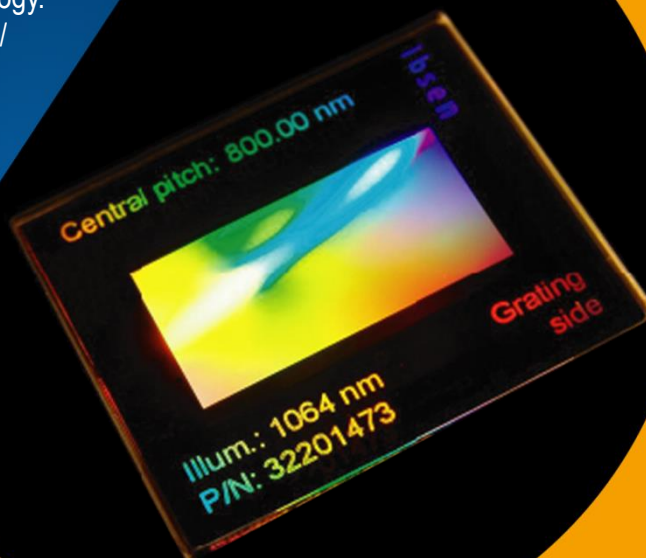


***Fused silica transmission grating technology offers unbeatable energy/power damage threshold combined with high-efficiency spectral performance***



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**

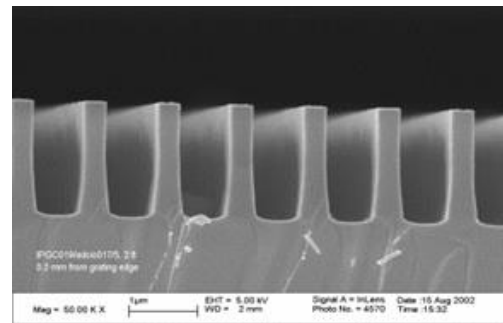
**1250 l/mm for 1030 – 1064 nm**

**PCG-1250-10XX-986**

# 1250 l/mm for 1030 – 1064 nm

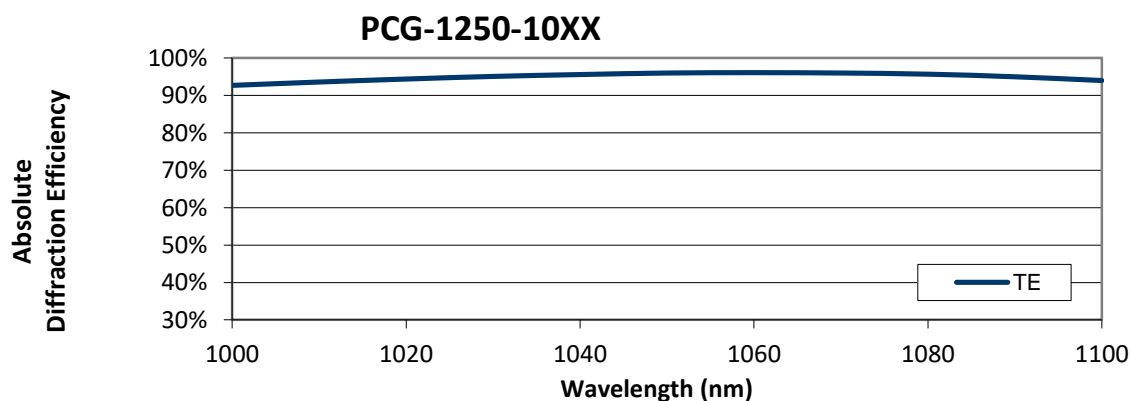
## PCG-1250-10XX-986

| 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                  | 10.2 mm x 5.2 mm  |
| Substrate size                | 11.2 mm x 10.2 mm x 1 mm  |
| Grating resolution            | 1250 l/mm   |
| Grating period                | 800.0 nm +/- 0.1 nm   |
| Dispersion at 1064 nm         | 0.096 deg/nm  |
| Nominal wavelength            | 1030 - 1064 nm  |
| Angle of incidence (AOI)      | Littrow (41.7 deg)  |
| Diffraction efficiency (TE)   | >94%  |
| 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 | <a href="http://ibsen.com/products/transmission-gratings/high-power-gratings">http://ibsen.com/products/transmission-gratings/high-power-gratings</a> |

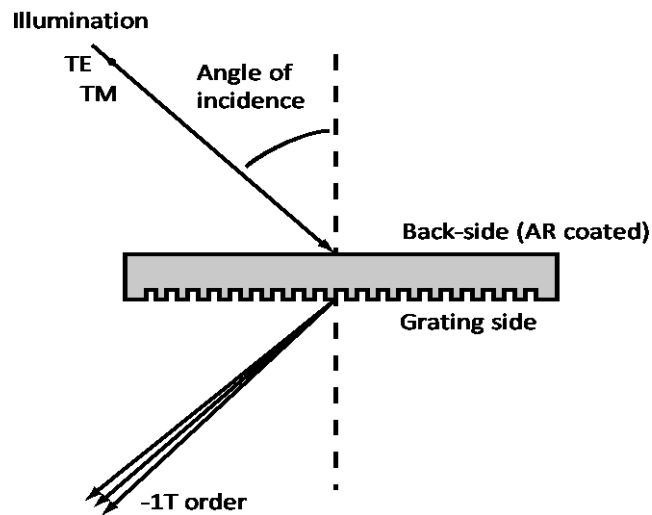
## Typical Grating Performance



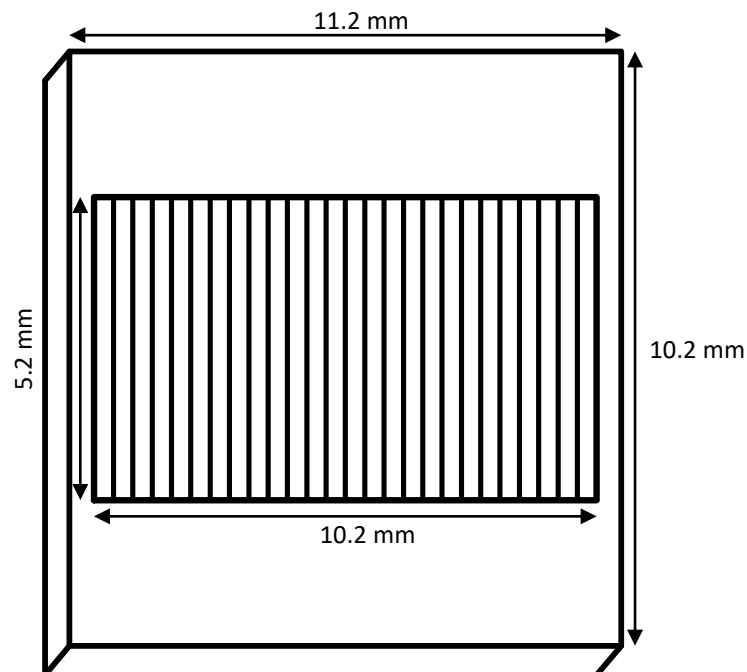
# 1250 l/mm for 1030 – 1064 nm

PCG-1250-10XX-986

## 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.