

## **INSTALLATION INSTRUCTIONS**

### **DL250TC Deck / Dock Lighting**

The following components are included with each Deck Light Assembly (Part # DL250TC), and are required to install each fixture:

- 1 Stainless Steel Mount
- 2 #4 3/8 Stainless Steel Pan Head Screws
- 1 Wire Harness
- 1 Power Tap Connector

Sold Separately:

- PL250 Series Lamp Modules
- Removal Tool (Part # PLRT)
- Cable Staples 12/2 NM (Gardner Bender Part # PS-225JY)

Evening Star Lamp Modules may be surface mounted such as on hollow posts and step risers, or they may be recessed into decking to provide a flush fit. The following list of cutting tools will be needed for most applications:

- 1 Milwaukee Self-Feed bit 2-9/16" (part # 48-25-2561)
- 1 Milwaukee Self-Feed bit 1-3/8" (part # 48-25-1371)
- 2 Milwaukee Pilot Drill 1/4" (part # 49-56-8010)

### **Preparation**

The screw-type Pilot bit that is supplied by Milwaukee must be replaced with the 1/4" Pilot Drill. Using the Allen wrench supplied with each self-feed bit, loosen the setscrew, remove and replace the Pilot bit.

Important: Failure to replace the Pilot bit will result in a cutting rate that is too excessive and possibly cause irreversible damage. For best results, use only a 1/2" capacity, variable speed drill (400-600 RPM).

### **Spacing The Fixtures**

1) To calculate even spacing between fixtures, begin by measuring the length and width of your deck or dock. Example: L=18', W=12'.

2) Set your desired spacing for the fixtures.

**TIP:** A 6 to 7 foot spacing will offer an aesthetically pleasing effect.

3) Assuming you will place a fixture at each corner, divide your measurements by the total number of fixtures desired and subtract 1. The sum of your calculation will be the center-to-center spacing. Example: For a deck 18 feet long with 4 fixtures,  $18/(4-1) = 6$  foot spacing.

4) Mark the location where each fixture is to be placed. Make sure you have access under each location for wiring and routing the circuit cable.

**TIP:** When floor mounting (decking surface), the optimum visual effect is achieved by placing fixtures in close proximity to a wall, railing, or building structure. When used on steps, fixtures should be installed to the riser and project light onto the step's surface.

### **Drilling**

1. For SURFACE MOUNTING, bore a hole all the way through using the 1-3/8" Self-Feed bit.

2. Center the Mounting Plate over the hole, and secure using two #4 3/8 stainless steel screws.  
**NOTE:** For extremely hard wood or composite material, pre-drill pilot holes using a 5/64" drill.
3. For RECESSED MOUNTING, counter bore a recess using the 2-9/16" Self-Feed bit to a depth of 0.730".
4. Place a Lamp Module upside-down into the bore. The correct depth is achieved when the edge of the lens is flush with the surface.
5. Change bits, and bore all the way through using the 1-3/8" Self-Feed bit.
6. Place the Mounting Plate into the bore, and secure using two #4 3/8 stainless steel screws.  
**NOTE:** For extremely hard wood or composite material, pre-drill pilot holes using a 5/64" drill.

### **Installing The Lamp Module**

1. Remove the protective tape from the underside of the Lamp Module, exposing the socket and anti-corrosive compound.  
**NOTE:** Do not wipe off. This will ensure a watertight electrical connection.
2. Plug the wire harness into the Lamp Module, then press the Lamp Module into the Removal Tool.  
**NOTE:** Remember to back off several turns of the release knob so the Lamp Module will not ride on the plunger.
3. Align the locking ears on the lamp with the ears on the Mounting Plate. Twist the lamp 1/4 turn (90\*) clockwise, locking it in place.  
**NOTE:** Do not use excessive force or rotate more than 1/4 turn (90\*). Tighten the knob on the Removal Tool to release it from the Lamp Module.

### **Wiring:**

**WARNING:** Fixtures and power units shall not be installed within 10 feet (3.05 m) of a pool, spa or fountain.

1. Select the correct power unit by adding up the total number of fixtures and multiplying by 4. The total system wattage must not exceed your power unit's rated output capacity. Fixtures are only to be used with power units rated up to 300 watts, 25 amps and 15 volts maximum output per circuit.  
**NOTE:** To obtain maximum lamp performance, choose a power unit with ratings that are equal to or slightly greater than the total system wattage.
2. Hang the power unit outdoors at least 1 foot (30 cm) above the ground. Plug into a GFCI outdoor electrical outlet protected by a weatherproof receptacle cover.
3. We recommend using only 12/2 SPT-3 low voltage cable when connecting fixtures using the power tap connector. Power tap connectors are double sided and will accommodate either 12/2 single circuit, or 10/3 dual circuit cable, which offers greater design flexibility for advanced installers.
4. Begin by connecting one end of the supply cable to the power unit. Form a continuous loop around your project, routing it in close proximity to the fixture locations.
5. Be sure to observe the correct polarity when splicing cables, or attaching the other cable end back to the power unit by noting the ridge or markings on one side of the cable. If more cable is

needed, contact your point of purchase.

**NOTE:** The cable should be protected by routing in close proximity to a fixture, or building structure such as a house or deck, and is intended for shallow burial. Do not bury cable deeper than 6 inches below the surface. When splicing cable, it is recommended to use wire nuts suited for direct burial.

### **Connecting The Lights**

1. Turn the power unit on.

**NOTE:** It is highly recommended to install fixtures while the power unit is turned on.

2. Loosen the Philips screw on the power tap connector, and separate the two halves.

3. Inspect the connector to ensure the prongs are straight. **NOTE:** If the prongs are bent, straighten with pliers to avoid short circuits.

4. Insert the Fixture's wire into the small rectangular hole, then, bend the wire over, pressing it firmly into the small groove.

5. Place the supply cable in the large groove, pressing it firmly into place.

6. Carefully align the top section over the bottom section. **NOTE:** The prongs must pierce the exact center of each cable.

7. Assemble the connector by tightening the Philips screw. Each fixture will light as the prongs pierce the supply cable.

**NOTE:** Don't over tighten the Philips screw, or use pliers.

This lighting system is designed to last for many years under normal conditions. However, lamps eventually burn out and losing one can shorten the life of the others. Conditions beyond control (high input voltage, poor voltage regulation, etc.) will also affect lamp life. It is, therefore, important to replace a burned out lamp promptly. Care should be taken to never use any petroleum or detergent-based cleaning agents or solvents on, or around the lamp modules as this can soften or weaken plastic components. Additionally, you should avoid placing direct pressure on the lamp modules. Avoid mounting locations where chair and table legs will be in close vicinity.