

Surface Accuracy Guaranteed Mirror | HTFM

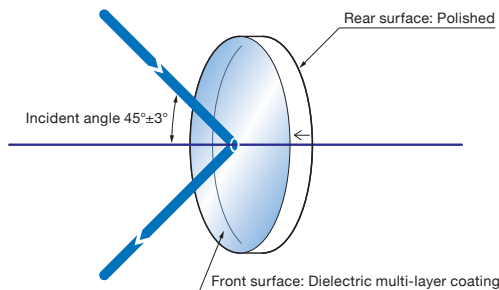
RoHS

High Surface Accuracy Mirrors are realized by optimizing the conditions of the substrate material, thickness and coating. A surface accuracy of $\lambda/10$ after coating is guaranteed on these mirrors.

- This product features a surface accuracy (after coating) higher than our standard dielectric multi-layer flat mirrors (TFM).
- By using synthetic fused silica and increasing the substrate thickness the rigidity of the mirrors are increased.
- Our product line includes mirrors with high-reflection for use in individual wavelengths including ultra-violet, YAG and other lasers.

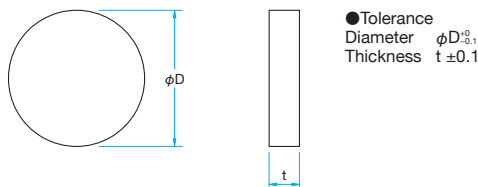


Schematic



Outline Drawing

(in mm)



Specifications

Material	Synthetic fused silica
Coating	Dielectric multi-layer coating
Incident angle	$45^\circ \pm 3'$
Surface Flatness after coating	$\lambda/10$
Parallelism	$< 3'$
Surface Quality (Scratch-Dig)	10-5
Clear aperture	80% of external diameter
Rear Surface	Polished

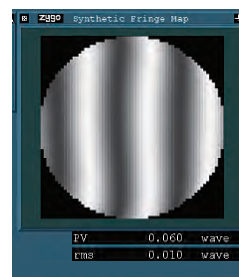
Guide

- ▶ These mirrors are available mounted in a holder with surface accuracy guaranteed (HTFM-MHG), contact our Sales Division to assist in your selection. [Reference > B018](#)
- ▶ Please contact our Sales Division for customized products. (customized on outer diameter, wavelength characteristic, etc.) Please use the inquiry sheet. (Reference > B041). [Reference > B041](#)

Attention

- ▶ Surface accuracy data is not provided standard with the product. Please contact our Sales Division for this data at an additional charge.
- ▶ For the dielectric multi-layer film, the reflection rate wavelength characteristics vary depending on the polarization state of the incident beam. The reflection rate of P polarization is lower than that of S polarization and the reflection band is narrow.
- ▶ The reflectance specifications are represented by the average of the reflectance of P polarized light and S polarized light.
- ▶ If the product is used without setting the angle of incidence to 45 degrees, the reflection may decrease.
- ▶ If the product is not used at an applicable wavelength, the reflection rate may decrease.

Surface Accuracy Data (reference data)



- Surface accuracy measurement method: Measured with Zygo laser interferometer
- Surface accuracy measurement wavelength 632.8nm
- Surface accuracy guaranteed temperature $23^\circ\text{C} \pm 2^\circ\text{C}$

248 – 308nm

Part Number	Wavelength Range [nm]	Diameter ϕD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]
HTFM-12.7C08-248	248	$\phi 12.7$	8	>99.2	2
HTFM-25.4C08-248	248	$\phi 25.4$	8	>99.2	2
HTFM-30C08-248	248	$\phi 30$	8	>99.2	2
HTFM-50C11-248	248	$\phi 50$	11	>99.2	2
HTFM-50.8C11-248	248	$\phi 50.8$	11	>99.2	2
HTFM-12.7C08-266	266	$\phi 12.7$	8	>99.2	2
HTFM-25.4C08-266	266	$\phi 25.4$	8	>99.2	2
HTFM-30C08-266	266	$\phi 30$	8	>99.2	2
HTFM-50C11-266	266	$\phi 50$	11	>99.2	2
HTFM-50.8C11-266	266	$\phi 50.8$	11	>99.2	2
HTFM-12.7C08-308	308	$\phi 12.7$	8	>99.5	2
HTFM-25.4C08-308	308	$\phi 25.4$	8	>99.5	2
HTFM-30C08-308	308	$\phi 30$	8	>99.5	2
HTFM-50C11-308	308	$\phi 50$	11	>99.5	2
HTFM-50.8C11-308	308	$\phi 50.8$	11	>99.5	2

* Laser pulse width 10ns, repetition frequency 20Hz

Compatible Optic Mounts

MHG-MP12.7-NL / MHG-MP25-NL, HS25-NL / MHG-MP30-NL, HS30-NL / MHG-MP50-NL / MHG-MP50.8-NL

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High Power

Ultra Broadband

Dielectric Coating

Aluminum Coating

Gold Coating



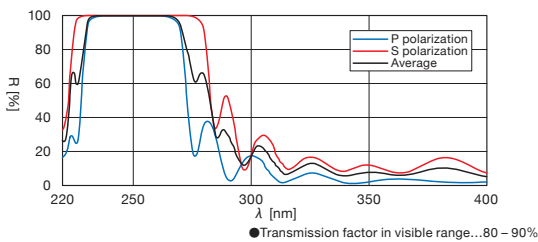
355 – 1064nm						
Part Number	Wavelength Range [nm]	Diameter ϕ D [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]	
HTFM-12.7C08-355	355	ϕ 12.7	8	>99.5	5	
HTFM-25.4C08-355	355	ϕ 25.4	8	>99.5	5	
HTFM-30C08-355	355	ϕ 30	8	>99.5	5	
HTFM-50C11-355	355	ϕ 50	11	>99.5	5	
HTFM-50.8C11-355	355	ϕ 50.8	11	>99.5	5	
HTFM-12.7C08-532	532	ϕ 12.7	8	>99.5	7	
HTFM-25.4C08-532	532	ϕ 25.4	8	>99.5	7	
HTFM-30C08-532	532	ϕ 30	8	>99.5	7	
HTFM-50C11-532	532	ϕ 50	11	>99.5	7	
HTFM-50.8C11-532	532	ϕ 50.8	11	>99.5	7	
HTFM-12.7C08-1064	1064	ϕ 12.7	8	>99.5	20	
HTFM-25.4C08-1064	1064	ϕ 25.4	8	>99.5	20	
HTFM-30C08-1064	1064	ϕ 30	8	>99.5	20	
HTFM-50C11-1064	1064	ϕ 50	11	>99.5	20	
HTFM-50.8C11-1064	1064	ϕ 50.8	11	>99.5	20	

* Laser pulse width 10ns, repetition frequency 20Hz

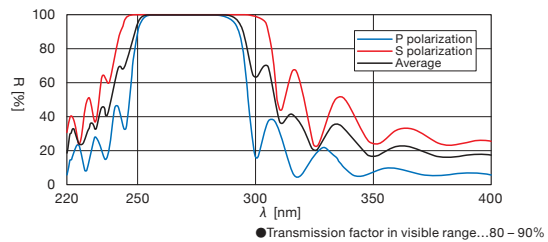
Typical Reflectance Data

R: Reflectance

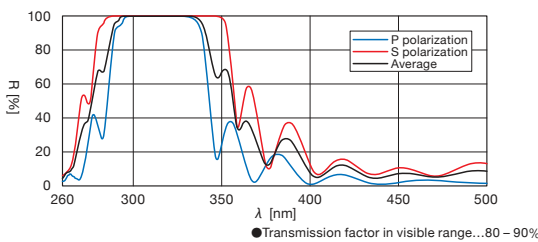
HTFM-248



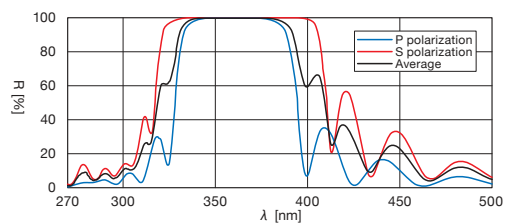
HTFM-266



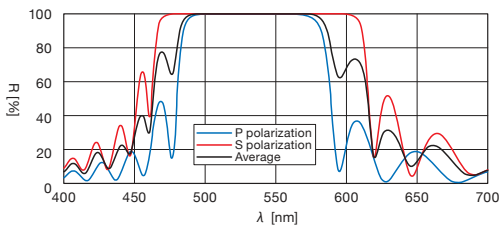
HTFM-308



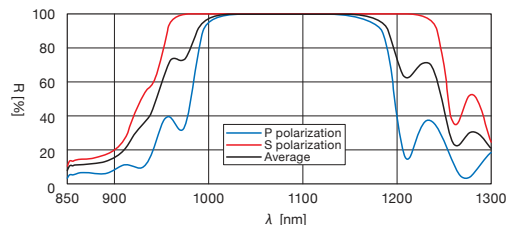
HTFM-355



HTFM-532



HTFM-1064



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