

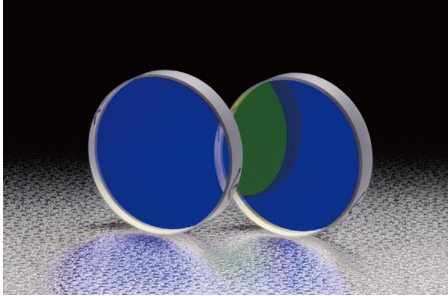
0-45° Wide Angle Broadband Dielectric Mirrors

TFVMQ **NEW** **RoHS**

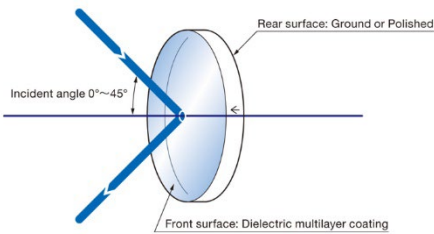
This high reflective mirror covers a broad range of wavelengths in the visible, UV, and IR, and can be used for any angle of incidence between 0° and 45°.

The mirrors can be commonly used in the incident angle range of 0° to 45°, making them highly versatile for use in multi-wavelength lasers or spectroscopic experiments.

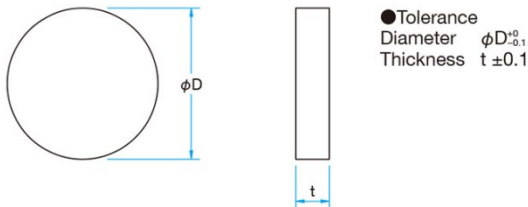
- Very high reflectivity can be obtained between 0 degree to 45 degrees angle of incidence.
- It provides a high reflectance with limited variation over a broad range of wavelengths.
- The dielectric multilayer coating makes the mirror surface highly resistant to scratches and allows for wiping for cleaning.
- There is no absorption from the coating, limited deterioration over time, and shows excellent resistance to continuous laser irradiation.



Outline Drawing



Schematic



Common Specifications

| | |
|------------------|-------------------------------|
| Material | Synthetic fused silica |
| Coating | Dielectric multilayer coating |
| Incident angle | 0°~45° |
| Surface flatness | $\lambda/10$ |
| Parallelism | <3' |
| Reflectance | Rmean > Average 99% |
| Clear aperture | 90% of the diameter |
| 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.

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 degrees angle of incidence listed are the average value of the reflectance of P-polarized light and S-polarized light.

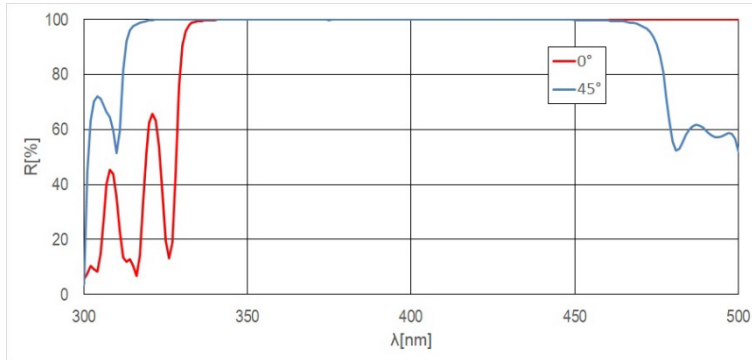
Specifications

| Part Number | Diameter ϕD [mm] | Thickness t [mm] | Wavelength Range [nm] | Surface Quality (Scratch-Dig) | Laser Damage Threshold* [J/cm ²] |
|---------------------|---------------------------|---------------------|--------------------------|----------------------------------|---|
| TFVMQ-12.7C05-3/4 | $\phi 12.7$ | 5 | 350-450nm | 20-10 | 0.5J/cm ² |
| TFVMQ-25.4C05-3/4 | $\phi 25.4$ | 5 | | | |
| TFVMQ-50.8C08-3/4 | $\phi 50.8$ | 8 | | | |
| TFVMQ-12.7C05-4/7 | $\phi 12.7$ | 5 | 400-750nm | 20-10 | 0.5J/cm ² |
| TFVMQ-25.4C05-4/7 | $\phi 25.4$ | 5 | | | |
| TFVMQ-50.8C08-4/7 | $\phi 50.8$ | 8 | | | |
| TFVMQ-12.7C05-7/11 | $\phi 12.7$ | 5 | 700-1100nm | 40-20 | 1J/cm ² |
| TFVMQ-25.4C05-7/11 | $\phi 25.4$ | 5 | | | |
| TFVMQ-50.8C08-7/11 | $\phi 50.8$ | 8 | | | |
| TFVMQ-12.7C05-10/16 | $\phi 12.7$ | 5 | 1000-1600nm | 40-20 | 2.5J/cm ² |
| TFVMQ-25.4C05-10/16 | $\phi 25.4$ | 5 | | | |
| TFVMQ-50.8C08-10/16 | $\phi 50.8$ | 8 | | | |

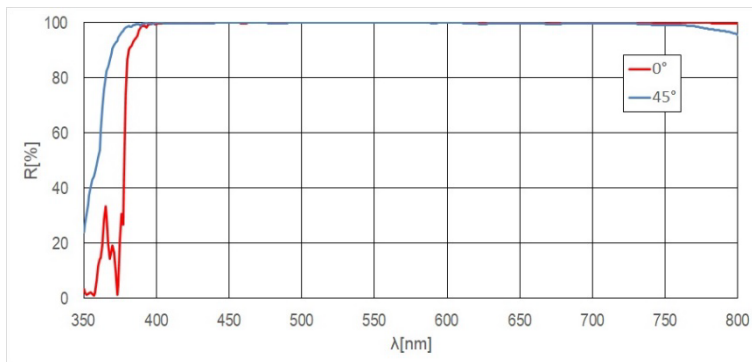
* Laser pulse width 10ns, repetition frequency 20Hz

45° is average value of P polarization and S polarization

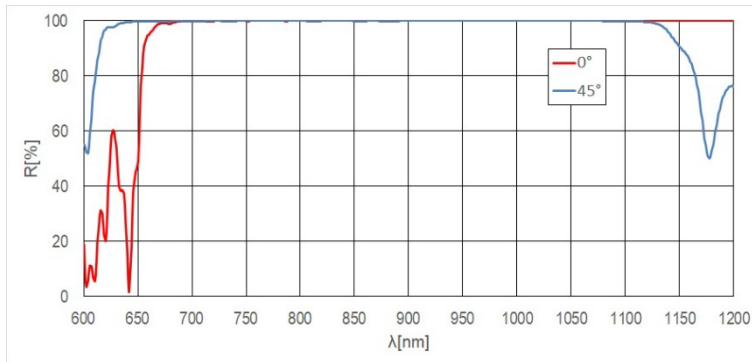
TFVMQ-3/4



TFVMQ-4/7



TFVMQ-7/11



TFVMQ-10/16

