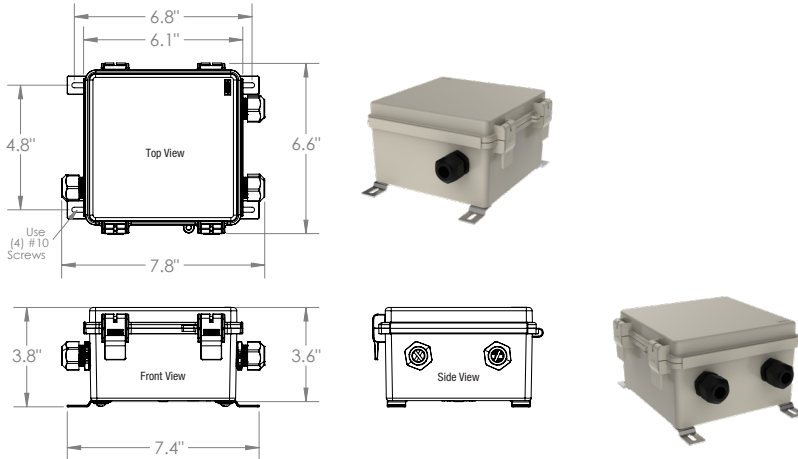
Connect to either side, both connectors are the same.

#### Back of Luminaire Connections

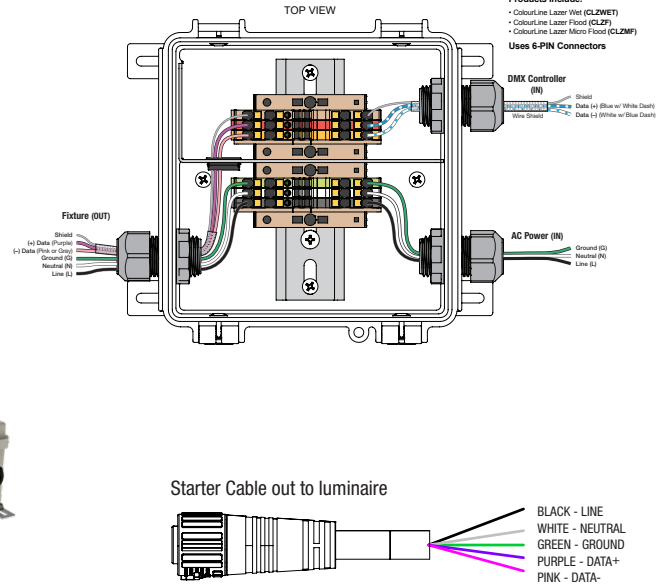


### PDX2 - POWER DATA WIRING BOX (ONE PDX2 REQUIRED PER RUN)

The PDX2 is an exterior-rated enclosure that consolidates multiple input sources into one output to the CLWET luminaires. Data input from the RDM Color controller and AC input combine to provide one output to a Starter Cord. One PDX2 box is required per each luminaire run.

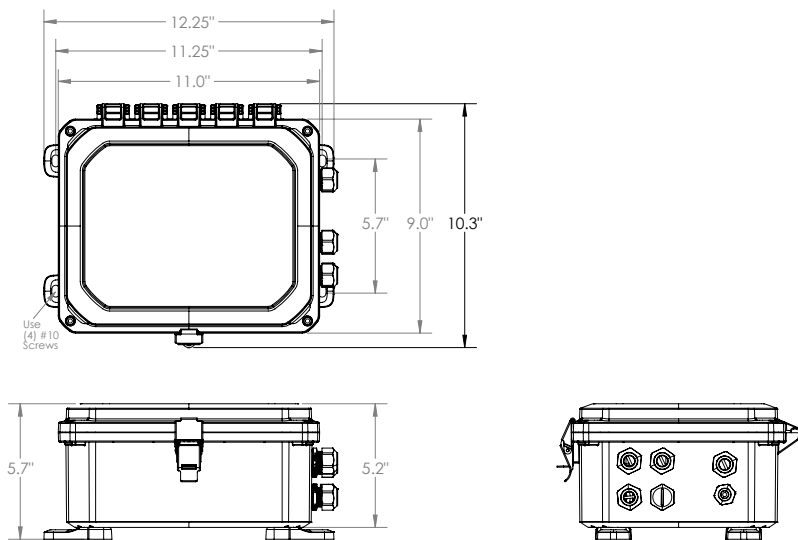


PDX2 Wiring for ColourLine Lazer Series



### PDX-RDS2 - POWER DATA WIRING BOX - WITH 2-PORT SPLITTER

The PDX-RDS2 is an exterior-rated enclosure with a transparent, hinged cover that latches and seals using a formed in place PUR gasket and a stainless steel hinge pin. The PDX-RDS2 houses a DMX/RDM 2 port splitter/repeater that takes in one DMX input and provides two regenerated DMX outputs that can be any combination of starter cords or straight DMX outputs. The repeater allows you to daisy-chain PDX2 or PDX-RDS2 boxes by providing two maximum DMX run length outputs.



#### Connector Identification

- 1) AC Input (Line power)
- 2) DMX Data Cable **DXG-xx** or **GD-xx** (CSC only)
- 3) Starter Cord **SCxxLZWET** one
- 4) Starter Cord **SCxxLZWET** two
- 5) Auxiliary Ground





## DMX / RDM PROTOCOL CONTROLLERS



### PHAROS TPC-BB - Pharos Touch Panel Controller - Black on Black finish

TPC Touch Panel Controller is an elegant lighting controller with a customizable 4.3" touch screen, 512 channels of eDMX output and flexible interfacing potential. The TPC must work in conjunction with the EXT or LPC. Pharos Backbox is available for mounting.



### PHAROS EXT - Extension Device for TPC Connectivity

The Pharos EXT is an extension for the Pharos TPC for making the physical DMX or eDMX output connections. It also provides a PoE connection for the TPC. It's DIN rail mounted. This device supports electrical input of 120-240V AC power.



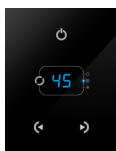
### PHAROS LPC - Lighting Playback Controller

Pharos offers two playback controllers, LPC1 (512 channels DMX/eDMX) and LPC2 (1024 channels DMX/eDMX) Pharos LPC (Lighting Playback Controller) is a versatile control solution. The LPC family features individually controllable and independently running timelines and scenes, letting you build dynamic, precise, fully customizable lighting effects. The LPC can be ordered with 1 to 100 Universe capability. It requires a TPC or PC to interface and is powered via 9V to 48V DC or PoE (IEEE802.3af, Class 2), 4W typical.



### DE3BK(WH) - Nicolaudie STICK-DE3 Black or White Wall Mount Controller with color dial

STICK DE3 provides an elegant solution to controlling your DMX fixtures. The glass, touch-sensitive panel can be used in multiple ways to select a programmed scene, change a color attribute or directly select a color from the color wheel. Scenes are displayed on the graphical color display. The DE3 provides 1024 DMX Channels with up to 500 scenes and 10 separate zones can be created and controlled separately. 120V AC is required for operation. The DE3 is programmed via Nicolaudie's ESA2 or ESA PRO software. Programs are stored on the internal MicroSD card.



**CW4-WH - Nicolaudie STICK CW4 White Touch Screen with Internal WiFi** CW4 touch controller provides 1024 channels of control. 36 scenes can be created in 1 zone. An internal access point provides remote control via any WiFi device using the Lightpad app from Nicolaudie.



### GA2BK(WH) - Nicolaudie STICK-GA2 Black or White Wall Mount Controller

GA2 is an economical controller with glass, touch-sensitive screen for basic control of up to 99 scenes and 1 available zone. It can control 512 DMX Channels. An LED display makes it easy to determine which scene number is playing.



### CSC-E - SSL ColourSelect Controller

ColourSelect Controller 2 Universe provides (1024 Channels) of output data capable of controlling 5 zones independently. CSC-E has two 3-pin female XLR connectors to connect to your DMX network and is defaulted in splitter mode, so two separate runs can be connected and controlled. It can store a total of 80 programmable presets. Additionally buttons control speed, dimming, scenes and static colors. The CSC can be powered via a PC USB port or with the PS-CSC external 120V AC power supply included.



**CSCSC-2WH (or 2BK) - SLIM White ColourSelect Controller** Wall mount versions of the CSC-E, includes power supply.