USHIO Applying Light to Life®

MHR Metal Halide Reflector

Reflector for Fiber-Optic Applications

The MHR series was specifically designed for fiber optic and light pipe applications. These lamps are predominantly used in applications with a fiber diameter of more than 8mm at the input and offers an unproblematic operation with standard ballasts and thus lowers cost applications. The MHR series features an ellipsoidal reflector coated with a special dichroic coating which transmits most of the lamp's heat radiation toward the rear.

Specifications include a 6.5mm arc gap, total luminous efficacy of 85 lumens per watt and useful lamp life of up to 6000 hours. The MHR series is an economical solution to high development and maintenance costs associated with using lamps developed for applications other than fiber optics.

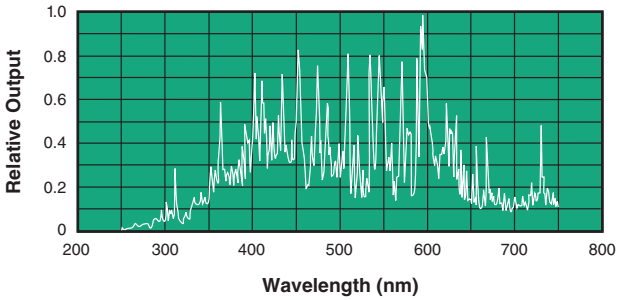
APPLICATIONS

- Fiber Optic Lighting Systems
- Light Pipes

FEATURES & BENEFITS

- MHR-100D uses M90 Ballast or Electronic Equivalent, MHR-150N Uses M81 Ballast and MHR-250N Uses M80 Ballast
- Cold Mirror Reflector - Concise Front End
- Compact Design
- Aligned to a Fiber During Manufacturing
- Standardized AMP Connector

SPECTRAL DISTRIBUTION CURVE



Watts (W)	Ordering Code	Lamp Description	Volts (V)	Ignition Voltage (kV)	Lamp Current (A)	Luminous Flux Through Aperature Ø13mm distance 42mm (lm)*	Ø10mm distance 44mm (lm)*	Ø13mm distance 42mm (lm)**	Color Temp (K)	CRI	Avg Rated Life (h)	ANSI Ballast / Fixture
		MHR - AMP Connector										
100	5000789	MHR-100D	95	4	1.2	1600	4.50	2.24	5200	72	6000	M90/E
150	5000834	MHR-150N	95	4	1.8	2000	4.50	2.24	4200	75	6000	M81/E
250	5001377	MHR-250N	100	4	3.0	3500	5.20	2.60	4200	72	4000	M80/E

*Measurement taken with optical sphere
**Measurement taken through fiber bundle

Discontinued - For Reference Only

SPECIFICATIONS

MHR-100D, MHR-150N, MHR-250N

Application Hints

The optimal focal distance between the lamp and the fiber depends on the diameter of the fiber. A rough calculation of the optimal distance between lamp and fixture can be done by the following formula:

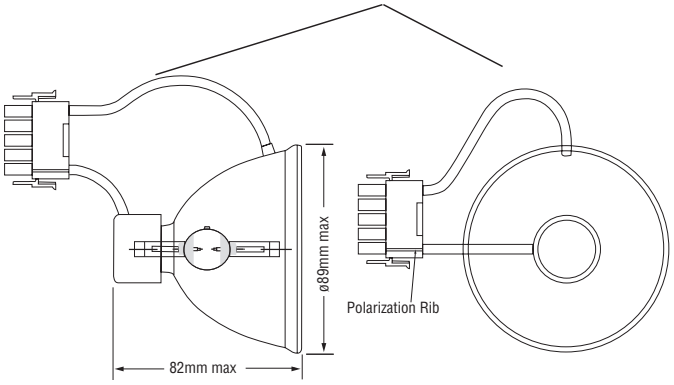
100/150W	Fd = 52mm - D * 0.77
250W	Fd = 64mm - D * 0.77

Fd(mm): Optimal distance betweeen fiber and lamp
D(mm): Diameter of the fiber bundle

UV and IR radiation from the lamp may cause damage to synthetic fibers. Therefore, reflective or absorbing filters are recommended for use with synthetic fibers.

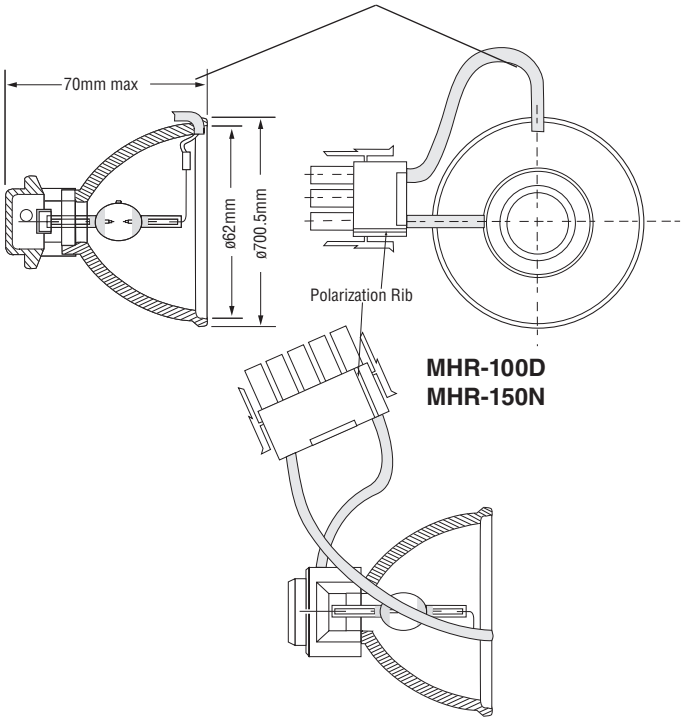
Optimal distance:	
100W & 150W	42mm
250W	53mm
from reflector to fiber:	(with ø13mm fiber bundle)
Length of Base Lead Wire:	Approx. 75mm
Base Type:	AMP Universal Mate-N-Lok
MHR-100D	3 channel plug
MHR-150N	5 channel plug
MHR-250N	5 channel plug

Burn Position: Lead wire facing up



MHR-250N

Burn Position: Lead wire facing up



MHR-100D
MHR-150N

100W lamp—M90; 150W lamp—M81; 250W lamp—M80
At the end of their lifetime, metal halide lamps may show rectifier effects causing a rise in current of up to 3 times of the rated value thereby posssibly damaging the ballast. Therefore we recommend to use only ballasts with integrated thermoswitch. For line compensation, a capacitor should be used. It is recommended to use ignitors with a timer switch. The use of electronic ballasts is possible if the operating frequency is below 250Hz. All lamps must be used with 4kV ignitor.

MHR-100D
Warm-up Time to 95% luminous flux: 2.5 minutes w/standard ballast
Reignition Time: Approximately 1 minute

MHR-150N
Warm-up Time: 3 minutes
Reignition Time: Approximately 2 minutes

MHR-250N
Warm-up Time: 10 minutes
Reignition Time: Approximately 7 minutes

WARNING! The lamp emits UV radiation which can cause serious eye and skin damage. Therefore, the lamp must be used only in closed lamp houses.

Hg contains mercury
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Manage in Accord with Disposal Laws
www.lamprecycle.org 1-800-895-8842

⚠ **CALIFORNIA PROPOSITION 65 WARNING:** These products can expose you to Mercury, which is known to the State of California to cause cancer, birth defects, and other reproductive harm. For more information, please go to: www.p65warnings.ca.gov.

USHIO

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