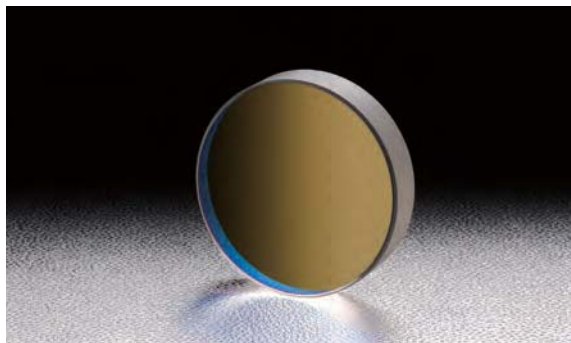


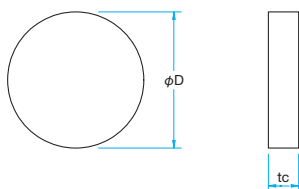
This mirror has a negative dispersion and can be used for pulse compression in a femtosecond laser system.

- These mirrors are more compact and exhibit a smaller optical loss than the conventional prisms used for pulse compression.
- Center wavelength is for Ti: Sapphire at 800nm.
- Plano and concave substrates designed for cavities are available.

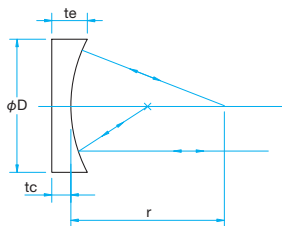


Outline Drawing

(in mm)



●Tolerance
Diameter $\phi D_{\pm 0.1}$
Thickness $t_{c \pm 0.1}$



●Tolerance
Diameter $\phi D_{\pm 0.1}$
Thickness $t_{c \pm 0.2}$

Specifications

Material	BK7
Coating	Dielectric multi-layer coating
Incident angle	0° – 20°
Surface Flatness	$\lambda/10$
Parallelism	<5" (flat surface)
Surface Quality (Scratch-Dig)	10-5
Clear aperture	80% of Actual Aperture
Rear Surface	Polished

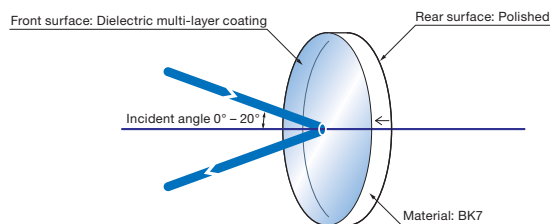
Guide

- ▶ Fabrication of negative dispersion mirror is also available.
- ▶ We can also provide high power negative dispersion mirror.
- ▶ Also available are our surface flatness guarantee (HTFM) mirrors with accuracy guarantee after surface coating.

Attention

- ▶ The angle of incident for this series is 0 to 20 degrees and the laser dispersion may not be corrected for other angles. Please contact our Sales Division for further details.

Schematic



Negative Dispersion Mirrors for Femtosecond Laser (Plano)

Part Number	Wavelength Range [nm]	Diameter ϕD [mm]	Thickness t_c [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]
GFM-12.7C05-800	700 – 900	$\phi 12.7$	5	>99.8	0.5
GFM-25.4C05-800	700 – 900	$\phi 25.4$	5	>99.8	0.5
GFM-30C05-800	700 – 900	$\phi 30$	5	>99.8	0.5

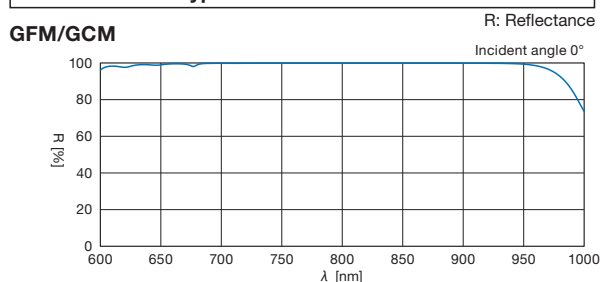
* Laser pulse width 50fs, wavelength 800nm

Negative Dispersion Mirrors for Femtosecond Laser (Concave)

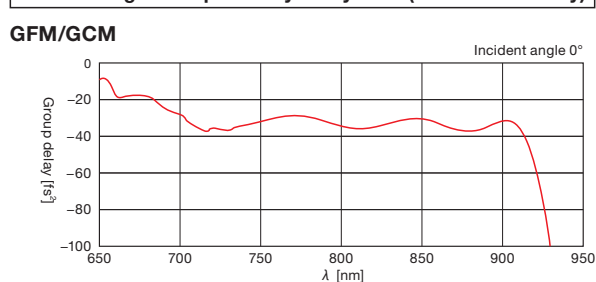
Part Number	Wavelength Range [nm]	Diameter ϕD [mm]	Edge Thickness t_e [mm]	Radius of curvature r [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm ²]
GCM-30C07-50-800	700 – 900	$\phi 30$	7	50	>99.8	0.5
GCM-30C07-100-800	700 – 900	$\phi 30$	7	100	>99.8	0.5
GCM-30C05-500-800	700 – 900	$\phi 30$	5	500	>99.8	0.5
GCM-30C05-1000-800	700 – 900	$\phi 30$	5	1000	>99.8	0.5

* Laser pulse width 50fs, wavelength 800nm

Typical Reflectance Data



Incident angle Group Velocity Delay Data (for reference only)



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