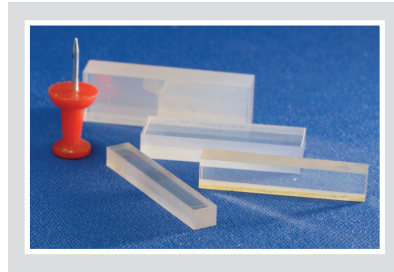


BragGrate™ - Pulse Ultra-short pulse stretcher & compressor

Product Description

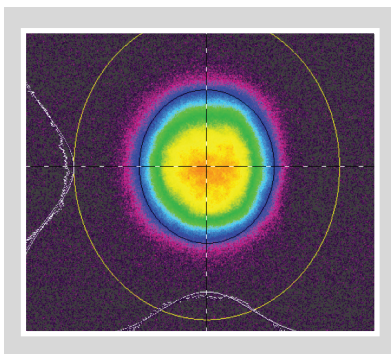
BragGrate™-Pulse is a volumetric Bragg grating in reflecting geometry with a period gradually varying along the direction of beam propagation (so-called chirped Bragg grating, CBG).



BragGrate™-Pulse is the first commercially available CBG-based product (since 2006) especially designed for stretching / compression of fs- and ps- pulses.

Product Features

- Compact geometry and easy-to align
- Ideal for industrial and scientific applications
- High power operation (up to 1 kW average power)
- High energy operation (up to 1 mJ pulse energy)
- Environmentally stable
- Robust, easy to handle and clean
- Preserves diffraction limited quality of femtosecond laser beam with diffraction efficiency exceeding 80%



Output beam shape after passing 30-mm-thick CBG in both directions

Specifications

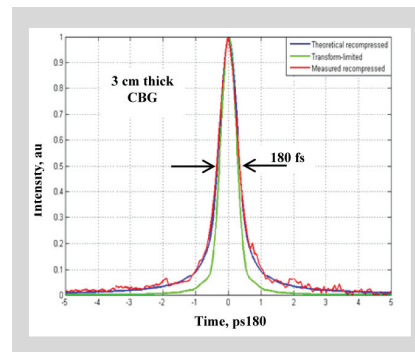
Spectral bandwidth	1-100 nm
Operating range	900-2500 nm
Thickness	10-35 mm
Stretching time	10-180 ps (FWHM)
Efficiency	60% to >95%
Aperture	up to 8x8mm

Applications

BragGrate™-Pulse is for temporal stretching of a reflected ultrashort pulse and recompression of this pulse if launched from the opposite side of the grating.

Typical Specs of BragGrate™- Pulse for 1030 nm spectral range

Center wavelength	: 1032 nm
Spectral bandwidth	: 5, 10, 25 nm
Diffraction efficiency	: > 75%
Thickness	: 20, 30 mm
Stretching time (FWHM)	: ~ 150 ps
Dispersion rate	: ~ 6, 10, 60 ps/nm
Compressed pulse duration	: < 200 fs



Compressed pulse profile theoretical vs measured data with 30 mm thick BragGrate™ Pulse

OptiGrate Corp is a 10-year old, privately owned company which designs and manufactures a full range of BragGrate™ holographic optical elements (volume Bragg gratings) in inorganic photosensitive silicate glass.

OptiGrate supplies custom build, as well as volume orders of diffractive optical components to hundreds of customers on 5 continents. This technology is protected by a portfolio of issued and pending patents.