



SeaArc[®] 2 (HMI/MSR)

**HIGH EFFICIENCY
400W HMI/MSR ARC LAMPS**

**DAYLIGHT COLOR
TEMPERATURE 5600° K**

**COLOR RENDERING
INDEX GREATER
THAN 90**

**SUITABLE FOR COLOR
OR B/W VIDEO IMAGING**



The SeaArc[®] 2 HMI/MSR underwater lights are 3-4 times more efficient (lumens/watt) than comparable tungsten-halogen lights. Since there is no filament to break, SeaArc[®] 2 HMI/MSR are less sensitive to vibration and shock. The SeaArc[®] 2 HMI/MSR lights are built using the 400W MSR/400HR lamps.

HMI/MSR lamps are AC-operated discharge lamps in which the luminous arc burns in a dense vapor atmosphere comprising mercury and the halides of rare earths. The MSR in the part number indicates Medium Source Rare earth (MSR) elements, the number indicates the wattage, and the HR designates HOT Restrike.

HMI lamps have a color temperature of 5600°K. Advantages of HMI/MSR lamps over HID lamps are that they warm up in 1-2 minutes and have instant restrike ability. HMI lamps can also be dimmed when operated from a ballast with dimming circuitry.

A properly designed ballast is required to operate a SeaArc[®] 2. The ballast can be powered from either AC or DC voltage. It accepts a nominal input voltage of 120V or 240V, ranging from 110V to 300V. The ballast provides properly conditioned AC voltage/current required by the igniter circuit and lamp in the lighthouse.

The HMI ballast can even power DeepSea's proprietary TI/EB (Thallium Iodide/Electronic Ballast) lamp, a specially configured Thallium Iodide (TI) lamp. TI lamps produce an intense, monochromatic green light output (535 nm) which is close to the transmission "window" of seawater. The TI lamp offers maximum light penetration for long range monochromatic imaging applications such as submersible navigation and subsea surveying. TI lamps typically operate from HID magnetic ballasts. However, using a special igniter, this lamp gives users the flexibility to use one type of ballast to power an HMI or a TI lamp. You can freely swap lighthoods with no modification to the ballast. DeepSea offers a dual ballast housing, so that users can operate a TI/EB and HMI from the same housing.

There are options available in types of reflectors, depth rating, types of material, and type of ballasts. Please call us for assistance in determining the best combination of options to meet your requirements.

SeaArc® 2 HMI Specifications

MECHANICAL

Housing Material:	Titanium 6AL-4V
Length (Lighthouse):	27.43 cm (10.8 in.)
Diameter (Lighthouse):	Body: 13.46 cm (5.3 in.)
Length (Ballast):	Single: 32.26 cm (12.7 in.), Dual: 55.37 cm (21.8 in.)
Diameter (Ballast):	Single: 14.73 cm (5.8 in), Dual: 14.73 cm (5.8 in.)
Air Weight (Lighthouse):	3.67 kg (8.1 lbs)
(Ballast):	Single: 9.56 kg (21.06lbs), Dual: 15.54 kg (34.25lbs)
Water Weight (Lighthouse):	1.8 kg (4.0 lbs)
(Ballast):	Single: 5.34 kg (11.76lbs), Dual: 9.28 kg (50.45lbs)
Glass Dome:	Tempered Borosilicate Glass

ENVIRONMENTAL

Rated depth:	6,000 meters (19,680 ft.)
Design safety factor:	1.5x depth rating
Temperature:	-5 to +40 deg. C

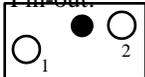
OPTICAL

Beam Pattern:	Spot (10 Degrees) Medium (30 Degrees) Wide (75 Degrees)
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ELECTRICAL

Input Voltage:	From ballast: 400W 300Hz Sq. wave
Input Power:	400 watts
Ballast Input Voltage Range:	100-300V AC/DC
Operating Current:	6A max at 120V AC (5A max at 105V DC)
Inrush Current:	30 amps DC, 35 amps AC
Average lamp life*:	650 hours
Recommended Lamp Replacement:	750 hours
Color Temperature:	5600K
Brightness:	12,000 lumens typical
Luminous Efficacy (lm/W):	80
Color Rendering Index:	92

Pin-out:

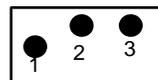


LPBH2MP
Ballast Input
1 = Hot
2 = Neutral

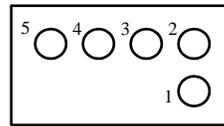


LPBH3FS
Ballast Output

1 = High
2 = Low
3 = Ground



LPBH3MP - Lighthouse



LPBH5FS
Ballast Input with dimmer

1 = High
2 = Low
3 = Ground
4 = Dimmer
5 = Dimmer

***Note:** Average Life Time is related to a burning cycle of 3.5 hours on and 0.5 hours off. Because the risk of arc tube rupture increases with the increasing life time of the lamp, it is advised not to use the lamp longer than the recommended replacement time.

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