

Dielectric Mirrors for High Power Laser | TFMHP

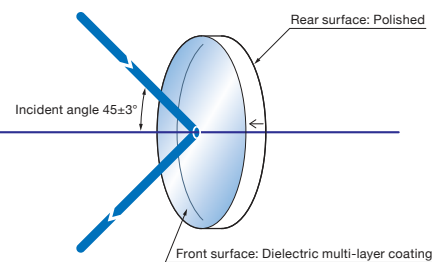
RoHS

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.

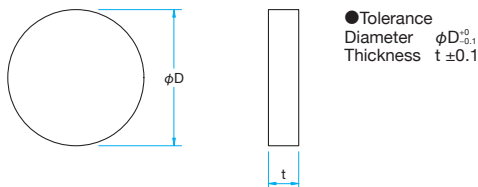


Schematic



Outline Drawing

(in mm)



Specifications

Material	BK7
Coating	Dielectric multi-layer coating
Incident angle	45°±3°
Surface Flatness	λ/10
Parallelism	<3'
Surface Quality (Scratch-Dig)	10-5
Clear aperture	90% of Actual Aperture
Rear Surface	Polished

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. [Reference](#) B041
- ▶ Also available are our surface flatness guarantee (HTFM) mirrors with accuracy guarantee after surface coating. [Reference](#) B016

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.

Specifications

Part Number	Wavelength Range [nm]	Diameter φD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]
TFMHP-25.4C05-193	193	φ25.4	5	>95	2
TFMHP-30C05-193	193	φ30	5	>95	2
TFMHP-50C08-193	193	φ50	8	>95	2
TFMHP-25.4C05-248	248	φ25.4	5	>98	4
TFMHP-30C05-248	248	φ30	5	>98	4
TFMHP-50C08-248	248	φ50	8	>98	4
TFMHP-25.4C05-266	266	φ25.4	5	>98	5
TFMHP-30C05-266	266	φ30	5	>98	5
TFMHP-50C08-266	266	φ50	8	>98	5
TFMHP-25.4C05-355	355	φ25.4	5	>99	8
TFMHP-30C05-355	355	φ30	5	>99	8
TFMHP-50C08-355	355	φ50	8	>99	8
TFMHP-25.4C05-532	532	φ25.4	5	>99	26.5
TFMHP-30C05-532	532	φ30	5	>99	26.5
TFMHP-50C08-532	532	φ50	8	>99	26.5
TFMHP-25.4C05-1064	1064	φ25.4	5	>99	28
TFMHP-30C05-1064	1064	φ30	5	>99	28
TFMHP-50C08-1064	1064	φ50	8	>99	28

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

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Femtosecond Laser

Frameless

Accuracy Guarantee

High Power

Ultra Broadband

Dielectric Coating

Aluminum Coating

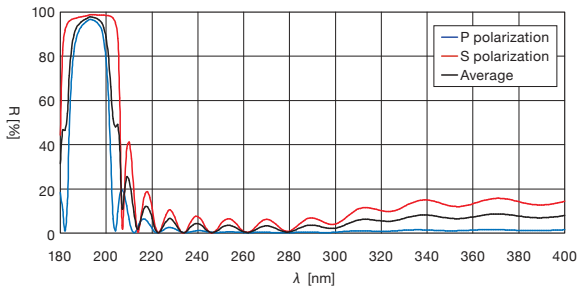
Gold Coating



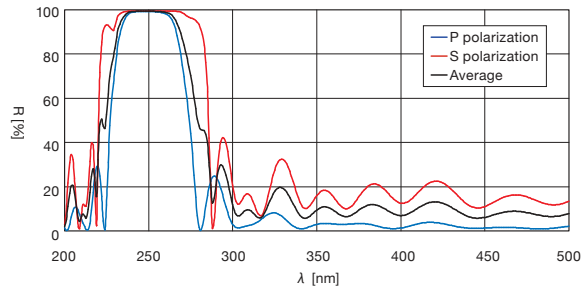
Typical Reflectance Data

R: Reflectance

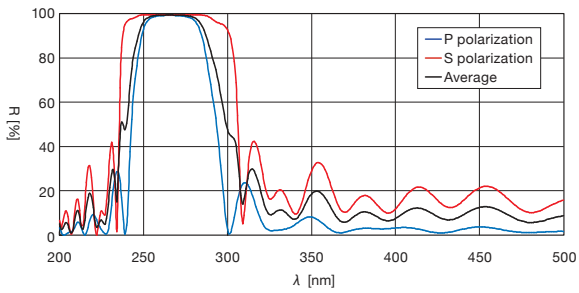
TFMHP-193



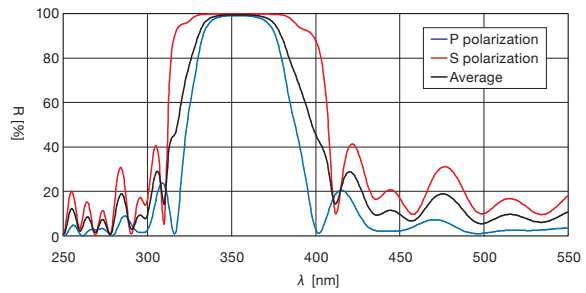
TFMHP-248



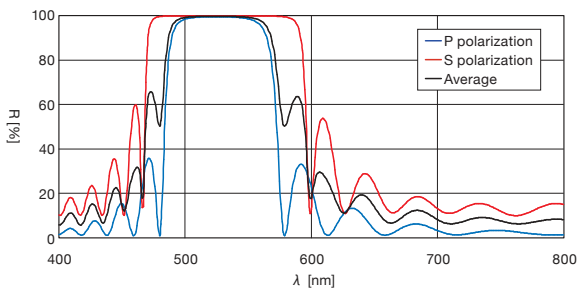
TFMHP-266



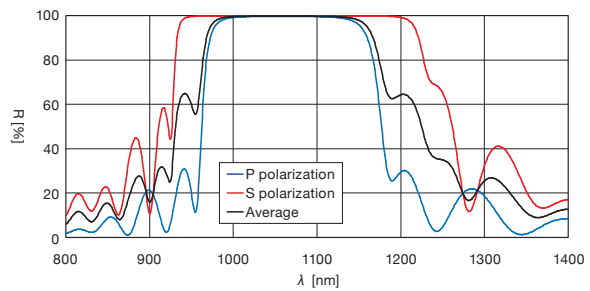
TFMHP-355



TFMHP-532



TFMHP-1064



Compatible Optic Mounts

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

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