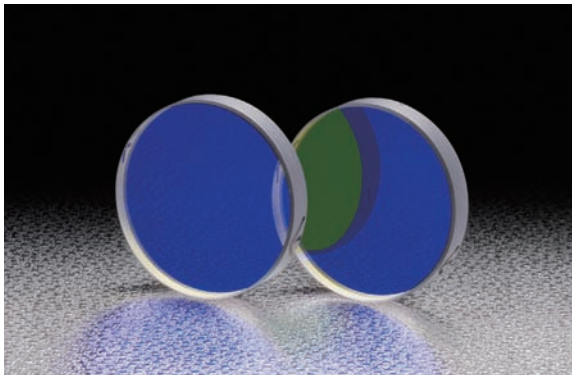
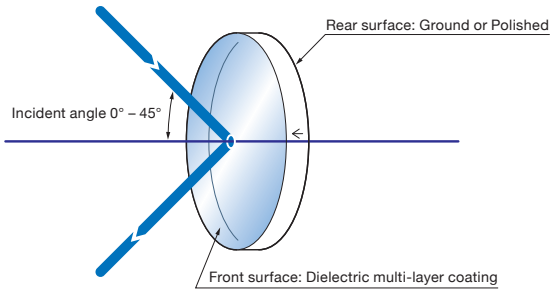
You can use the 0-45° Wide Angle Dielectric Mirrors for an optical system for reciprocating the light between two mirrors or Michelson interferometer, if you want to use a mirror at an incident angle of 45 ° or less. When used at 45 degree and 0 degree incidence angle, one mirror can be shared to obtain high reflectivity.

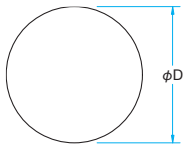
- Very high reflectivity can be obtained between 0 degree to 45 degree angle of incidence.
- If used at a fixed angle of incidence, it can also be used as a broadband mirror. For example, if TFVM-800 is used in a 45 degree incident, reflectance of 99% or more can be obtained in the range of 730nm to 900nm.
- Since there is no absorption in the coating there will be very little change in the performance over time and the mirror is durable even with continuous laser irradiation.



Schematic



Outline Drawing (in mm)



●Tolerance
Diameter $\phi D^{+0}_{-0.1}$
Thickness t ±0.1

Specifications

Material	BK7
Coating	Dielectric multi-layer coating
Incident angle	0° – 45°
Surface Flatness	λ/10
Parallelism	<3′
Surface Quality (Scratch–Dig)	10–5
Clear aperture	90% of Actual Aperture

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
- This mirror is also available as a “HTFM mirror” which provides guaranteed surface accuracy after coating. Reference B016

Attention

- Reflectance wavelength characteristics of dielectric multilayer coating vary depending on the polarization state of the incident beam. Reflectance of P-polarized light is lower than that of the S-polarized light, and the reflection range will also be narrower.
- When used not in adaptive wavelength, reflectance may be lower.
- If a mirror is used other than normal incidence, wavelength reflectance characteristics also vary depending on the polarization condition.
- The reflectance characteristics of the 45 degree angle of incidence listed are the average value of the reflectance of P-polarized light and S-polarized light.

400 – 700nm

Part Number	Wavelength Range [nm]	Diameter ϕD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm²]	Rear Surface
TFVM-15C03-405	405	ϕ15	3	>99	0.5	Ground
TFVM-25.4C05-405	405	ϕ25.4	5	>99	0.5	Polished
TFVM-30C05-405	405	ϕ30	5	>99	0.5	Polished
TFVM-50C08-405	405	ϕ50	8	>99	0.5	Polished
TFVM-25.4C05-532	532	ϕ25.4	5	>99	8	Polished
TFVM-30C05-532	532	ϕ30	5	>99	8	Polished
TFVM-50C08-532	532	ϕ50	8	>99	8	Polished
TFVM-10C03-VIS	400 – 700	ϕ10	3	>99	0.5	Ground
TFVM-15C03-VIS	400 – 700	ϕ15	3	>99	0.5	Ground
TFVM-15C05-VIS	400 – 700	ϕ15	5	>99	0.5	Ground
TFVM-20C03-VIS	400 – 700	ϕ20	3	>99	0.5	Ground
TFVM-20C05-VIS	400 – 700	ϕ20	5	>99	0.5	Ground
TFVM-25C05-VIS	400 – 700	ϕ25	5	>99	0.5	Polished
TFVM-25.4C05-VIS	400 – 700	ϕ25.4	5	>99	0.5	Polished
TFVM-30C05-VIS	400 – 700	ϕ30	5	>99	0.5	Polished
TFVM-40C06-VIS	400 – 700	ϕ40	6	>99	0.5	Polished
TFVM-50C08-VIS	400 – 700	ϕ50	8	>99	0.5	Polished

* Laser pulse width 10ns, repetition frequency 20Hz

0-45° Wide Angle Dielectric Mirrors | TFVM

780 – 1550nm						
Part Number	Wavelength Range [nm]	Diameter ϕD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm²]	Rear Surface
TFVM-10C03-800	780 – 830	ϕ10	3	>99	0.5	Ground
TFVM-15C03-800	780 – 830	ϕ15	3	>99	0.5	Ground
TFVM-15C05-800	780 – 830	ϕ15	5	>99	0.5	Ground
TFVM-20C03-800	780 – 830	ϕ20	3	>99	0.5	Ground
TFVM-20C05-800	780 – 830	ϕ20	5	>99	0.5	Ground
TFVM-25C05-800	780 – 830	ϕ25	5	>99	0.5	Polished
TFVM-25.4C05-800	780 – 830	ϕ25.4	5	>99	0.5	Polished
TFVM-30C05-800	780 – 830	ϕ30	5	>99	0.5	Polished
TFVM-40C06-800	780 – 830	ϕ40	6	>99	0.5	Polished
TFVM-50C08-800	780 – 830	ϕ50	8	>99	0.5	Polished
TFVM-25.4C05-1064	1064	ϕ25.4	5	>99	20	Polished
TFVM-30C05-1064	1064	ϕ30	5	>99	20	Polished
TFVM-50C08-1064	1064	ϕ50	8	>99	20	Polished
TFVM-15C03-1300	1300	ϕ15	3	>99	1	Ground
TFVM-25.4C05-1300	1300	ϕ25.4	5	>99	1	Polished
TFVM-30C05-1300	1300	ϕ30	5	>99	1	Polished
TFVM-15C03-1550	1550	ϕ15	3	>99	1	Ground
TFVM-25.4C05-1550	1550	ϕ25.4	5	>99	1	Polished
TFVM-30C05-1550	1550	ϕ30	5	>99	1	Polished

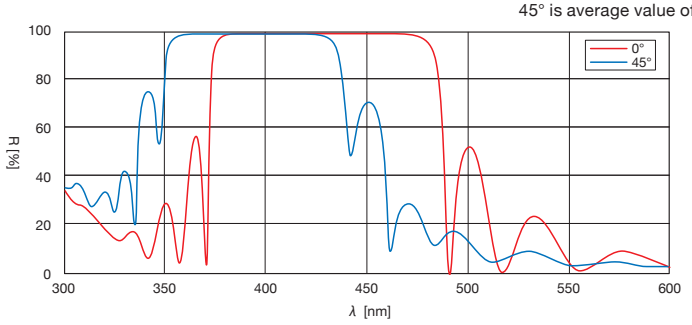
* Laser pulse width 10ns, repetition frequency 20Hz

Typical Reflectance Data

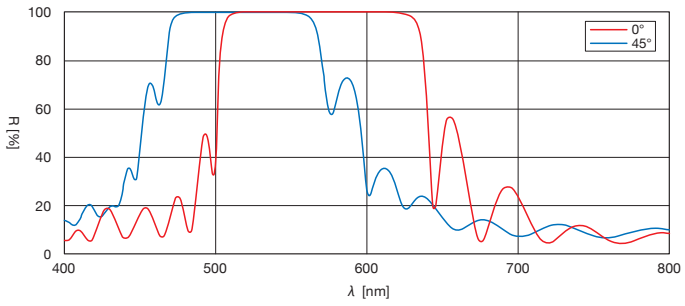
R: Reflectance

45° is average value of P polarization and S polarization

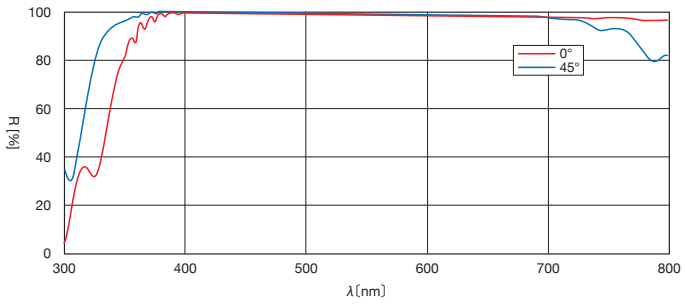
TFVM-405



TFVM-532



TFVM-VIS

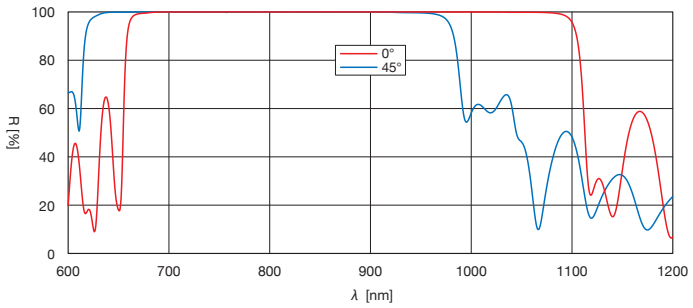


Typical Reflectance Data

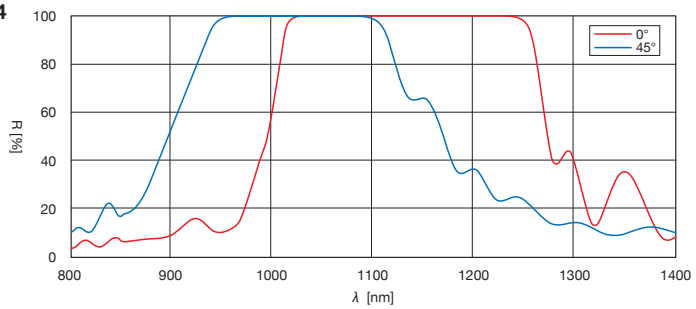
R: Reflectance

45° is average value of P polarization and S polarization

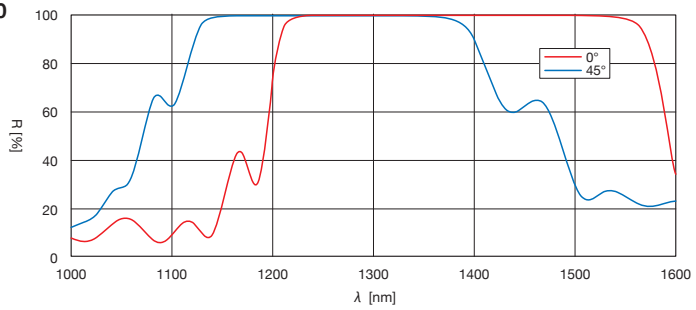
TFVM-800



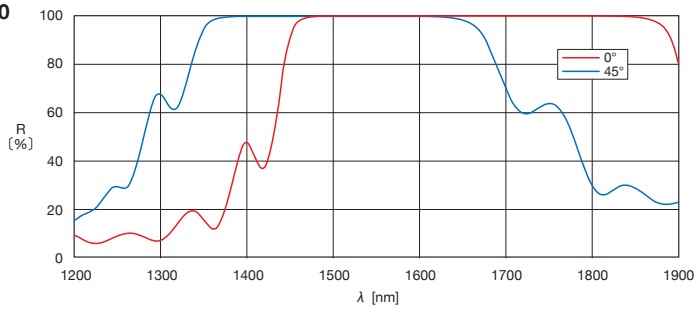
TFVM-1064



TFVM-1300



TFVM-1550



Compatible Optic Mounts

MHG-MP30-NL / MHG-MP50-NL / BSHL-15-2