

Dielectric Mirrors for High Power Laser

DHPLM

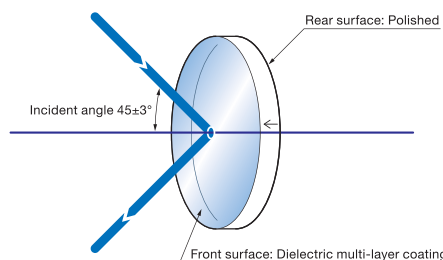
RoHS

All dielectric 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.
- These are specifically designed for use at 45 degrees (AOI).
- All dielectric 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.

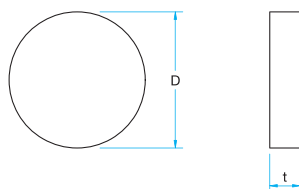


Schematic



Outline Drawing

(in mm)



- Tolerance Diameter $D \pm 0.1$, Thickness $t \pm 0.1$

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 contact our International Sales Division for customized products. (customized on outer diameter, wavelength characteristic, etc.) Please use the inquiry sheet. [Reference](#) C036
- ▶ Also available are our surface flatness guarantee (SAGM) mirrors with accuracy guarantee after surface coating. [Reference](#) C012

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 is indicated with an arrow on the side of the substrate.
- ▶ 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 be different 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 D [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm²]
DHPLM-25.4C05-193	193	φ25.4	5	>95	2
DHPLM-30C05-193	193	φ30	5	>95	2
DHPLM-50C08-193	193	φ50	8	>95	2
DHPLM-25.4C05-248	248	φ25.4	5	>98	4
DHPLM-30C05-248	248	φ30	5	>98	4
DHPLM-50C05-248	248	φ50	8	>98	4
DHPLM-25.4C05-266	266	φ25.4	5	>98	5
DHPLM-30C05-266	266	φ30	5	>98	5
DHPLM-50C08-266	266	φ50	8	>98	5
DHPLM-25.4C05-355	355	φ25.4	5	>99	8
DHPLM-30C05-355	355	φ30	5	>99	8
DHPLM-50C08-355	355	φ50	8	>99	8
DHPLM-25.4C05-532	532	φ25.4	5	>99	26.5
DHPLM-30C05-532	532	φ30	5	>99	26.5
DHPLM-50C08-532	532	φ50	8	>99	26.5
DHPLM-25.4C05-1064	1064	φ25.4	5	>99	28
DHPLM-30C05-1064	1064	φ30	5	>99	28
DHPLM-50C08-1064	1064	φ50	8	>99	28

* Angle of incidence 0°, laser pulse width 10ns, repetition frequency 20Hz

Application Systems

Machine Vision

Manual Positions

Motion Control Products

Optical & Mirror Holder

F A Parts

Measurement & Control

FA Electrical Parts

Tool & Measure

Cleanroom & AntiStatic

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Mirrors

Beamsplitters

Filters

Polarizers

Lenses

Multi-Element Optics

Prisms

Substrates & Windows

Holder & Vibration isolator

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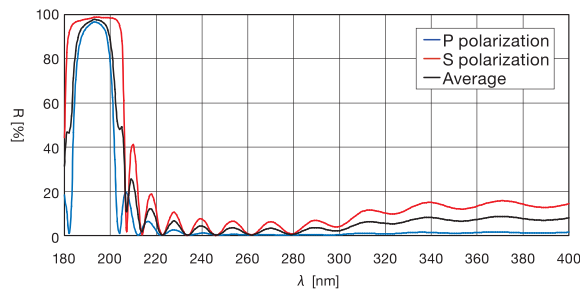
Substrates & Windows

Holder & Vibration isolator

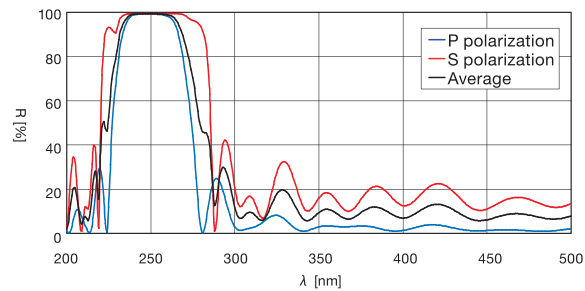
Typical Reflectance Data

R: Reflectance

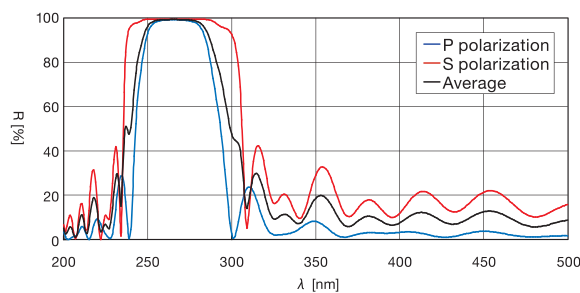
DHPLM-193



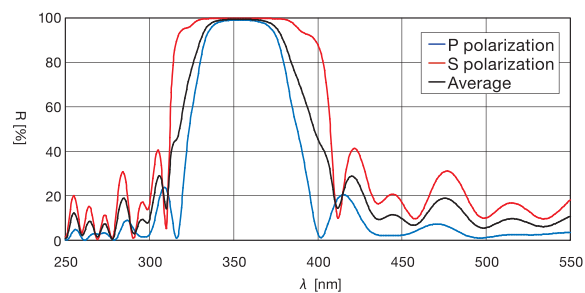
DHPLM-248



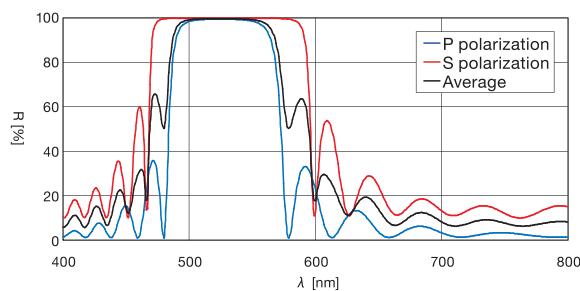
DHPLM-266



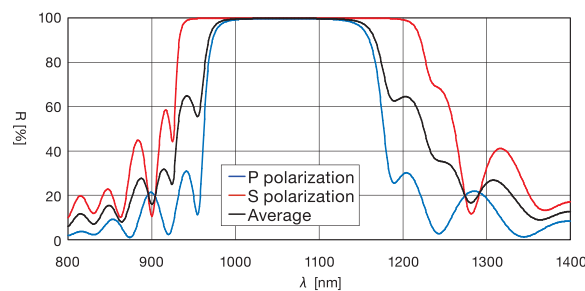
DHPLM-335



DHPLM-532



DHPLM-1064



Compatible Optic Mounts

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