

# Low GDD Ultrafast Mirrors



## Standard specifications

Material	UVFS
Diameter tolerance	+0/-0.1 mm
Thickness tolerance	±0.1 mm
Clear aperture	>90%
Surface quality	20-10 S-D
Surface flatness	<math>\lambda/8</math> @ 632.8 nm
Protective chamfers	<math><0.25\text{ mm} \times 45^\circ</math>
Coating adhesion and durability	Per MIL-C-675A
Laser damage threshold reports	<a href="http://www.altechna.com/lid">www.altechna.com/lid</a>

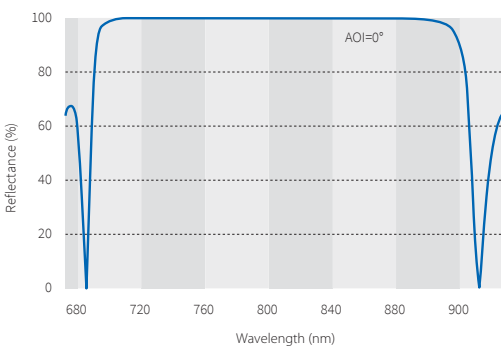
## Description

Low GDD Ultrafast mirrors are designed for femtosecond applications to provide an optimized performance at certain wavelength and angle of incidence (AOI). This is achieved by careful selection of coating stacks to combine high reflectivity and low GDD value (from  $-10\text{ fs}^2$  to  $10\text{ fs}^2$  at design bandwidth) at the same time. Such coatings are used for external beam manipulation applications where pulse broadening effect is undesirable. Low GDD Ultrafast mirrors are intended for Ti:Sapphire, Nd:Glass, Er:Glass or Ytterbium doped host based lasers working in femtosecond regime. Variety of catalogue components allows to choose the right mirror for fundamental wavelength as well as for its harmonics.

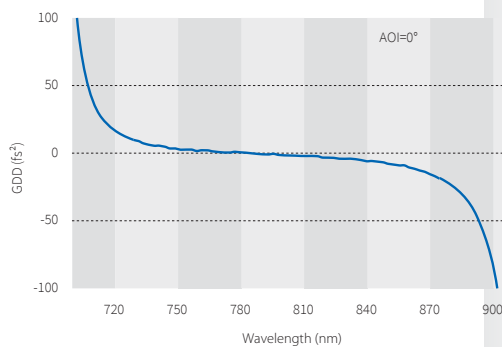
## Features

- Other dimensions and wavelengths are available in small and mass production quantities
- GDD reflectance values range from  $-10\text{ fs}^2$  to  $10\text{ fs}^2$  for s polarized light and  $-20\text{ fs}^2$  to  $20\text{ fs}^2$  for p polarized light

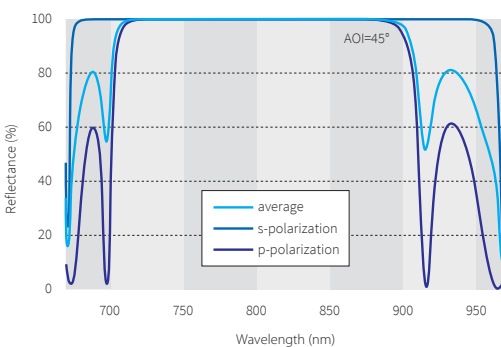
Calculated reflectance curve of [1K00-GDD] coating



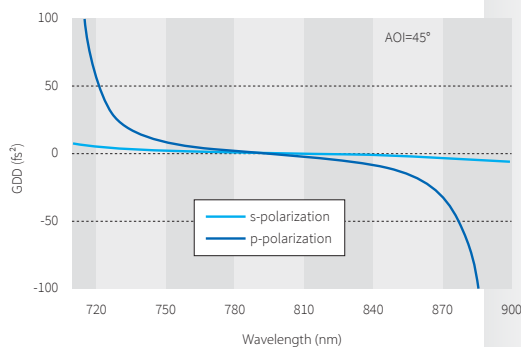
Calculated GDD-reflectance values of [1K00-GDD] coating



Calculated reflectance curve of [1K45-GDD] coating



Calculated GDD-reflectance values of [1K45-GDD] coating



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TECHNICA** [www.phototechnica.co.jp](http://www.phototechnica.co.jp)  
**フォトテクニカ株式会社**  
 〒336-0017 埼玉県さいたま市南区南浦和 1-2-17  
 TEL:048-871-0067 FAX:048-871-0068  
 e-mail:voc@phototechnica.co.jp