Dielectric Mirrors for High Power Laser

All dielectric coating designs are much more resistant to laser damage than typical mirrors and are suitable for use with high power laser systems.

- All Dielectric Mirrors for High Power Laser are manufactured using dielectric multi-layer coatings of alternating high and low index layers.
- The Mirrors are specifically designed for use at 45 degrees (AOI).
- All dielectric coating designs are much more resistant to laser damage than typical mirrors and are suitable for use with high power laser systems.
- Mirrors for YAG lasers are also available.

### Specifications

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Wavelength Range</th>
<th>Diameter ( \pm D ) [mm]</th>
<th>Thickness ( t ) [mm]</th>
<th>Reflectance [%]</th>
<th>Laser Damage Threshold ( [\mu J/cm^2] )</th>
</tr>
</thead>
<tbody>
<tr>
<td>TFMHP-25.4C05-193</td>
<td>193 ( \pm 25.4 )</td>
<td>5</td>
<td>&gt;95</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>TFMHP-30C05-266</td>
<td>266 ( \pm 30 )</td>
<td>5</td>
<td>&gt;98</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>TFMHP-50C08-352</td>
<td>352 ( \pm 30 )</td>
<td>5</td>
<td>&gt;99</td>
<td>26.5</td>
<td></td>
</tr>
<tr>
<td>TFMHP-50C08-532</td>
<td>532 ( \pm 30 )</td>
<td>4</td>
<td>&gt;99</td>
<td>26.5</td>
<td></td>
</tr>
<tr>
<td>TFMHP-25.4C05-1064</td>
<td>1064 ( \pm 25.4 )</td>
<td>5</td>
<td>&gt;99</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>

* Angle of incidence 0°, laser pulse width 10ns (TFMHP-193: 20ns), repetition frequency 20Hz

**Guide**
- Please consult our Sales Division for assistance in your selection and for customized products (customized on outer diameter, wavelength characteristic, etc.). Please use the inquiry sheet.
- Also available are our surface flatness guarantee (HTFM) mirrors with accuracy guarantee after surface coating.

**Attention**
- Reflectance of dielectric mirrors will vary according to the polarization of the input beams.
- The un-coated rear surface of the mirror is polished and the arrow on the side of the substrate points towards the coated surface.
- Reflectance of laser line mirrors are different according to the polarization of input beams. S-polarization has the high reflectance and the wide reflective bandwidth compared with p-polarization. The reflectance in the specifications list is that of random polarization or (p-polarization reflectance + s-polarization reflectance) / 2.
- The reflectance curves are based on actual measurements and may vary with production lots.
- Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.
- The surface flatness is the reflected surface wavefront distortion before coating.
Typical Reflectance Data

TFMHP-193

TFMHP-248

TFMHP-266

TFMHP-355

TFMHP-532

TFMHP-1064

Compatible Optic Mounts

MHG-HS25-NL, HS30-NL / MHG-MP50-NL / MHAN-25.4S, -30S, -50S