

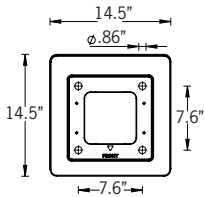
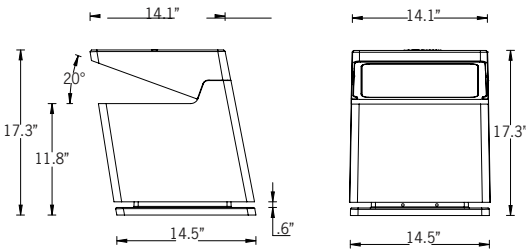
UFRA-10021

Frame 1 RGBW Bollard



RGBW

41w LED 441 Lumens
 IP67 · Suitable For Wet Locations
 IK08 · Impact Resistant (Vandal Resistant)
 Weight 60 lbs



Anchor Bolt Base Mounting Detail

Construction

Aluminum Casting

Less than 0.1% copper content – Marine Grade 6060 extruded & LM6 Aluminum High Pressure die casting provides excellent mechanical strength, clean detailed product lines and excellent heat dissipation.

Pre paint

8 step degrease and phosphate process that includes deoxidizing and etching as well as a zinc and nickel phosphate process before product painting.

Memory Retentive -Silicon Gasket

Provided with special injection molded "fit for purpose" long life high temperature memory retentive silicon gaskets. Maintains the gaskets exact profile and seal over years of use and compression.

Thermal management

LM6 Aluminum is used for its excellent mechanical strength and thermal dissipation properties in low and high ambient temperatures. The superior thermal heat sink design by Ligman used in conjunction with the driver, controls thermals below critical temperature range to ensure maximum luminous flux output, as well as providing long LED service life and ensuring less than 10% lumen depreciation at 50,000 hours.

BUG Rating

B0 - U2 - G1

Surge Suppression

Standard 10kv surge suppressor provided with all fixtures.

Finishing

All Ligman products go through an extensive finishing process that includes fettling to improve paint adherence.

Paint

UV Stabilized 4.9mil thick powder coat paint and baked at 200 Deg C. This process ensures that Ligman products can withstand harsh environments. Rated for use in natatoriums.

MicroPRIM Finishes

MicroPRIM is Ligman's trade marked decorative powder coating technology that permanently infuses colors, patterns, or imagery directly into the surface of luminaires and poles while providing protections that standard powder coating does not offer.

MicroPRIM finishes include nature-inspired wood grains and stone aesthetics, material-inspired finishes such as brushed metal, concrete, and carbon fiber, Solid colors in Ligman standard colors, as well as any RAL or Pantone color, Decorative patterns, custom imagery and more.

Coating and Infusion Process

Metal components are pre-treated and powder coated with a proprietary polyurethane-based coating engineered for outdoor architectural use. Decorative patterns or imagery are then permanently infused into the cured powder coat through a heat-based process, creating a durable, integrated finish.

Performance and Validation

MicroPRIM finishes are suitable for indoor and outdoor applications and meet AAMA2605 architectural coating requirements. Performance is validated through laboratory and real-world testing to ASTM standards for UV exposure, adhesion, abrasion, impact, salt spray, chemical resistance, and graffiti resistance.

All MicroPRIM finishes are backed by Ligman's 10-year warranty.

Key Performance Attributes

- Anti-graffiti resistance
- UV and weather resistance
- Scratch and abrasion resistance
- Natatorium Rated for installation in corrosive environments

Hardware

Provided Hardware is Marine grade 316 Stainless steel.

Anti Seize Screw Holes

Tapped holes are infused with a special anti seize compound designed to prevent seizure of threaded connections, due to electrolysis from heat, corrosive atmospheres and moisture.

Crystal Clear Low Iron Glass Lens

Provided with tempered, impact resistant crystal clear low iron glass ensuring no green glass tinge.

Optics & LED

Precise optic design provides exceptional light control and precise distribution of light. LED CRI > 80

Lumen - Maintenance Life

L80 /B10 at 50,000 hours (This means that at least 90% of the LED still achieve 80% of their original flux)

Stylish signature seating bollard with numerous combination options for finishes and lighting. Combine your luminaire and seating needs into one piece of contemporary urban lighting furniture.

This modern bollard is ideal for providing light, as well as seating at commercial building entrances, parks, recreational areas, as well as schools and universities.

This robust luminaire provides ambient light in the evenings as well as functional seating.

The luminaire has an incorporated LED band at the base of the bollard that provides a decorative glow and can be ordered with static white, or color changing RGBW.

Aside from Ligman's standard color options, these luminaires can be produced in various custom finishes, as well as the option of having the top and bottom sections in different colors to match corporate or school/university colors.

This range of rectangular bollards, with regressed LEDs provides excellent glare control.

(Top Light) Color temperature 2700K, 3000K, 3500K and 4000K, LED CRI >80 and lifetime 50,000 Hours.

Low copper content die-cast aluminum housing with a high corrosion resistance.

This fixture is supplied completely wired with powercord and waterproof gland from the driver enclosure to the base of the column to ensure quick trouble-free installation.

This bollard is designed to support a +/-330lb static load.



A92391-US
 Power Plug & USB-C Outlet



UFRA-10021

Frame 1 RGBW Bollard

PROJECT		DATE	
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QUANTITY		TYPE		NOTE	
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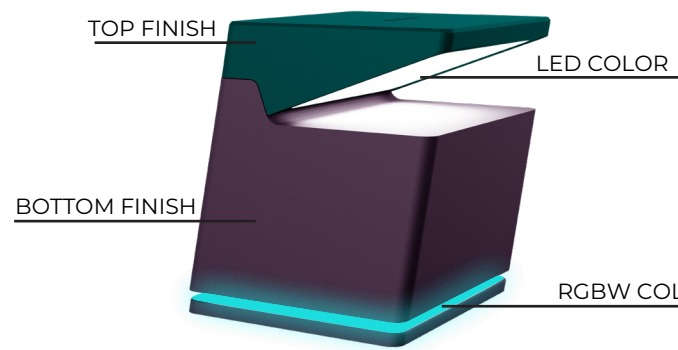
ORDERING EXAMPLE || UFRA - 10021 - 41w - W30 - RGBW30 - 02 - 02 - 120/277V

UFRA-10021						
LAMP	LED COLOR (TOP)	RGBW COLOR (BOTTOM)	FINISH COLOR (TOP)	FINISH COLOR (BOTTOM)	VOLTAGE	
41w LED 441 Lumens	W27 - 2700K W30 - 3000K W35 - 3500K W40 - 4000K	RGBW30 - Warm White 3200K RGBW40 - Neutral White 4000K RGBW65 - Cool White 6850K	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	01 - BLACK RAL 9011 02 - DARK GREY RAL 7043 03 - WHITE RAL 9003 04 - METALLIC SILVER RAL 9006 05 - MATTE SILVER RAL 9006 06 - LIGMAN BRONZE 07 - CUSTOM RAL	120/277v	

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ADDITIONAL OPTIONS

- NAT - Natatorium Rated
- A92391-US - Power Plug & USB-C Outlet
- A64791 - RDM DMX Splitter
- STICK-DE3 - Nicolaudie DMX Controller
- CUST - Custom Fixture Address *[See Page 3 for More information]*
- A64791 - RDM DMX Splitter
- A65191 - TPC Touch Panel
- A65391 - EDN Ethernet Data Node
- A66991 - LPCX Lighting Playback
- A64991 - CLOUD
- PS - Perforated Shield
- HGT - Custom Bollard Height [Specify HGT=XX"]
- A64791 - RDM DMX Splitter
- A65191 - TPC Touch Panel
- A65391 - EDN Ethernet Data Node
- A66991 - LPCX Lighting Playback
- A64991 - CLOUD



EXAMPLE OF TWO-TONE CUSTOM COLOR BOLLARD

More Custom Finishes Available Upon Request

Consult factory for pricing and lead times

THERE IS AN ADDITIONAL COST FOR THESE FINISHES

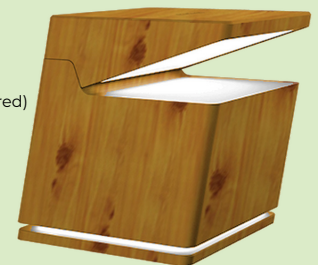
MicroPRIM FINISHES

- SW01 - OAK FINISH
- SW02 - WALNUT FINISH
- SW03 - PINE FINISH
- DF - DOUGLAS FIR FINISH
- CW - CHERRY WOOD FINISH
- NW - NATIONAL WALNUT FINISH
- SU01 - CONCRETE FINISH
- SU02 - SOFTSCAPE FINISH
- SU03 - STONE FINISH
- SU04 - CORTEN FINISH
- CSM - Custom Image/Pattern

MicroPRIM FINISHES

- MP - MAPLE FINISH
- MHG - MAHOGANY FINISH
- BH - BEECH FINISH
- CN - CHESTNUT FINISH
- WMBL - WHITE MARBLE FINISH
- MBL - MARBLE FINISH
- GRNT - GRANITE FINISH
- BGD - BRUSHED GOLD FINISH
- BBRZ - BRUSHED BRONZE FINISH
- CAMO - CAMOUFLAGE FINISH

- MP01 - MicroPRIM RAL 9011 Black (Glossy)
- MP02 - MicroPRIM RAL 7043 Dark Grey (Glossy)
- MP03 - MicroPRIM RAL 9003 White (Glossy)
- MP04 - MicroPRIM RAL 9006 Metallic Silver (Glossy)
- MP05 - MicroPRIM RAL 9006 Matte Silver (Matte/Textured)
- MP06 - MicroPRIM Ligman Bronze (Glossy)
- MP07 - MicroPRIM Custom Color (Glossy)



Example: MicroPRIM - Pine Woodland

RGBW DMX/RDM Control

RGBW control requires precise communication between lighting fixtures and IP-based systems. To manage Red, Green, Blue, and White diodes effectively, each fixture must be pre-addressed to ensure accurate individual or grouped control.

Ligman's Engineered Approach

Ligman offers a structured, performance driven methodology for RGBW system design and deployment.

Fixture Addressing

- Default: Fixtures are factory programmed with the same DMX start address unless otherwise specified.
- Issue: Identical addresses cause all fixtures to respond as one—changing colors simultaneously.
- Solution: Assign unique DMX addresses to each fixture during programming or via RDM tools to enable independent or grouped control.

Termination Resistors

To prevent signal interference (crosstalk) between fixtures:

- Ligman supplies 120 ohm termination resistors.
- Install the resistor inside the last fixture or at the last fixture's J BOX. *Most fixtures include a factory installed resistor; some fixture types require on site installation depending on model.*
- Install the resistor between the DMX+ and DMX- signal lines.

System Design Guidelines

Fixture Count

- On 3 or More Fixtures: A termination resistor must be installed at the end of the run.
- On 5 or More Fixtures: Ligman may request additional layout details to verify system integrity.
- Fixtures with Dual DMX Addresses: These require more DMX channels, reducing the allowable number of fixtures per DMX run. (Refer to technical drawings for specifics.)

Maximum Distance

- Maximum Distance Without Booster: 984 ft (300 m) from the controller to the last fixture.
- Beyond This Limit: DMX/RDM splitters or boosters are required.

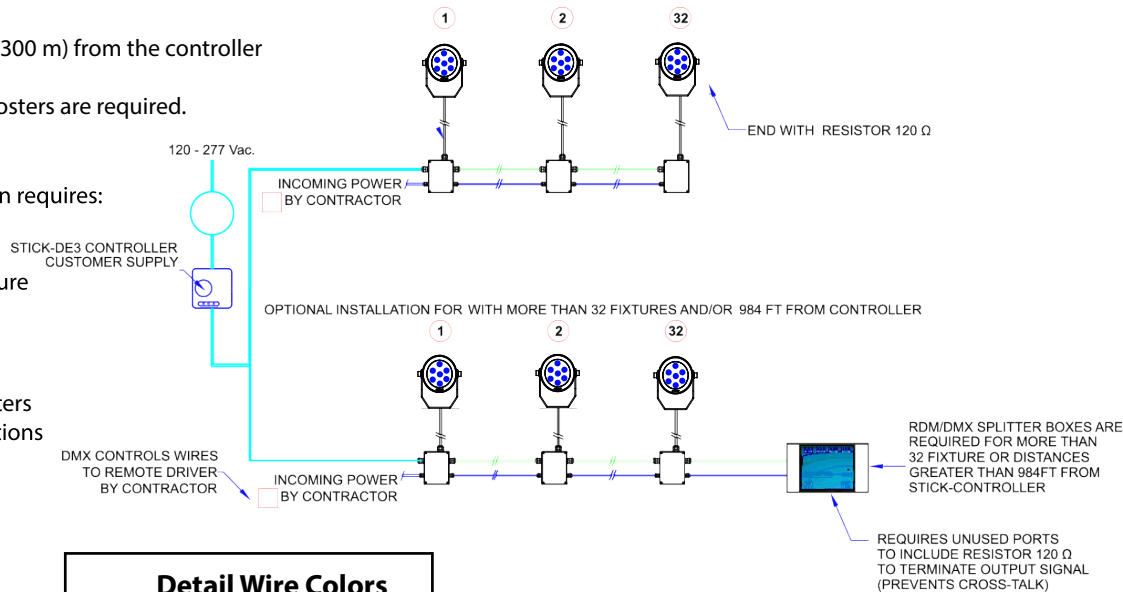
Custom Layouts

For non standard RGBW configurations, Ligman requires:

- Fixture quantity per run
- Distance between fixtures
- Total cable length from controller to last fixture

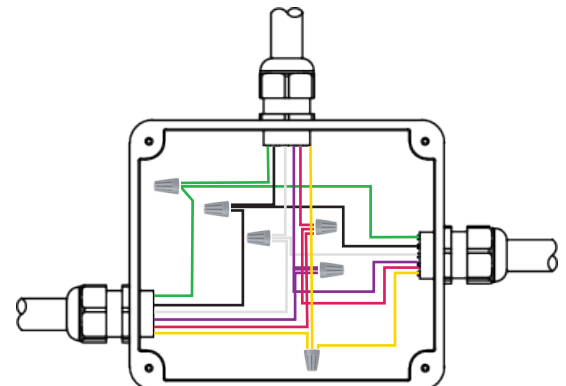
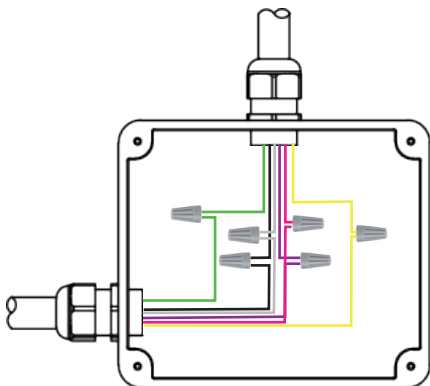
This ensures:

- Reliable DMX signal transmission
- Proper use of termination resistors and splitters
- Compliance with fixture and distance limitations



Detail Wire Colors For 5-Wire Cable

Green	-----	Ground
Black	-----	120-277v HOT
White	-----	Neutral
Purple	-----	DMX +
Pink	-----	DMX -
Yellow	-----	DMX Drain Wire





TPC Touchscreen & EXT Controller DMX & DALI 1 Universe

The TPC (Touch Panel Controller) is an elegant touch screen lighting controller with a customisable, 4.3" capacitive touch panel, 512 channels of eDMX output and vast interfacing potential, all over a single Power-over-Ethernet (PoE) network connection.

The EXT is an extension for the Pharos TPC and together they form a standalone, mainspowered lighting controller with versatile output and show control options. The EXT provides local DMX and DALI output for the TPC, as well as power and other hardware interfaces.



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TPC Touchscreen & LPC Controller DMX 2 Universe

The LPC (Lighting Playback Controller) is an all-in-one control solution for themed entertainment and LED lighting installations. It features individually controllable and independently running timelines and scenes. Supported fixtures include LEDs in any configuration (RGB, RGBW, tunable white), moving heads, yokes or scanners and fountain jets. Output includes DMX512, Art-Net, DALI & RDM.

POE Connect

The POE (Power-over-Ethernet Switch) provides a simple power and networking solution for four Power-over-Ethernet devices with two separate Ethernet uplink ports. It is perfect for connecting power and data between Pharos Controllers and Pharos Remote Devices.



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RDM DMX Splitters

The RDM (Remote Device Management) is a 4 port DMX512 Splitter compatible with the RDM standard to provide DMX output to luminaires and other devices. DMX splitters are an essential requirement for most control systems, allowing multiple separate cable runs from a single DMX output and ensuring electrical isolation.

STICK-DE3

The feature rich lighting controller has been designed to provide a control solution for the most demanding of projects, whilst maintaining an easy to use panel of touch sensitive buttons. The controller integrates a graphical color screen allowing scene photos to be displayed. Easily view the selected zone, scene name and design without the need to navigate through complex menus.

Change the speed, color and dimmer using the circular palette. The lighting levels, color and effects can be programmed from a PC, Mac, Android, iPad or iPhone using the included software



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CLOUD

The CLOUD makes it easy to achieve remote control and management which is truly remote and totally secure.

Once connected, users can adjust hardware settings remotely, schedule tasks, control multiple projects, view system status, set remote user permissions, and more; through a standard internet connection without any additional hardware.

LPCX Lighting Playback Controller X

The Pharos LPC X (Lighting Playback Controller X) offers an extreme level of power and integration, making it an ideal solution for landmark lighting installations with significant channel counts. It integrates with the full range of Pharos products and offers an optional real-time video input



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EDN Ethernet Data Node

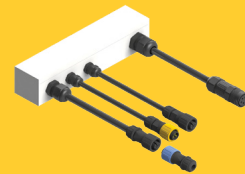
The Pharos EDN (Ethernet Data Node) is a convenient and scalable solution, providing cost-effective Ethernet-distributed DMX ports for large control projects. The EDN is an easily configurable networking node that is specifically designed to add physical DMX ports to Pharos Controllers and integrates natively with the full Pharos range.

Extremely compact, it packs up to 20 DMX512 output ports into a 1U 19" form factor. For higher port count installations, nodes can be daisy-chained to provide as many physical DMX ports as you need.

EDNs are discoverable through Pharos Designer software and associated to a Controller to be seamlessly configured as part of your patch. Ports can be flexibly assigned to any controller in your project providing an elegant data distribution solution over an Ethernet network with minimal setup required.

DMX/RDM Decoder - 24 VDC - Remote IP65 Box

- Control mode: RGBW / RGB / Custom / Dimming
- Compatible with DMX protocol (ANSI E1.11) and RDM function (ANSI E1.20)
- Output power: 33 W x 4 Channels (132 W max)
- Input voltage: 12-36 VDC
- Output voltage: 7.5-33 VDC



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SLESA-U9

The Nicolaudie SLESA-U9 is a standalone USB based DMX256 lighting controller with 20 scenes and 1 zone. This simple and reliable control allows dynamic lighting scenes to be programmed quickly and easily through the ESA2 software for uninterrupted independent operation.



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SLESA-U11

The Nicolaudie SLESA-U11 is a standalone engine (NSA) offering incredible power based DMX2048+ lighting controller with 99 scenes 5 zones, extended triggers and 16-bit channels management. Intuitive backlit keyboard with 10 presets and zone selection. Lighting scenes can be programmed quickly and easily through ESAPRO2 software via USB or Ethernet connection and mobile applications.

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DMX Splitter & Amplifier in IP Box

Digital signal distributor is used with DMX512 digital lighting control signal for amplification and 2 channel distribution output. Each input/output interface adopts high voltage isolation technology, applied to DMX512 signal via remote transmission attenuation after the plastic amplification processing. Complete electrical isolation is used between the input interface and the distribution between output interface.



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DINA-DR MICRO DMX Lighting Controller & Power Adapter

The DINA-DR MICRO is the perfect standalone lighting controller for simple DMX installations. It offers an affordable and programmable solution to replace automatic controllers.

Delivered with a DIN rail adapter, the DINA-DR MICRO can be mounted in an electrical cabinet and affords significant ease of installation.

Create your static or dynamic lighting scenes with ESA Pro 2 software and upload them to the DINA-DR MICRO through its USB connection. Specifications: 10 scenes, 1 zone, 60 channels.

TPS Touch Panel Station

The Pharos TPS (Touch Panel Station) is an elegant interface with a customizable, 4.3" capacitive touch screen, that works with any Pharos Controller



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