MARINE LIGHTING

PowerLED Downlight Installation and Operation Manual

Omega

Omega Eyeball

Omega Square

OVERVIEW

Imtra PowerLED fixtures are uniquely suited for marine, automotive, and architectural lighting applications. They have been engineered specifically to take advantage of the latest LED (Light Emitting Diode) technology offering superior reliability, minimal power consumption, and far less radiated heat than traditional incandescent light sources. When installed properly, these products will provide years of flawless performance.

The Omega PowerLED is a family of powerful, low-voltage DC LED recessed spots specifically designed for use on large yachts that typically have higher lux and greater lumen requirements. For new builds or as an LED upgrade, Omega matches the light output of a typical 35W MR16 halogen while consuming only 6 watts and emitting virtually no radiated heat. Omega's LED color quality has been optimized in order to accentuate wood grains and render colored fabrics as accurately as possible.

When installed and operated with an Imtra approved PWM dimmer, up to 30 fixtures can be controlled simultaneously from multiple locations.

We encourage you to read this installation guide thoroughly as there are particular electronic & electrical criteria and other critical installation details that should be met in order to assure many years of enjoyment from your new PowerLED product(s).

Omega is compatible with several Automated Control Systems. For more information on integrating our PowerLEDs with your control system, please contact us at 508-995-7000 or via email at lighting@imtra.com.

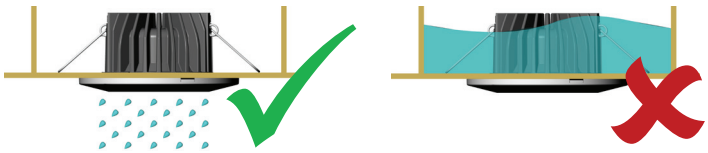
SPECIFICATIONS

	Omega	Omega Square	Omega Eyeball
Trim Ring Diameter	3.75" (95.1mm)	3.75" (95.1mm)	3.74" (95mm)
Trim Ring Height	0.32" (8.1mm)	0.32" (8.1mm)	0.36" (9.18mm)
Cutout Diameter	2.95" (74.9mm)	2.95" (74.9mm)	3.25" (8.25mm)
Recess Depth	1.45" (36.8mm)	1.45" (36.8mm)	1.43" (36.44mm)
Input Voltage Range	10-30 VDC		
Power Consumption	6.4 Watts		
IP Rating	IP65*	IP65*	IP20

** IP65: "Protected from the ingress of dust and low pressure jets of water from all directions"*

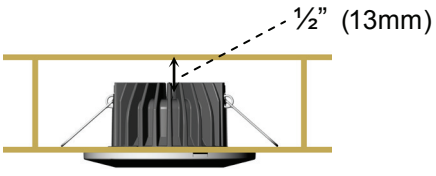
PHYSICAL INSTALLATION

Omega round and square may be fastened with screws or spring mounted. Screw mounting is the preferred method for solid, permanent surfaces, especially in wet environments where the fixtures may be sprayed down or exposed to rough conditions. Spring mounting is most convenient when mounting in headliner covered paneled ceilings and is suitable for interior locations where a tight seal against the mounting surface is not required.



It is imperative that the lights are mounted in such a location that the fixtures are protected from the rear against water exposure.

Also, it is important that the lights are mounted with airspace around the heat sink housing to allow for convective cooling of the lights. We recommend a distance of ½" (13mm) of free space above the housing.



SPRING MOUNT INSTALLATION

1. Cut a circle in the mounting surface according to the cutout diameter required by your light (see chart on page 2).
2. Connect the light to a DC power source following the Wiring Instructions in the next section of this guide.
3. Once all electrical connections are made and secure, gently bend back the mounting springs of your PowerLED and insert the spring tips into the cutout circle in the mounting surface (see Figure 1).
4. Gently push the light into the mounting hole allowing the springs to come to rest on the inside of the surface, holding the light in place (see Figure 1).

Figure 1

SCREW MOUNT INSTALLATION

1. Cut a circle in the mounting surface according to the cutout diameter required by your light (see chart on page 2).
2. Connect the light to a DC power source following the Wiring Instructions in the next section of this guide.
3. Once all electrical connections are made and secure, twist and remove the trim ring of your PowerLED and insert it into the cutout circle in the mounting surface. Fasten with #6 flat head screw (see Figure 2).
4. Place the trim ring/lens over the light making sure the tabs of the trim ring engage with the openings in the housing. Twist the trim ring on to secure it.

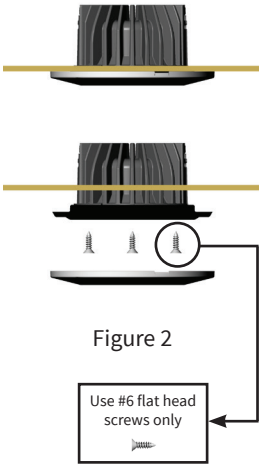


Figure 2

WIRING INSTRUCTIONS

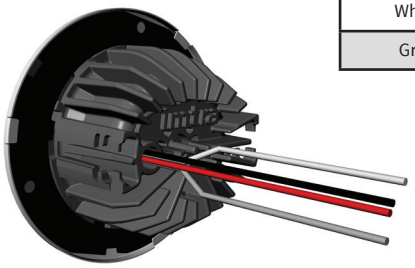
1. Connect the light to a DC power source. Connect the red wire to positive DC voltage and the black wire to negative or ground.
2. If you will be dimming your PowerLED lighting, connect the white and grey wires to the white and grey wires of the PowerLED PWM Dimmer Module. You may connect as many as 30 PowerLEDs to the PowerLED Dimmer Module. Please refer to the PowerLED Dimmer Module Installation and Owner's manual for more information.

(Please refer to the wiring diagram on page 10)

3. If you will not be dimming your PowerLED lighting, simply trim the white and grey wires so that no bare conductor is exposed and cover the ends of the wires individually with insulation (shrink tube).

(Please refer to the wiring diagram on pages 8-9)

Wire	Function
Red	DC +
Black	DC -
White	Dim +
Grey	Dim –

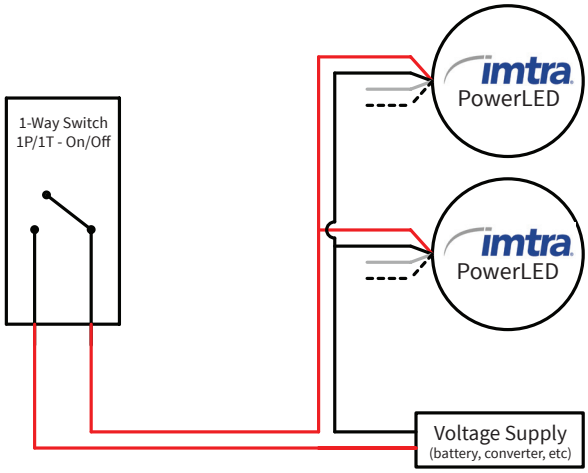


NOTES ON WIRE SIZE

The PowerLED family of products comes equipped with integrated driver electronics. These components are sensitive to DC systems with voltage drops. Therefore, it is imperative to select the correct wire size to supply DC voltage to the lights. This prevents excessive impedance and voltage drops which can cause premature failure in the PowerLEDs. It is recommended that the supply wire size be selected according to the ABYC Wiring Recommendations Chart for a 10% voltage drop. These charts can be found at www.imtra.com.

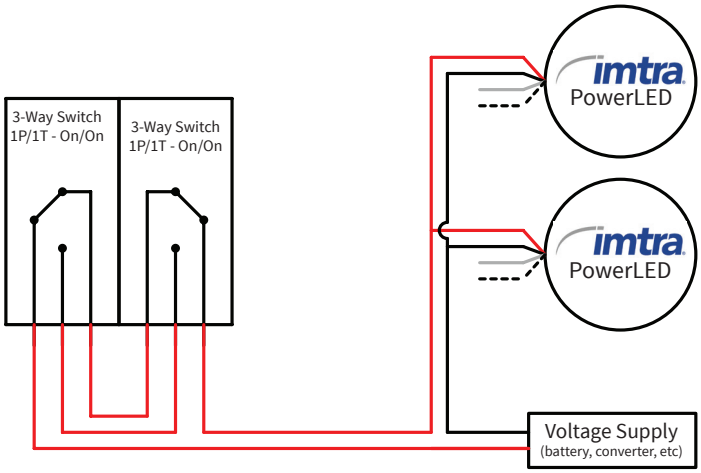
Wiring Diagram

- No Dimming
- Single Switch Location



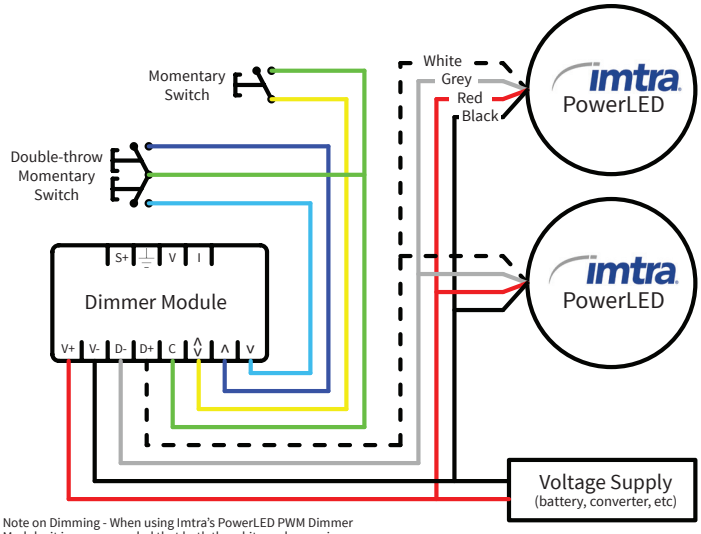
Wiring Diagram

- No Dimming
- Multiple Switch Locations



Wiring Diagram

- With Dimming (two different switch options shown)



Note on Dimming - When using Imtra's PowerLED PWM Dimmer Module, it is recommended that both the white and grey wires are used in order to prevent electrical/electronic interferance with other systems onboard. It is possible to control the PowerLED lights with the PowerLED PWM dimmer module via the white wire only by simply omitting the grey wire connections.

LIMITED WARRANTY

Imtra warrants the light-emitting LSA (LED spotlight assembly) component of our IML PowerLED spot lights & fixtures for 5 years from the date of purchase. If the LSA should cease to function within 5 years, return the complete spot light assembly to Imtra for repair or replacement.

This warranty does not apply to damage resulting from actions of the user such as misuse, improper wiring/installation, operation outside of specification, improper maintenance or repair, unauthorized modification, lightning strike or damage from a power surge.

The trim ring (bezel) of the IML Power LED spot lights are warranted for one year.

Imtra specifically disclaims any implied warranties, merchantability or fitness for a specific purpose and will not be liable for any direct, indirect, incidental or consequential damages. Imtra's total liability is limited to repair or replacement of the product.

The warranty set forth above is inclusive and no other warranty, whether written or oral, is expressed or implied.

If it should become necessary to return a fixture for service during or beyond the warranty period, please refer to Imtra's standard Return Policy as detailed on Imtra's website (www.imtra.com) or call Imtra customer service at (508) 995-7000.

No returns are accepted without a Return Authorization (RA) number.