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
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:

\[
\begin{align*}
100/150W & \quad F_d = 52\text{mm} - D \times 0.77 \\
250W & \quad F_d = 64\text{mm} - D \times 0.77
\end{align*}
\]

Fd(mm): Optimal distance between 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.

**Burn Position:** Lead wire facing up

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 possibly 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: 2.5 minutes
- 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.

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

**Optimal distance:**

<table>
<thead>
<tr>
<th>Power</th>
<th>Optimal distance (mm)</th>
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</thead>
<tbody>
<tr>
<td>100W &amp; 150W</td>
<td>42 mm</td>
</tr>
<tr>
<td>250W</td>
<td>53 mm</td>
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</tbody>
</table>

**Length of Base Lead Wire:**

Approx. 75mm

**Base Type:**

- MHR-100D: 3 channel plug
- MHR-150N: 5 channel plug
- MHR-250N: 5 channel plug

**Manage in Accord with Disposal Laws**

www.lamprecycle.org  1-800-895-8842

**SPECIFICATIONS**