

### What you will need:

- ✂ Scissors
- ✂ Low Stick Masking Tape
- ✂ Power drill (18v cordless preferred)
- ✂ Use appropriately sized drill bit to pre-drill mounting screw holes for #8 screws (screws included)
- ✂ 5/8" Diameter drill
- ✂ Alcohol (Do not use acetone on polycarbonate lens)
- ✂ Clean cloth or paper towel
- ✂ Sealant, 3M 4200 is recommended

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Shadow-Caster® Marine LEDs utilize state-of-the-art high powered LED technology combined with a rugged military grade design to bring you the best value in underwater lighting. Our lights are manufactured in the U.S.A. and are inspected to meet the highest standards of quality.

The following steps are recommended to properly install your SCM-Series™ underwater lights. Avoiding to do so may void your warranty.

- 1) Choose mounting location - The lights require water cooling and should be installed on a flat surface area that is frequently submerged, splashed, or sprayed. Also consider the area inside the boat where the wire will enter and make sure it will be accessible to retrieve the wire. It IS recommended to mount the light as low as possible for optimal water penetration and cooling. It IS NOT recommended to mount the lights on the bottom of the hull because it will create drag and increase the risk of damage when beaching the vessel and from floating debris.
- 2) The provided template can be used for finding an appropriate mounting location. Verify that the template matches the mounting holes on the light if using this as a drill template. Make sure you are drilling into a place where you can get to the hole from inside the boat in order to feed wire. Mark center drill location with pencil. Remove template and store in a safe place.
- 3) Drill a 5/8" diameter hole for the cable in the center hole location only (Shown on template).
- 4) If mounting to an aluminum hull use a foam or rubber spacer for galvanic isolation to prevent corrosion (For more information, visit us at [www.shadow-caster.com](http://www.shadow-caster.com)).
- 5) Feed the cable through the hull into the boat.
- 6) With the light against the hull in the location to be mounted, use the actual mounting holes of the light to mark one mounting hole. Drill that hole with an appropriately sized drill (9/64 is typical for #8 screws). Be sure the drill is not over sized or undersized. An undersized hole can cause the screw to break, over size the hole and the hole will strip. With the light in place thread a screw into the hole. Now mark and drill the last mounting hole.
- 7) This procedure will prevent damage to the rubber boot where the cable comes out of the light. Gross misalignment of the mounting screw holes can cause excessive side loads on the boot. Now check the mounting hole alignment with the light against the hull in the mounting location. If the mounting holes are not both easily visible through the holes in the light, then the center hole for the cable must be reamed until the light can be aligned with the mounting holes.
- 8) Place a sufficient amount of silicone or 3M® 4200 marine sealant on the hull around all three holes to seal them against the light's base plate.
- 9) Fill the screw holes with sealant.
- 10) Use provided screws (Qty 2) to mount light to the hull. If alternate screws are used they must be passivated 316 stainless steel (generally military spec screws are passivated). Do not use bronze screws as this will cause galvanic corrosion.
- 11) Install wiring:
  - a. Route wire through the boat in a manor such that it is tied up out of standing water and protected from excessive heat or abrasion.
  - b. Route wire to a switch rated at a minimum of twice the continuous current draw (i.e. for two SCM-10™ lights: 3.5 amps x 2 lights x 2 = 14) [amp switch and circuit breaker minimum rating]. Switch not provided.
  - c. Red wire is positive, black wire is ground. Reversing the polarity will void your warranty. The lights must be wired through a fuse or circuit breaker. FAILURE TO DO SO COULD CAUSE A FIRE AND INJURY OR DEATH. Each light should be fused separately and will require 4 amps at 12 volts, with a 7.5 amp fuse to handle in-rush current.
  - d. Blue wire is the PWM (Pulse Width Modulation) control wire. This is to control strobing and dimming functions integrated into the light. Contact Shadow-Caster® Marine LED Lighting to purchase a compatible controller or dimming