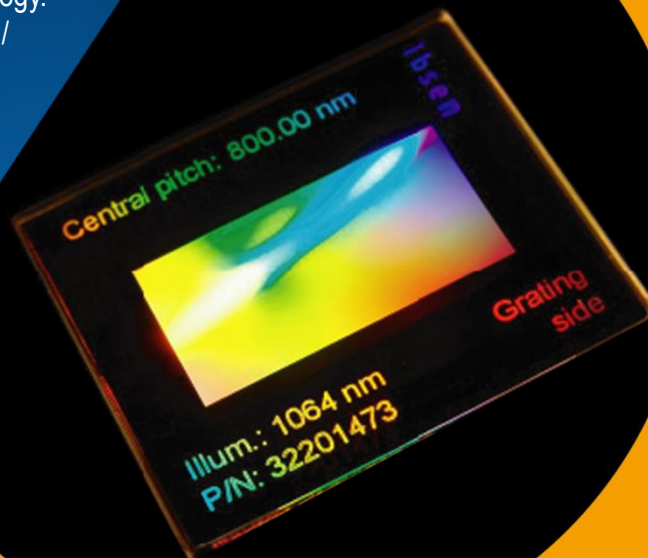


Fused silica transmission grating technology offers unbeatable energy/power damage threshold combined with high-efficiency spectral performance



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

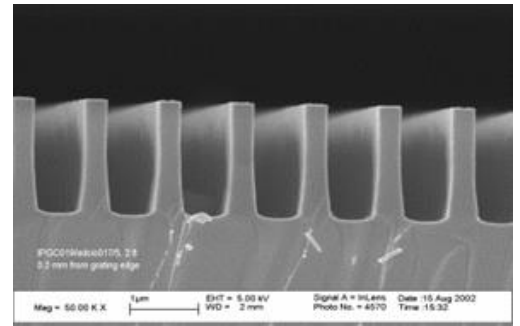
1250 l/mm for 800 nm

PCG-1250-800-991

1250 l/mm for 800 nm

PCG-1250-800-991

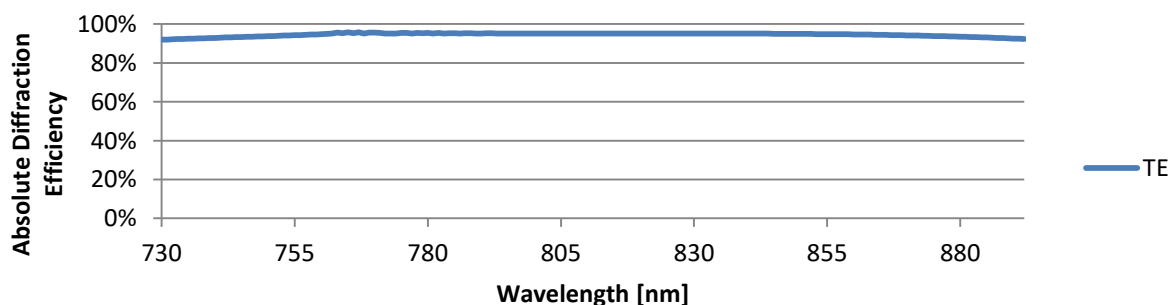
Benefits
Highest energy/power damage threshold
Environmentally and thermally stable
High diffraction efficiency
High tolerance to incidence angle
Low transmitted wavefront distortion



Parameter	Specification
Material	Fused silica and high-power, dielectric AR coating materials
Grating area	30 mm x 15 mm
Substrate size	31 mm x 25 mm x 1 mm
Grating resolution	1250 l/mm
Grating period	800.0 nm +/- 0.1 nm
Dispersion at 800 nm	0.083 deg/nm
Nominal wavelength	800 nm
Angle of incidence (AOI)	Littrow (30 deg)
Diffraction efficiency at 800 nm	>93%
Diffraction efficiency at 730 & 892 nm (TE)	>85%
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

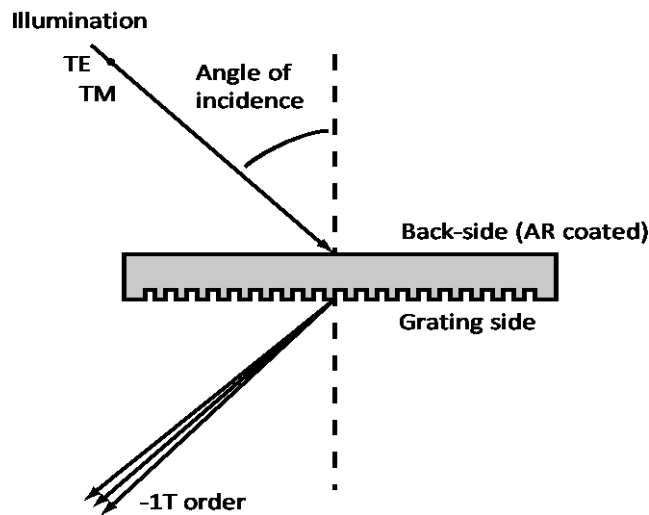
1250 l/mm for 730-892 nm



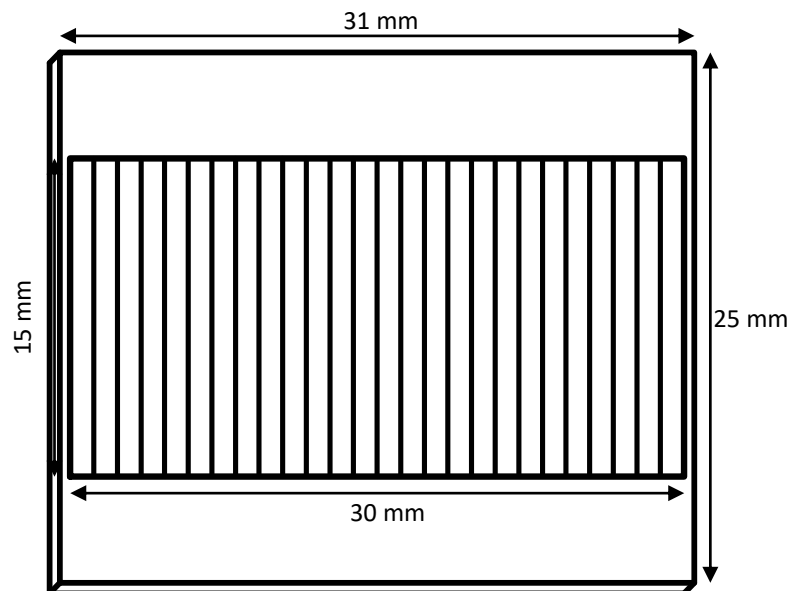
1250 l/mm for 800 nm

PCG-1250-800-991

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.