

# PERKO FIG. 1643 LIGHTSHIP 300 SERIES HIGH PERFORMANCE LED FLOOD/SPOT LIGHTS INSTALLATION INSTRUCTIONS

## READ ALL DIRECTIONS BEFORE PROCEEDING

- 1). Examine mounting template, and choose appropriate mounting location.
- 2). Orient the template so that desired illumination is achieved, then use the template to drill mounting and wiring holes.
- 3). This is a DC light. You should only power it directly using a DC source. The light will auto detect the DC voltage.
- 4). Connect:
  - a. White wire to Positive (+) supply.
  - b. Black wire to Negative (-) supply.
  - c. Dimming wires (thin white and thin black) left unconnected for max brightness. For dimmable operation, consider a 10K Ohm potentiometer across these wires (not included).
  - d. Green wire (ground) to chassis ground (metallic element that is tied to vessel chassis).
- 5). All wire connections including the open end of the cable jacket **MUST BE** protected from water intrusion. Otherwise, damage due to water ingress, short circuits, or corrosion will not be covered by the warranty.

### A Note on Cable Length:

- If you operate at 12V, the current draw will be approximately 26A. The 6ft cable that comes out of the light (i.e. the pigtail) is AWG12 and if you also plan to use AWG12, your **total** cable run **MUST NOT** exceed 10ft. This is to minimize voltage drop to the light. If your light looks dim or it flickers, the most likely cause is an insufficient cable gauge or the cable run is too long. (See A.B.Y.C. Standard E-9\*)
  - If you plan to do a longer cable run, we recommend you to first run the pigtail to a waterproof junction box close to the light, then run AWG10 or AWG8 to your DC power source depending on the overall length.
  - If you are operating on 24V, the light will draw roughly 18A. AWG14 gauge should suffice for an entire run up to 30ft.
- 6). Make electrical supply connections in accordance with A.B.Y.C. Standard E-9\* and U.S. Coast Guard Safety Standards for Boat Electrical Systems\*.
  - 7). Fasten to deck with 1/2" and/or 3/8" bolts as shown in the diagram.

\* The above referenced standards can be obtained from:

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

## OPTICAL & ELECTRICAL CHARACTERISTICS

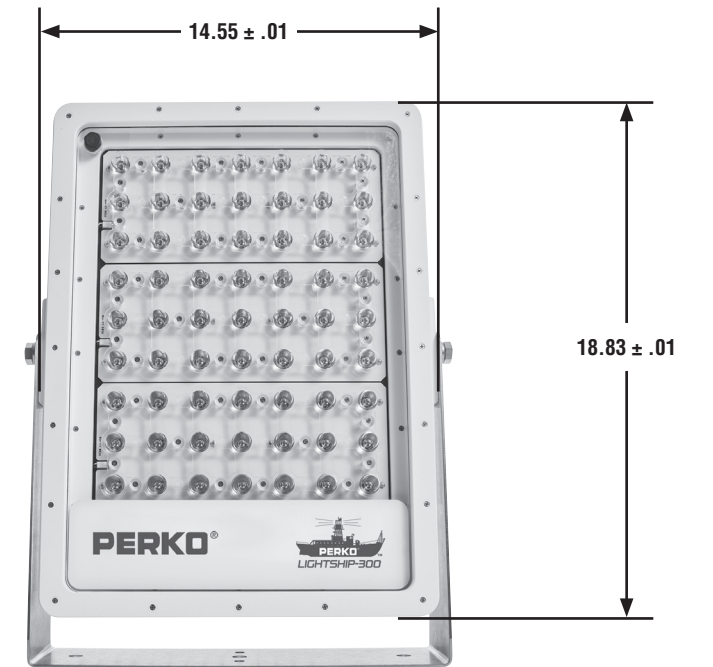
(All ratings are at 77°F unless otherwise specified)

LED Color, CCT	Typical = 5000K (Neutral white)
Brightness	50,000 lm at 24VDC & 32VDC 40,000 lm at 12VDC
Beam Angle	25 deg (Spot) / 76 deg (Flood)
Operating Voltage	Auto detect 12VDC, 24VDC, 32VDC <small>*Most efficiently operated at 24VDC with max brightness</small>
Current Draw	Approx. 14A at 32VDC Approx. 18A at 24VDC Approx. 26A at 12VDC
Total Power Consumption	440W at 24VDC & 32VDC 304W at 12VDC

### Mechanical Characteristics

Water Resistance	IP68 (submerged to 4.5 ft water for 30min)
Moisture Resistance	149°F / 95% RH Mil-Std-883 TM 1004.7
Salt Spray / Corrosion Resistance	240 hrs 95°F ASTM B 117-09 / ASTM D1654-08
Temperature Range	-40°F to 130°F Mil-Std-883 TM1010.8
Mechanical Shock	30G, 11ms Half Sine, 3-axes (+ve/-ve) Mil-Std-202 TM213B
Vibration Resistance	100,000 cycles, 3-axes ANSI C136.31

## MECHANICAL DIMENSIONS & WEIGHT

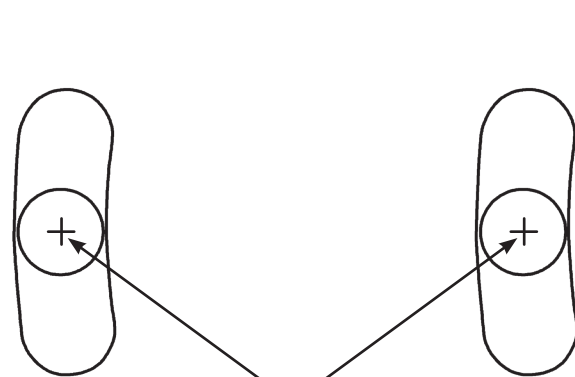


Thickness: 3.59"

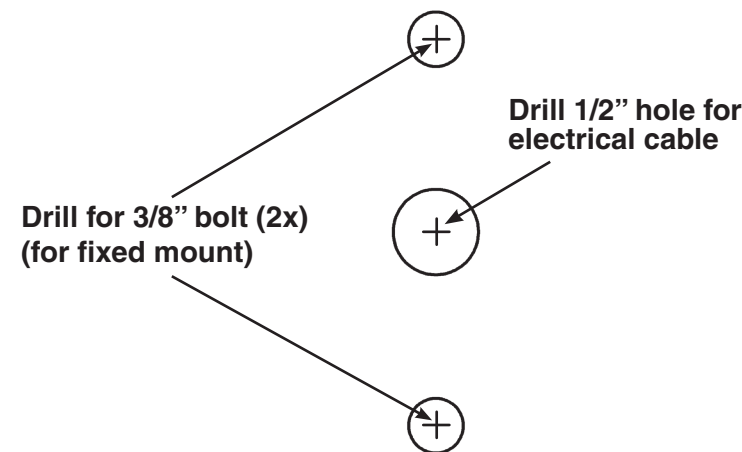
Weight: 32 pounds (with marine grade 316 stainless steel bracket)

**WARNING!!**  
**USE DC Power input Only**  
Plugging AC power to light directly will destroy the driver and will NOT be covered by the warranty.

## MOUNTING BRACKET HOLE TEMPLATE (TO SCALE)

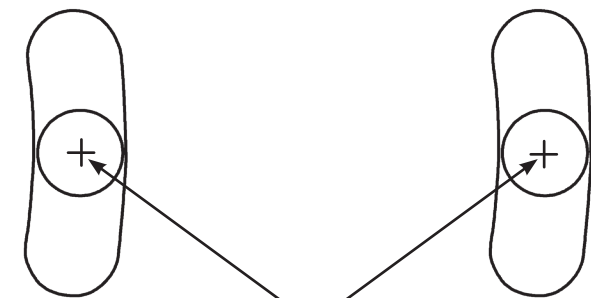


Drill for 1/2" bolt (4x)  
(for adjustable mount)



Drill for 3/8" bolt (2x)  
(for fixed mount)

Drill 1/2" hole for  
electrical cable



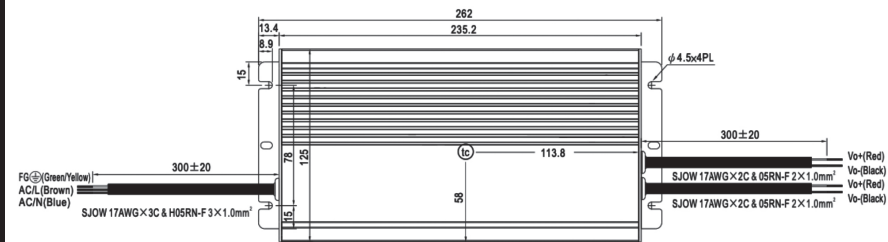
Drill for 1/2" bolt (4x)  
(for adjustable mount)

1 inch

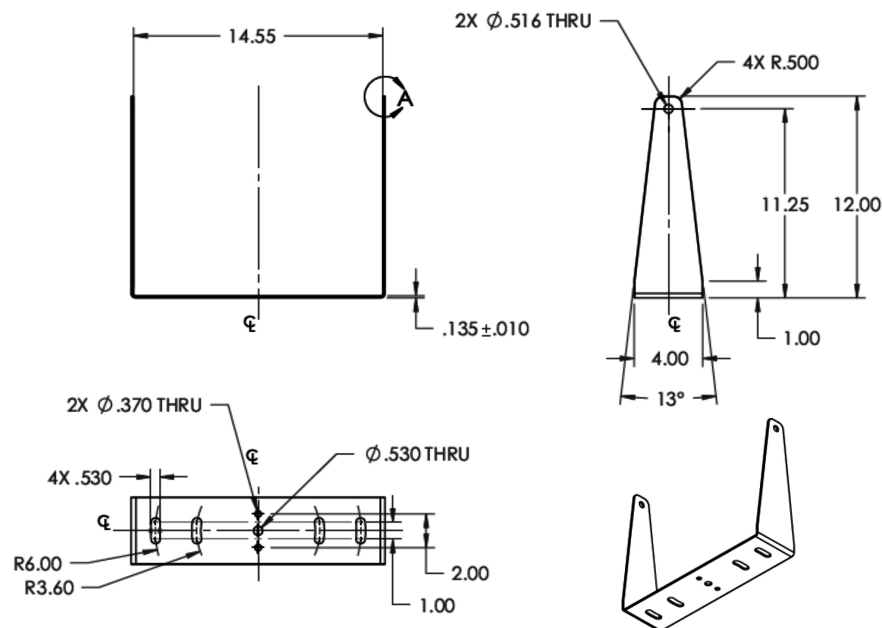
## OPTIONAL 120-240 Volt Installation

- Order PERKO Cat. No. **1679300** 24V POWER SUPPLY (120/240 VAC 50/60 Hz INPUT for Lightship 300).
- Use one 1679300 for each Lightship 300 light.
- Connect:
  - Two Red wires on the Output side of the Power Supply to Positive (+) white wire on the light.
  - Two Black wires on the Output side of the Power Supply to Negative (-) black wire on the light.
  - Dimming wires (thin white and thin black) left unconnected for max brightness. For dimmable operation, consider a 10K Ohm potentiometer across these wires (not included).
  - Green wire (ground) to chassis ground (metallic element that is tied to vessel chassis).
- All wire connections including the open end of the cable jacket **MUST BE** protected from water intrusion. Otherwise, damage due to water ingress, short circuits, or corrosion will not be covered by the warranty.
- Make connection on the Input side of the Power Supply according to the National Electrical Code or equivalent in your country. The Power Supply can be powered by either 120VAC or 240VAC 50/60 Hz.

### POWER SUPPLY WIRING DIAGRAM



### MOUNTING BRACKET SPECIFICATIONS



### PERKO Limited Warranty FIVE YEAR LIMITED WARRANTY

PERKO, INC. (PERKO) warrants to the original consumer-purchaser that PERKO'S consumer products will be free from defective materials or workmanship, and that the PERKOPLATE/PERKO-KOTE Finish will remain corrosion-free under normal use and service, for a period of **five (5) years** from the original purchase date. Products installed as original equipment by a boat builder or manufacturer are limited to one (1) year or the duration of the manufacturer's general accessory warranty, whichever is longer.

ALL IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY, ARE ALSO LIMITED IN DURATION TO THE FIVE YEAR PERIOD FROM THE ORIGINAL PURCHASE DATE.

PERKO SHALL NOT BE LIABLE FOR LOSS OF USE OF ANY OF ITS CONSUMER PRODUCTS, NOR FOR OTHER INCIDENTAL OR CONSEQUENTIAL COSTS, EXPENSES, OR DAMAGES INCURRED BY THE ORIGINAL CONSUMER-PURCHASER OR BY ANY OTHER PERSON.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY OR MAY NOT APPLY TO YOU. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY OR MAY NOT APPLY TO YOU.

This warranty is void if the consumer product warranted has been damaged by accident or unreasonable use, neglect, improper service or other cause not arising out of defects in material or workmanship. Excluded from this warranty are Electric Light Bulbs (lamps), Sealed Beam Units and Fuses.

During the warranty period, your PERKO product will either be repaired or it will be replaced with a like product (at PERKO'S option) without charge to the original consumer-purchaser, when returned prepaid and insured, with proof-of-purchase date to PERKO at the address shown below. In the event of replacement, the replacement product will continue the warranty of the original product, or ninety (90) days, whichever is longer.

PERKO does not authorize any person or company to create for it any other obligation or liability in connection with any of its products.

PERKO, INC. • 16490 N.W. 13TH AVENUE • MIAMI, FL 33169-5707

### PERKO Warranty Terms: Light Engine

This product is covered by Durabrite's **10 Year Limited Warranty** against material and manufacturing defects. However, it does not cover application and conditions that are outside of the product design parameters, abuse, and wear-and-tear. Further details can be found on their website at: <https://durabritelights.com/pages/warranty>

**Any product branded DURABRITE should be handled directly by Durabrite at:**  
<https://durabritelights.com/pages/repair-request-form>

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## LIGHTSHIP - 300™ High Performance LED Flood/Spot Lights Installation Instructions



Fig. 1643 Lightship 300 Series

Cat. Numbers:

Flood Light

- 1643300F0B
- 1643300F0W

Spot Light

- 1643300S0B
- 1643300S0W

**WARNING!!**  
**USE DC POWER INPUT ONLY**  
Plugging AC power to light directly will destroy the driver and will **NOT** be covered by the warranty.

**PERKO, INC.**

16490 N.W. 13th Avenue • Miami, FL 33169-5707

[www.perko.com](http://www.perko.com)

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