GROUP VELOCITY DELAY COMPENSATION PLATES

Features

- Made of calcite crystals
- Designed for different GVD compensation ranges
- Clear aperture Ø12 mm

Group Velocity Delay (GVD) compensation plates are designed for specified ranges of time delay compensation between two different wavelength pulses with orthogonal polarizations. A compensation plate can be adjusted for the precisely desired delay by angular tuning - changing the angle of incidence (AOI) of the laser beams to the plate. The recommended AOI tuning range of the plate is from -10° to +10°.

Standard GVD compensation plates are rectangular (full aperture 16 x 14 mm) with a clear aperture of Ø12 mm. They are supplied mounted into Ø25.4 mm (1") ring holders. Calcite plates with clear apertures up to Ø20 mm can be produced on special requests.

The optical axis of calcite plates is at the particular orientation, which is not parallel to the faces of the plate. Thus walk-off effect for e-polarized beam and displacement of both beams at non-zero AOI should be considered in the actual application conditions. The plane of optical axis is parallel to the long 16 mm edge of the calcite plate and is marked on the ring holder.

Time delay compensators for custom wavelengths, specific delay values, as well as plates made of Alpha-BBO crystals are available on request.

Specifications

Material	Natural Calcite
Clear aperture	Ø12 mm
Ring mount outer diameter	25.4 +0.0 / -0.12 mm
Surface quality	40 – 20 scratch & dig (MIL-PRF-13830B)
Wavefront distortion	λ/4@ 633 nm
Parallelism	<3 arc min
AR coating	R<0.5% 760-840 nm and R<1% at 380-420 nm R<0.5% at 500-530 +1000-1060 nm

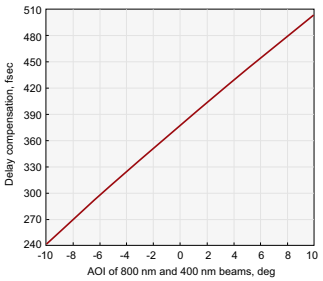
Group velocity delay between 800 nm and 400 nm pulses in compensation plates at different angle of incidence.
400 nm pulse („e" pol) is faster than 800 nm pulse („o" pol).

Standard Calcite plates

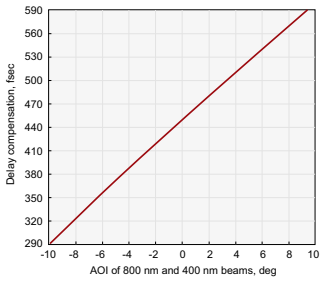
for delay compensation between 800 nm ("o" polarization) and 400 nm ("e" polarization) pulses

Delay compensation range*	Coatings	Catalogue number	Price, EUR
310 – 450 fsec	BBAR @ 800+400 nm	225-2113	470
370 – 520 fsec	BBAR @ 800+400 nm	225-2114	470
440 – 630 fsec	BBAR @ 800+400 nm	225-2115	470

* GVD compensation range at Angle Of Incidence from -10° to +10°.



225-2113



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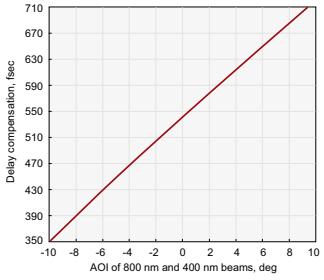


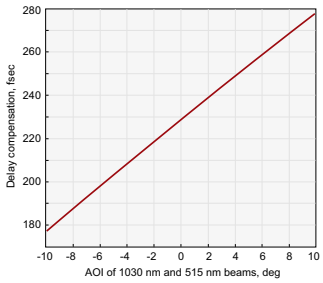
225-2115

Standard Calcite plates

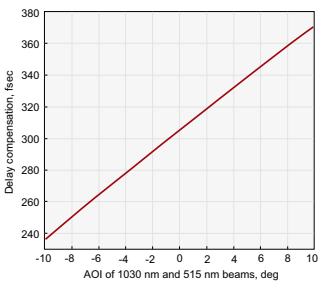
For delay compensation between 1030 nm ("o" polarization) and 515 nm ("e" polarization) pulses

Delay compensation range*	Coatings	Catalogue number	Price, EUR
177 – 278 fs	BBAR @ 1030+515 nm	225-2210	470
236 – 370 fs	BBAR @ 1030+515 nm	225-2211	470
295 – 463 fs	BBAR @ 1030+515 nm	225-2212	470
378 – 593 fs	BBAR @ 1030+515 nm	225-2213	470

* GVD compensation range at angle of incidence from -10° to +10°.



225-2210.



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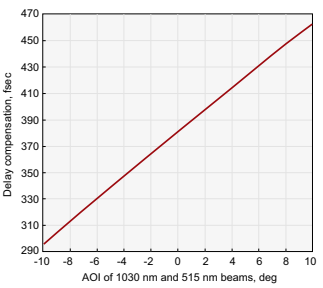

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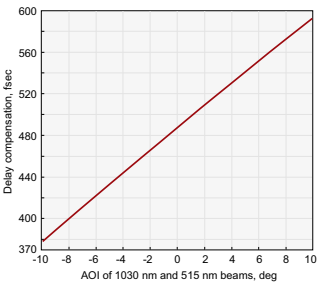

225-2213