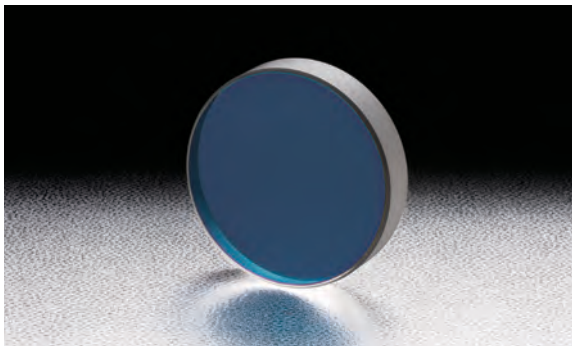
Low Dispersion Mirrors for Femtosecond Laser | FLM/FLMHP RoHS Catalog Code W3004

This mirror is designed to provide low wavelength dispersion suitable for use with ultra-short pulse lasers with 100 femtosecond or less.

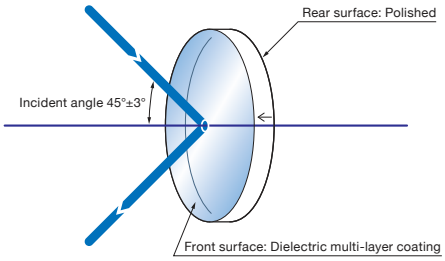
- We have designed a special thin film coating that optimizes wavelength dispersion, range and the strength of lasers.
- It has the effect of suppressing the spread of the pulse width produced by a plurality of reflecting mirrors.
- There are three types available, FLM1 standard, FLM2 wide wavelength band, and FLMHP for high power femtosecond laser*.
- These mirrors are designed and produced for usage within the microscopy with femtosecond laser and optical systems with femtosecond time-resolved spectroscopy.



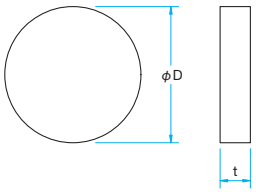
Specifications

Material	BK7 (FLM) Synthetic fused silica (FLMHP)
Coating	Dielectric multi-layer coating
Incident angle	45°±3°
Surface Flatness	λ/10
Parallelism	<5″
Surface Quality (Scratch–Dig)	10–5
Clear aperture	80% of Actual Aperture
Rear Surface	Polished

Schematic



Outline Drawing (in mm)



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

Guide

- These low dispersion wavelength mirrors are available in physical dimensions other than those found in the catalog, please contact our Sales Division for Custom products.
- We can also provide high power negative dispersion mirror.
- Also available are our surface flatness guarantee (HTFM) mirrors with accuracy guarantee after surface coating. Reference B016

Attention

- When used in angles other than 45 degrees (AOI), we would not be able to guarantee the wavelength dispersion.

Low Dispersion Mirrors for Femtosecond Laser

Part Number	Wavelength Range S polarization [nm]	Wavelength Range P polarization [nm]	Diameter ϕD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm²]
FLM1-12.7C05-800	720 – 900	760 – 840	ϕ12.7	5	>99.8	1
FLM1-25.4C05-800	720 – 900	760 – 840	ϕ25.4	5	>99.8	1
FLM1-30C05-800	720 – 900	760 – 840	ϕ30	5	>99.8	1
FLM2-12.7C05-800	700 – 940	740 – 860	ϕ12.7	5	>99.8	0.5
FLM2-25.4C05-800	700 – 940	740 – 860	ϕ25.4	5	>99.8	0.5
FLM2-30C05-800	700 – 940	740 – 860	ϕ30	5	>99.8	0.5

* Laser pulse width 50fs, wavelength 800nm

Low Dispersion Mirrors for High Power Femtosecond Laser

Part Number	Wavelength Range S polarization [nm]	Wavelength Range P polarization [nm]	Diameter ϕD [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm²]
FLMHP-12.7C05-800	745 – 855	775 – 825	ϕ12.7	5	>99	2
FLMHP-25.4C05-800	745 – 855	775 – 825	ϕ25.4	5	>99	2
FLMHP-30C05-800	745 – 855	775 – 825	ϕ30	5	>99	2

* Laser pulse width 65fs, wavelength 800nm

Compatible Optic Mounts

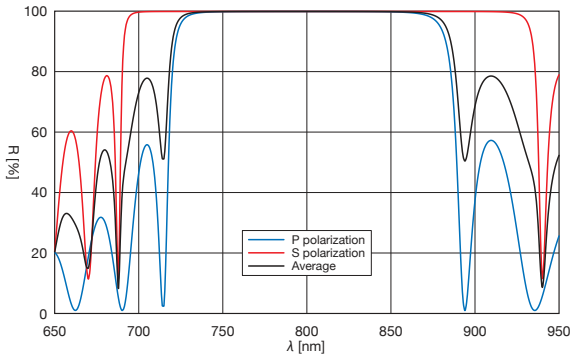
MHG-MP12.7-NL / MHG-MP25-NL, HS25-NL / MHG-MP30-NL, HS30-NL

Low Dispersion Mirrors for Femtosecond Laser | FLM/FLMHP

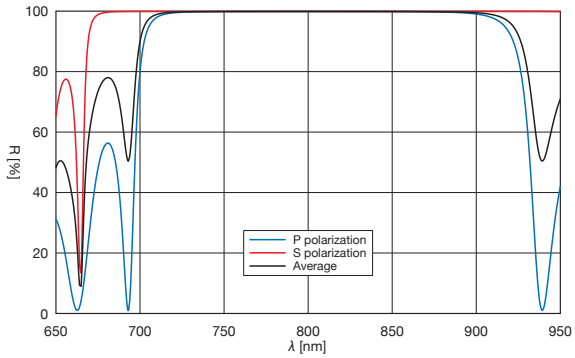
Typical Reflectance Data

R: Reflectance

FLM1



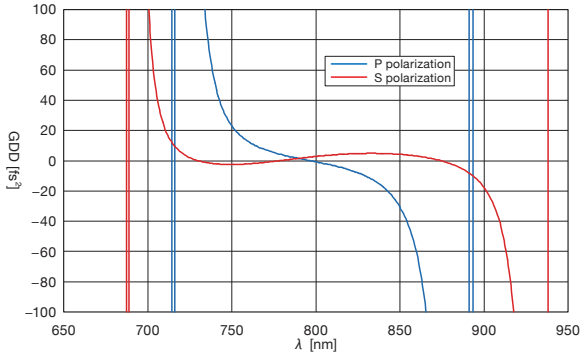
FLM2



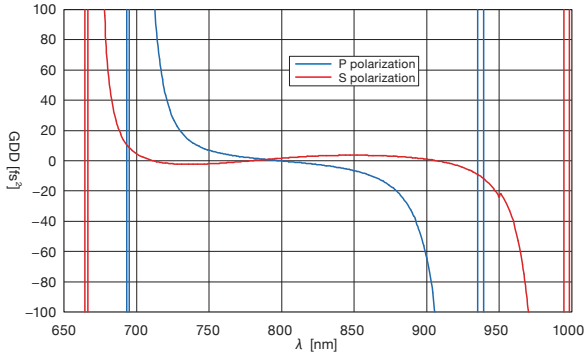
Group Delay Data (for reference only)

GDD: Group Delay Dispersion

FLM1



FLM2



Typical Reflectance Data

R: Reflectance

FLMHP