

## Cat. No. 1686 Series Combination Masthead & White All-Round (Anchor) Light

These LED lights are certified for use on sail or power driven vessels under 20 meters (65.6 ft.) in length operating on a nominal 12 volt system. When properly installed, these lights\* will comply with A.B.Y.C. Standards C-5 and A-16, EN ISO 19009, '72 COLREGS and the U.S. Inland Rules.

## MOUNTING INFORMATION

Read all instructions before proceeding.

- 1). For information on proper light selection, positioning and configuration, refer to A.B.Y.C. Standards C-5 and A-16 (1), the '72 COLREGS, and the U.S. Inland Rules (2).
- 2). Determine the proper base configuration. (See Diagram 1 below).
- 3). These lights are designed to be mounted on a horizontal, vertical or angled surface.

a). For Horizontal Mount bases: Draw a 3 inch long reference line through the center of the selected mounting location and parallel to the vertical plane through the fore-aft centerline of the boat. Using the base or the plastic mounting insulator as a template, place it on the mounting surface such that the lens/LED assembly can be adjusted to a vertical position when mounted with the LED's of the Masthead light facing forward.

b). For Vertical Mount bases: Draw a 4 inch long reference line through the center of the selected mounting location and parallel to the vertical plane through the fore-aft centerline of the boat. Using the base or the plastic mounting insulator as a template, place it on the mounting surface such that the lens/LED assembly can be adjusted to a vertical position when mounted with the LED's of the Masthead light facing forward.

c). For Round Fixed Mount bases: Draw a reference line through the center of the selected mounting location and parallel to the fore-aft centerline of the boat. Cut out the mounting template below. Place it on the mounting surface such that the reference mark (drawn above) is directly underneath the center of the template and the Ahead marking (and PERKO name) on the template is facing forward.

- 4). Drill mounting holes for #8 screws (not supplied). Use #8 oval or flat head screws on lights with metal adjustable bases and use #8 round or pan head screws on lights with plastic bases.
- 5). **IMPORTANT:** If wiring light into a new installation (or an installation with a new switching arrangement), use wiring diagram (A). If replacing a similar two compartment light (incandescent combination masthead/anchor) light, use wiring diagram (B) with Perko Cat. No. 1680DP012V 12 volt converter module or reswitich the navigation lights to match wiring diagram (A). Direct wire-to -wire replacement of an older style incandescent light with this new style L.E.D. light will not work.

Attach supply connections to the light making sure to wire in accordance with both A.B.Y.C. Standard E11\* and U.S. Coast Guard Safety Standards for Boat Electrical Systems (33 CFR 183)\*. The supply leads are coded as follows:

- WHITE Masthead light positive lead supply.
- RED: Anchor light positive lead supply.

BLACK: Negative lead supply.

Electrical connections are to be made such that only the Masthead light is energized with the other running lights (sidelights, stern lights etc.) while underway and the All-Round (Anchor) light is energized separately and illuminated only when at anchor.

- 6). Mount the light. If using a metal base on a metal surface, the plastic mounting insulator (supplied) and stainless steel screws (not supplied) may be used between the base and mounting surface to reduce the possibility of electrolysis on dissimilar metals.
- Adjust pole such that the light is in a vertical position during operation, in order to assure compliance 7). with the technical details of the regulations. IMPORTANT: Light must be vertical during operation (See Diagram #2).
- 8). These lights use white LEDs and therefore are not serviceable. The LED optical assembly is permanently sealed and cannot be opened.

\*The above referenced standards can be obtained from:

DIAGRAM #1

American Boat & Yacht Council, Inc.(2)U.S. Coast Guard613 Third Street, Suite 10Washington, D.C. 20593Annapolis, MD 21403(or your local C.G. Office) (1)

International Standard Organization (ISO) Ch. de Blandonnet 8 • CP 4 CH-1214 Vernier, Geneva, Switzerland (3)



Fig. 1686 Horiz. Mt.



Fig. 1686 Vert. Mt.



Fig. 1686 Round Fixed Mt.

NOTE: TOP OF LIGHT MUST BE VERTICAL **DURING OPERATION** 

**DIAGRAM #2** 

All-Round (Anchor Lt.)

Masthead

LED's

WIRING DIAGRAM (A) FOR COMBINATION MASTHEAD/ANCHOR LIGHTS Masthead LED's Facing AHFAD Red (Anchor) Black White (Ground) (Masthead) To Other Running Lights (Side & Stern)

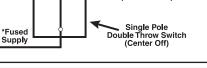
8/11/23

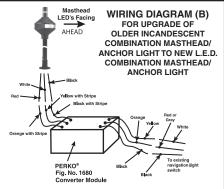
Visibility:

All-Round: 2nm

ONPLIAN, 

CE UK Masthead: 3nm







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