

## Negative Dispersion Mirrors for Femtosecond Laser RoHS

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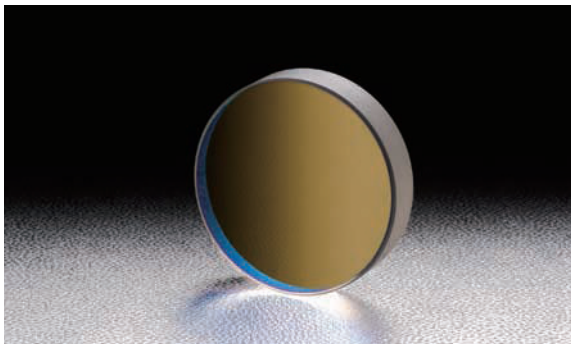
Prisms

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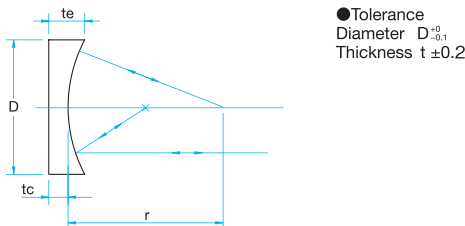
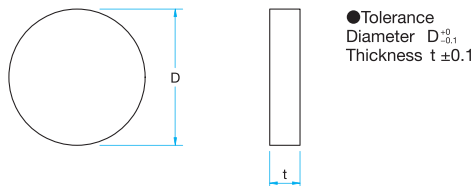
**This mirror has a negative dispersion and can be used for pulse compression in a femtosecond laser system.**

- 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)



### 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

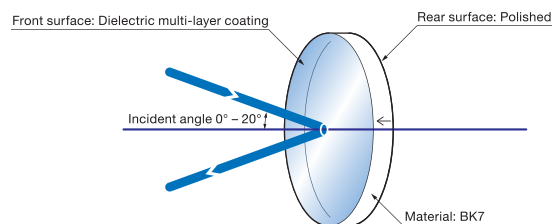
### Guide

- ▶ Fabrication of negative dispersion mirror is also available.
- ▶ We can also produce high power negative dispersion mirror.
- ▶ Also available are our surface flatness guarantee (**SAGM**) mirrors with accuracy guarantee after surface coating. [Reference](#) C012

### 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 us for further details.

### Schematic



### Negative Dispersion Mirrors for Femtosecond Laser (Plano)

Part Number	Wavelength Range [nm]	Diameter D [mm]	Thickness t [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm <sup>2</sup> ]
<b>NDFLM-12.7C05-800</b>	700 – 900	φ12.7	5	>99.8	0.5
<b>NDFLM-25.4C05-800</b>	700 – 900	φ25.4	5	>99.8	0.5
<b>NDFLM-30C05-800</b>	700 – 900	φ30	5	>99.8	0.5

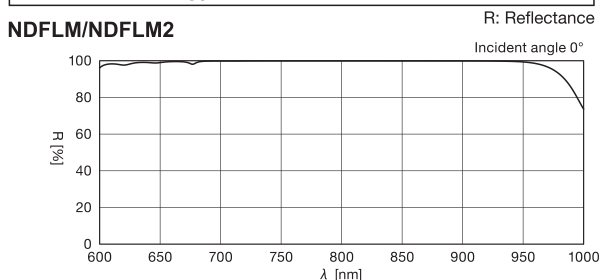
\* Laser pulse width 50fs, wavelength 800nm

### Negative Dispersion Mirrors for Femtosecond Laser (Concave)

Part Number	Wavelength Range [nm]	Diameter D [mm]	Edge Thickness te [mm]	Radius of curvature r [mm]	Reflectance [%]	Laser Damage Threshold* [J/cm <sup>2</sup> ]
<b>NDFLM2-30C07-100-800</b>	700 – 900	φ30	7	50	>99.8	0.5
<b>NDFLM2-30C07-100-800</b>	700 – 900	φ30	7	100	>99.8	0.5
<b>NDFLM2-30C05-500-800</b>	700 – 900	φ30	5	500	>99.8	0.5
<b>NDFLM2-30C05-1000-800</b>	700 – 900	φ30	5	1000	>99.8	0.5

\* Laser pulse width 50fs, wavelength 800nm

### Typical Reflectance Data



### Incident angle Group Velocity Delay Data (for reference only)

