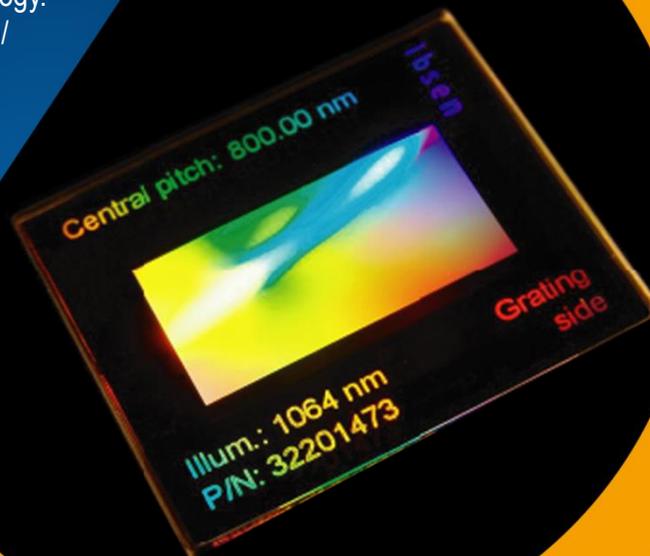


Fused silica transmission grating technology offers unbeatable energy/power damage threshold combined with high-efficiency spectral performance



As femtosecond laser systems advance to ever increasing energy levels, demands to the energy/power handling capabilities of pulse compression gratings increase. Ibsen manufactures 100% fused silica pulse compression gratings that offer unbeatable energy/power handling capacity, combined with high-efficiency, low wavefront distortion performance.

Pulse compression gratings from Ibsen build on Ibsen's world leading position in fused silica transmission gratings, utilizing state-of-the art interferometric patterning technologies and advanced reactive ion etching technology. Gratings are manufactured on custom/OEM basis, but an increasing number of gratings are stock available, such as the grating described in this product sheet.



Pulse Compression Grating

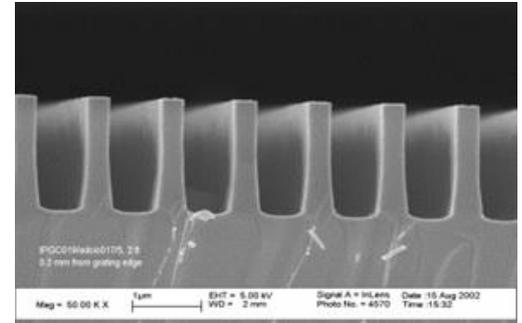
3039.5 l/mm for 450 nm

PCG-3039.5-450-810

3039.5 l/mm for 450 nm

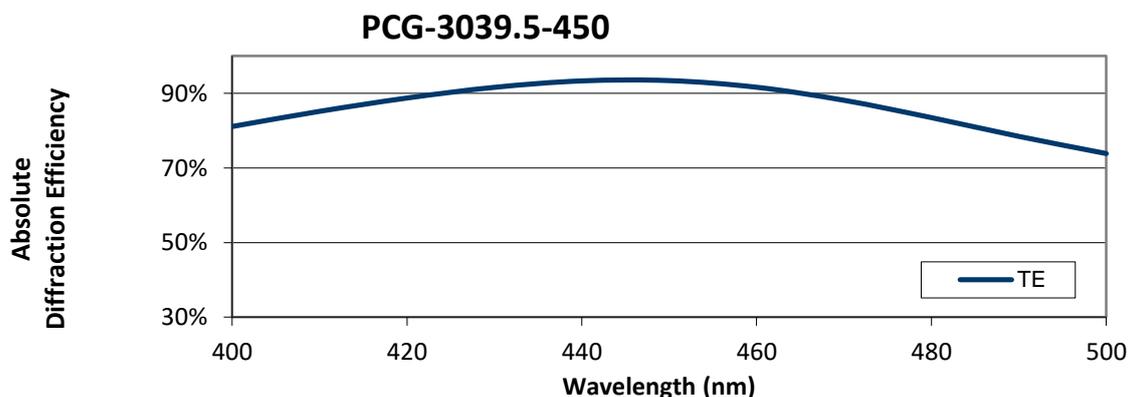
PCG-3039.5-450-810

Benefits
Highest energy/power damage threshold
Environmentally and thermally stable
High diffraction efficiency
High tolerance to incidence angle
Low transmitted wavefront distortion



Parameter	Specification
Material	Fused silica and high-power, dielectric AR coating materials
Grating area	20 mm x 20 mm
Substrate size	22 mm x 22 mm x 1 mm
Grating resolution	3039.5 l/mm
Grating period	329.0 nm +/- 0.1 nm
Dispersion at 450 nm	0.24 deg/nm
Nominal wavelength	450 nm
Angle of incidence (AOI)	Littrow (43 deg)
Diffraction efficiency (TE)	>92%
Back-side AR coating	High power, dielectric AR coating applied
Production technology	2-beam Interferometry and Reactive Ion Etch, Class 10 cleanroom environment
Energy/power damage threshold	http://ibsen.com/products/transmission-gratings/high-power-gratings

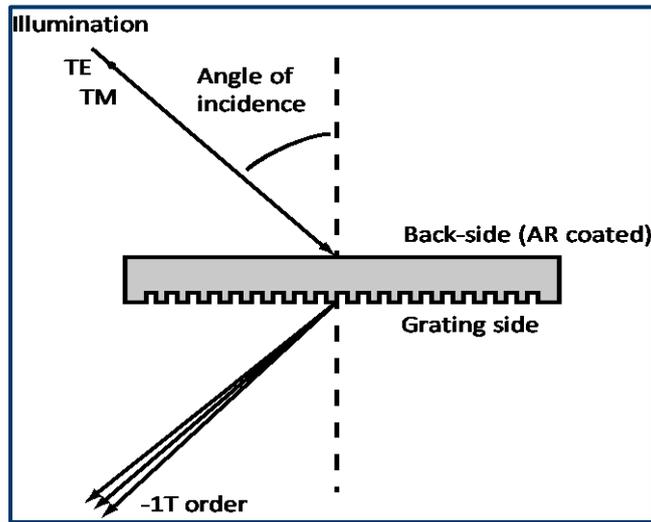
Typical Grating Performance



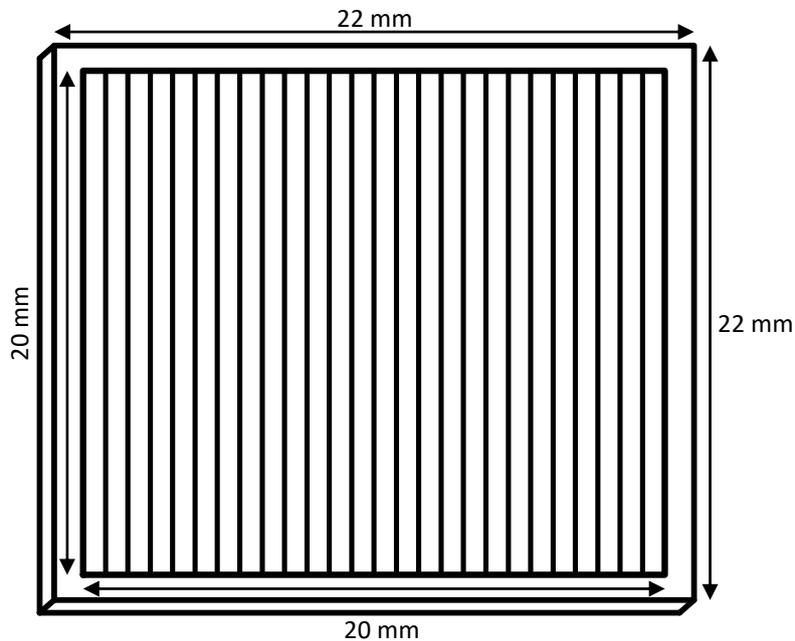
3039.5 l/mm for 450 nm

PCG-3039.5-450-810

Configuration/definitions



Drawing



Specifications are subject to change without notice.

The above grating is an example of Ibsen's capabilities. Ibsen operates as grating partner for our customers, from being an integrated part of the grating and device / instrument design phase, to the manufacturing of prototypes, to volume manufacturing of OEM gratings.