



Ultra Broadband Dielectric Mirrors

TFMS

RoHS

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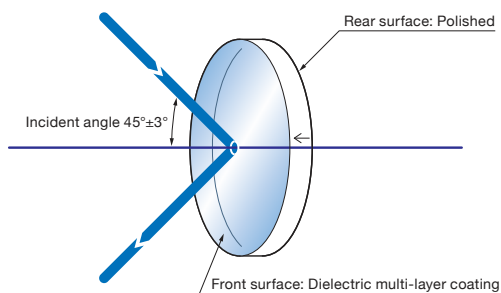
Gold Coating

Ultra Broadband Dielectric Mirrors are manufactured using all dielectric multi-layer coatings of alternating high and low index layers. These are specifically designed for use at 45 degrees angle of incidence. The mirrors are offered for use in applications where high-reflection over a broad wavelength range is required.

- Visible, near infrared and multiple wavelengths are covered with a single mirror.
- These mirrors have many advantages over a metal mirror including very little deterioration with age and that it is durable and easy to clean and maintain.

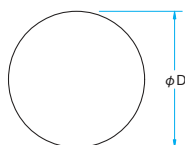


Schematic



Outline Drawing

(in mm)



- Tolerance Diameter $\phi D: \pm 0.1$
- Thickness $t \pm 0.1$

Specifications

Material	BK7
Coating	Dielectric multi-layer coating
Incident angle	$45^\circ \pm 3^\circ$
Surface Flatness	$\lambda/10$
Parallelism	$< 3'$
Surface Quality (Scratch-Dig)	40-20
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 high reflectance with a wide reflective bandwidth compared with P-Polarization.
- ▶ The reflectance specification listed is at random polarization or (P-Polarization reflectance + S-Polarization reflectance) / 2.

Specifications

Part Number	Wavelength Range [nm]	Diameter ϕD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm^2]
TFMS-25.4C05-2/4	245 - 400	$\phi 25.4$	5	> Average 97	0.5
TFMS-30C05-2/4	245 - 400	$\phi 30$	5	> Average 97	0.5
TFMS-25.4C05-2/7	245 - 700	$\phi 25.4$	5	> Average 97	0.5
TFMS-30C05-2/7	245 - 700	$\phi 30$	5	> Average 97	0.5
TFMS-25.4C05-4/11	400 - 1100	$\phi 25.4$	5	> Average 98	0.5
TFMS-30C05-4/11	400 - 1100	$\phi 30$	5	> Average 98	0.5
TFMS-50C08-4/11	400 - 1100	$\phi 50$	8	> Average 98	0.5
TFMS-25.4C05-4/20	400 - 2000	$\phi 25.4$	5	> Average 98	0.5
TFMS-30C05-4/20	400 - 2000	$\phi 30$	5	> Average 98	0.5
TFMS-50C08-4/20	400 - 2000	$\phi 50$	8	> Average 98	0.5
TFMS-25.4C05-3/20	300 - 2000	$\phi 25.4$	5	> Average 97	0.5
TFMS-30C05-3/20	300 - 2000	$\phi 30$	5	> Average 97	0.5
TFMS-50C08-3/20	300 - 2000	$\phi 50$	8	> Average 97	0.5

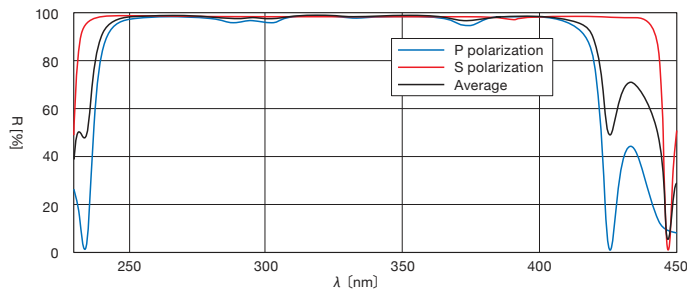
* Laser pulse width 10ns, wavelength 532nm, repetition frequency 20Hz



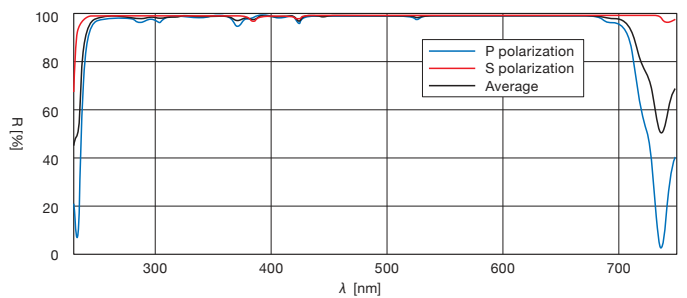
Typical Reflectance Data

R: Reflectance

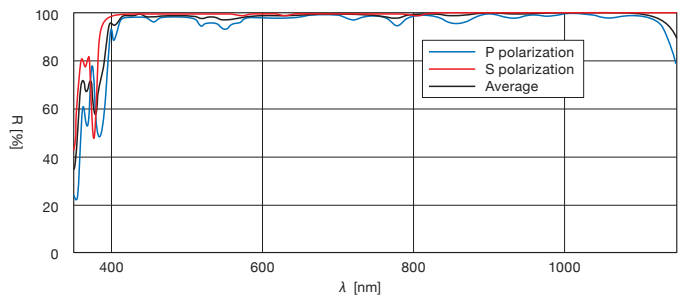
TFMS-2/4



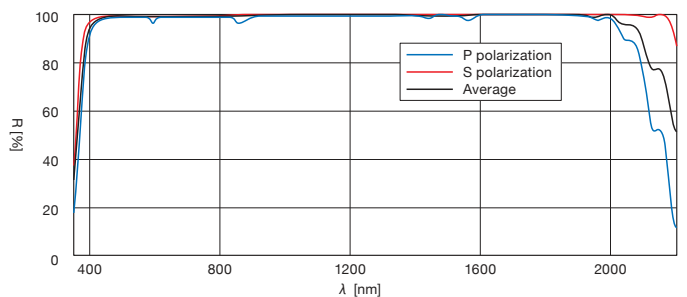
TFMS-2/7



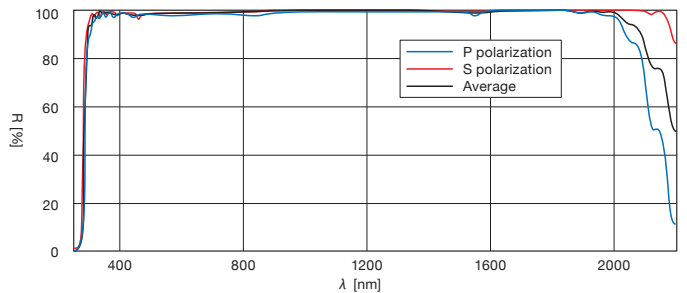
TFMS-4/11



TFMS-4/20



TFMS-3/20



Compatible Optic Mounts

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

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