



DATE: \_\_\_\_\_

PROJECT: \_\_\_\_\_

FIRM: \_\_\_\_\_

INSTALLER: \_\_\_\_\_

NOTES: \_\_\_\_\_

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## High-output submersible luminaire with intelligent Full Spectrum RGBW LED's

The F-Series line of underwater marine lighting fixtures is designed to be mounted a depth of up to 4.6 m (15 ft) below the water's surface to provide vibrant color and color-changing light in the water. With watertight aluminum bronze housings and silicon bronze hardware, Metro Marine's F-Series luminaires are perfect for marine-based applications such as mounting to yachts, docks, sea walls, as well as for use in fountains and theme park installations. Leveraging Metro's rich legacy of innovation and leadership in optics & LED control technology, the F-Series underwater lighting fixtures introduce a unique LED array to the market with 72 H.O. LEDs per fixture, allowing close adjacent fixture placement where fully-mixed, uniform light is important. Our F-Series RGBW Luminaires also integrate a separate white LED in each of the 18 individually optically lensed RGBW LED configurations, creating higher-quality whites and richer color blends than possible with traditional RGB+White fixtures.

The F-SMR1-FS-90 is a superior underwater RGBW LED luminaire with 90° optical lensing for lighting mid- to large-scale structures and yachts ranging from 10 m (32 ft) to 30 m (100 ft), with uniform color control, and high efficiency.

- Rugged and watertight: aluminum bronze housing with silicon bronze hardware is designed for submersion in water to a depth of 4.6 m (15 ft).
- Close mixing distance: F-Series luminaires feature 90° beam angle with 72 LEDs, utilizing custom optical lenses. This unique design virtually eliminates pixilation and shortens mixing distance dramatically, providing beautiful consistent light, even at close range.
- Unified power and data cable: Each F-Series RGBW luminaire comes with a 3m (9.84 ft.) unified power and data cable to minimize wiring. Our F-Series RGBW luminaires are designed for use with Metro Marine's F-HB-2-FS5 power/data distribution Hubs.
- Temperature monitoring: The F-Series Luminaires have an internal temperature monitoring system that automatically reduces operation to protect the fixtures from damage in extreme operating temperatures.
- High output, underwater: This submersible luminaire offers a full range of 22 million RGBW variations of colors with an output of over 4200 lumens. Long-life state-of-the-art Nichia LEDs significantly reduce or eliminate required maintenance, a major advantage for underwater installations.
- Easily controlled: Metro Marine's F-Series luminaires work seamlessly with Metro's full range of controllers as well as third-party controllers.

For detailed product information, please refer to the F-Series Product Guide at [www.Metro-Marine.com/support](http://www.Metro-Marine.com/support)

### **SPECIFICATIONS\***

\*Due to continuous improvements and innovations, specifications may change without notice.

#### **Output**

Beam Angle: 90°

Lumens per channel: R: 292 lm / G: 1940 lm / B: 245 lm / W: 2227 lm

Lumens (Maximum): 3836 lm

Efficiency (lm/W): Maximum lm/W

LED Channels: Red/Green/Blue/6500K

#### **Electrical**

Input Voltage: 10VDC - 30VDC

Power Consumption: (Maximum at full output, steady state)

For additional Surge Protection Requirements for LED Lighting Systems, please refer to [www.Metro-Marine.com/support](http://www.Metro-Marine.com/support)

#### **Control**

Interface: Control Center MM-CC-V1

To see the full range of controllers or third-party controllers available, please visit [www.Metro-Marine.com/products](http://www.Metro-Marine.com/products)

#### **Lumen Maintenance**

Threshold Ambient Temperature Reported Calculated

L50 25 °C > 66,000 > 100,000 50 °C > 66,000 > 100,000

#### **Physical**

Dimensions: W:7.53"(191.8mm) H:7.68"(195.2mm) D:2.349"(59.32mm)

Net Weight: 1.61 kg (3.54 lb)

Housing Material: Die-cast marine aluminum bronze, polished finish

Lens: Clear Quartz

Luminaire Connections: Integral male/female IP68 connectors.

#### **Temperature Ranges**

-40 to 50 °C (-40 to 122 °F) Operating

-20 to 50 °C (-4 to 122 °F) Startup

-40 to 80 °C (-40 to 176 °F) Storage

### Corrosion Resistance

Complies with ASTM B117 standard for > 1,500 hours  
Humidity 0 to 95%, non-condensing.

### Luminaire Run Lengths

To calculate luminaire run lengths and total power consumption for your specific installation, contact [www.metro-marine.com/support](http://www.metro-marine.com/support)

### Certification and Safety

Approbation, Lloyd's Register(Pending), ABS(Pending) , ABYC Compliant.  
Environment Wet Location, IP68 Submersible up to 4.6 m (15 ft)

### LUMINAIRE and ACCESSORIES

Use Item Number when ordering in North America

### Luminaire Item Number

F-Series RGBW, ITEM#: F-SMR1-FS-90, Luminaire only. Accessories sold separately.

### Accessories

F-Series Full Spectrum Hub: F-HB-2-FS5

Full Spectrum, 3 Meter, Jumper Cable: F-FS-3M-EX

Surface Mount: F-R1-SMT