

***MV-LED II AC***  
***(L200 NUCLEAR)***

**OPERATION AND MAINTENANCE MANUAL**



5618 Copley Drive  
San Diego, CA 92111-7902  
TEL: (858) 565-8500  
FAX: (858) 565-8808  
[www.rosys.com](http://www.rosys.com)

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## **WARRANTY**

ROS, Inc. (hereinafter called "**ROS**") warrants its products as stated below subject to the conditions specified.

**ROS** warrants its products, when operated under normal conditions, to be free from defects in material or workmanship for a period of one year from the date of purchase provided that inspection by **ROS** discloses that such defects developed under normal and proper use. **ROS** products repaired or replaced pursuant to this warranty shall be warranted for the unexpired portion of the warranty applying to the original product. The liability of **ROS** under this warranty shall exist subject to the following conditions:

- (a) Purchaser properly notifies ROS of such defects and the defective product is returned to ROS, transportation charges paid by Purchaser.
- (b) ROS shall be released from all obligations under its warranty in the event repairs or modifications are made by persons not authorized by ROS.
- (c) Representations and warranties made by any person, including distributors and representatives of ROS, which are inconsistent or conflict with the terms of this warranty, shall not be binding upon ROS unless reduced to writing and approved by an officer of ROS. ROS shall in no event be liable for other direct, special, incidental, consequential, indirect or penal damages.
- (d) The laws of the State of California shall govern this warranty.

In the event the defect is determined to be within the terms of this warranty then **ROS** agrees to repair and/or replace (at **ROS**' discretion) the product or defective portion at no charge to the Purchaser. This warranty does not apply to expendable items or to normal wear-and-tear, and is conditional upon performance of normal preventative maintenance procedures.

Our commitment to quality and customer service directs us to constantly strive to improve our products. The materials and specifications presented in our manuals and data sheets are correct and accurate to the best of our knowledge, and are presented in good faith. However, the information is not guaranteed and is subject to change without notice.

### **LIMITATIONS OF REMEDIES**

Purchaser assumes all risk and liability for results obtained in any installation, operation, or use of the product. Purchaser's sole remedy for any breach of warranty by vendor shall be limited to the "express remedies" set forth above. Otherwise, in no event shall vendor, its agents, or employees be liable to the original purchaser or any third party for any consequential or incidental damages or expenses of any nature arising directly out of or in connection with the use of vendor projects, even if vendor has been advised of the possibility of such damages or expenses. In any event, unless otherwise contrary to state law, vendor liability under this limited warranty shall not exceed the purchase price of the product.

## CUSTOMER ASSISTANCE

ROS, Inc. uses a worldwide network of stocking distributors and representatives who are familiar with our products and are able to provide assistance during installation and/or operation of these products.

If you have any questions or problems with this product that are not covered by this manual or instruction, please contact our agent in your area, or contact us directly by phone or FAX or e-mail.

TEL: (001) 858-565-8500

FAX: (001) 858-565-8808

Sales: [sales@rosys.com](mailto:sales@rosys.com)

Web Site: [www.rosys.com](http://www.rosys.com)

Technical Support: [support@rosys.com](mailto:support@rosys.com)

## CHANGE RECORD

<u>REV</u>	<u>DESCRIPTION</u>	<u>DATE</u>
A	Initial release	08FEB12
B	SEE EC-02192	11FEB15
C	SEE EC-02682	15DEC16

## 1 DESCRIPTION

The MV-LED II is a 120VAC LED spotlight designed to illuminate underwater scenes for video recording, and general underwater illumination. It is designed to run continuously underwater.

The MV-LED II provides a typical light intensity of **2000 Lux** at one meter, a typical color temperature of 6300°K, and consumes **65 watts** of power (typical). ROS has released this product in hard anodized aluminum.

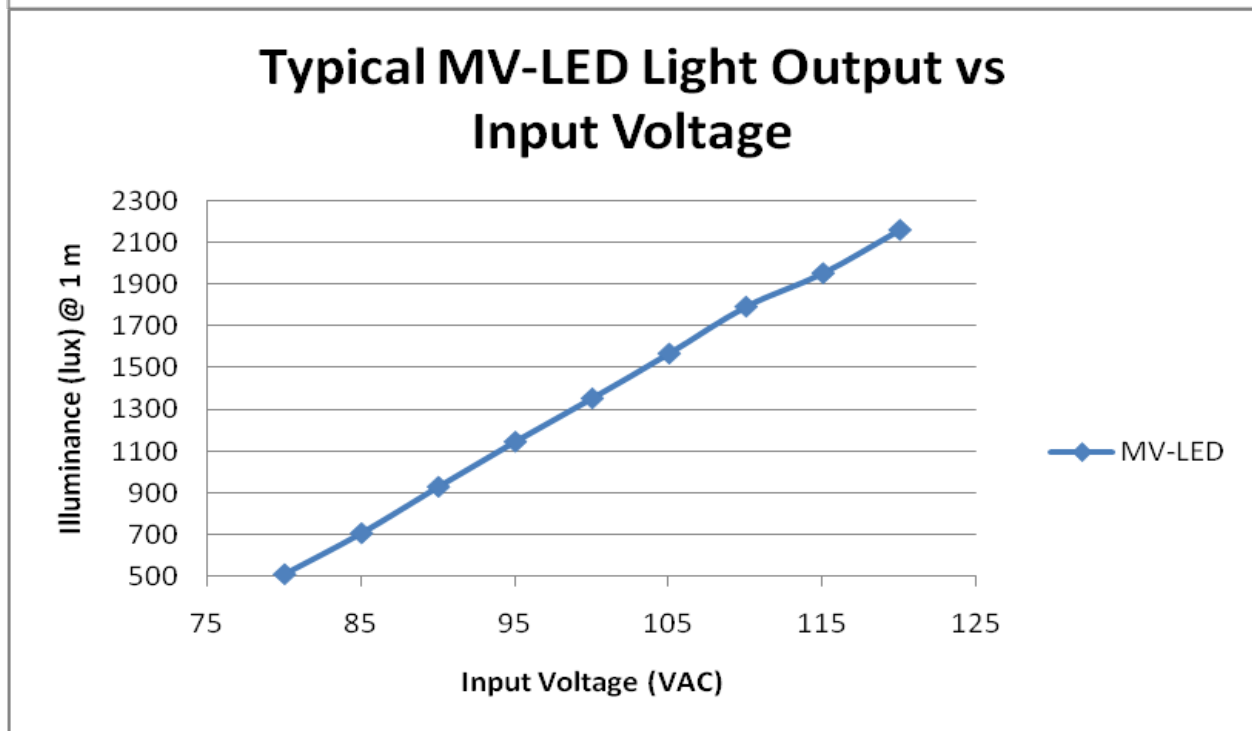
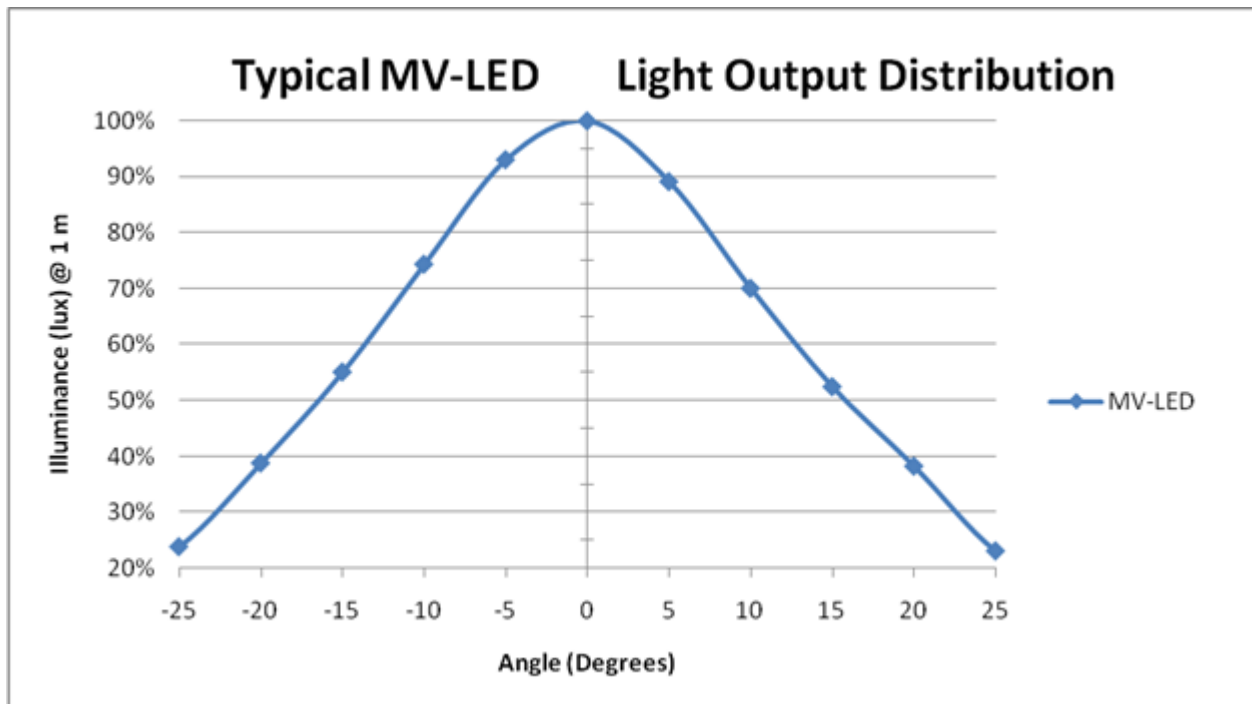
The LED light engine is secured in the housing via a special assembly. The forward end of the MV-LED II is sealed with an o-ring between the housing and a deepwater-rated window, 6000m (10,000psi). The rear side of the MV-LED is sealed by the connector o-ring.

## 2 PRODUCT SPECIFICATIONS

### 2.1 General Specifications

<b>Mechanical</b>	
Housing Material	Hard Anodized 6061-Al
Window Material	Optical Grade Acrylic; TSC-3 Quartz (Nuclear Only)
Mounting Options	Optional Mounting Collar
Weight in Air	2.5 lb (1.13kg)
Weight in Salt Water	1.5 lb (.67 kg)
Luminance at 1m in air	2000 Lux
Thermal Protection	Thermal Cut-off Switch (62°C) (Standard on Non-Nuclear MV-LEDs)
<b>Environmental</b>	
Depth Rating	8,820 psi (6,000m – 20,000 ft)
Test Pressure	10,000 psi
Min/Max Operating Temperature	-10°C to 40°C (Standard Non-Nuclear) -10°C to 60°C (Nuclear Only)
End of Life Light Output	70% Rated Intensity ~35,000 Hrs
<b>Optical</b>	
Color Temperature	6200 K Nominal
Beam Pattern	Spotlight – 38° Intensity Angle
Color Rendering Index (CRI)	80
<b>Electrical</b>	
Max Power Draw	1.8A, 65W Nominal
Input Voltage Ranges	0-120 VAC 50/60 Hz
Dimming Control Modes	Phase Control Dimming

## 2.2 Light Output



## 3 INSTALLATION/ GENERAL FUNCTIONALITY

Operation of the MV-LEDII requires an input voltage between 0 and 120 VAC. The lamp draws 65 (typical) Watts of power at maximum light intensity. Mount the lamp in any orientation using optional Mounting Collar.



## 4 ROUTINE MAINTENANCE

The MV-LED II is intended to be maintenance free. Be sure to clean your lamp with fresh water post dive. A visual inspection is always helpful in assessing the integrity of the lamp. In the event the lamp stops working, please contact ROS customer service. For troubleshooting see section 5.

## 5 TROUBLESHOOTING

<b>Problem</b>	<b>Typical Causes</b>
Product won't power on	Check cables and power supply
	Check wiring
	Verify proper input power
	Over temperature, allow light to cool