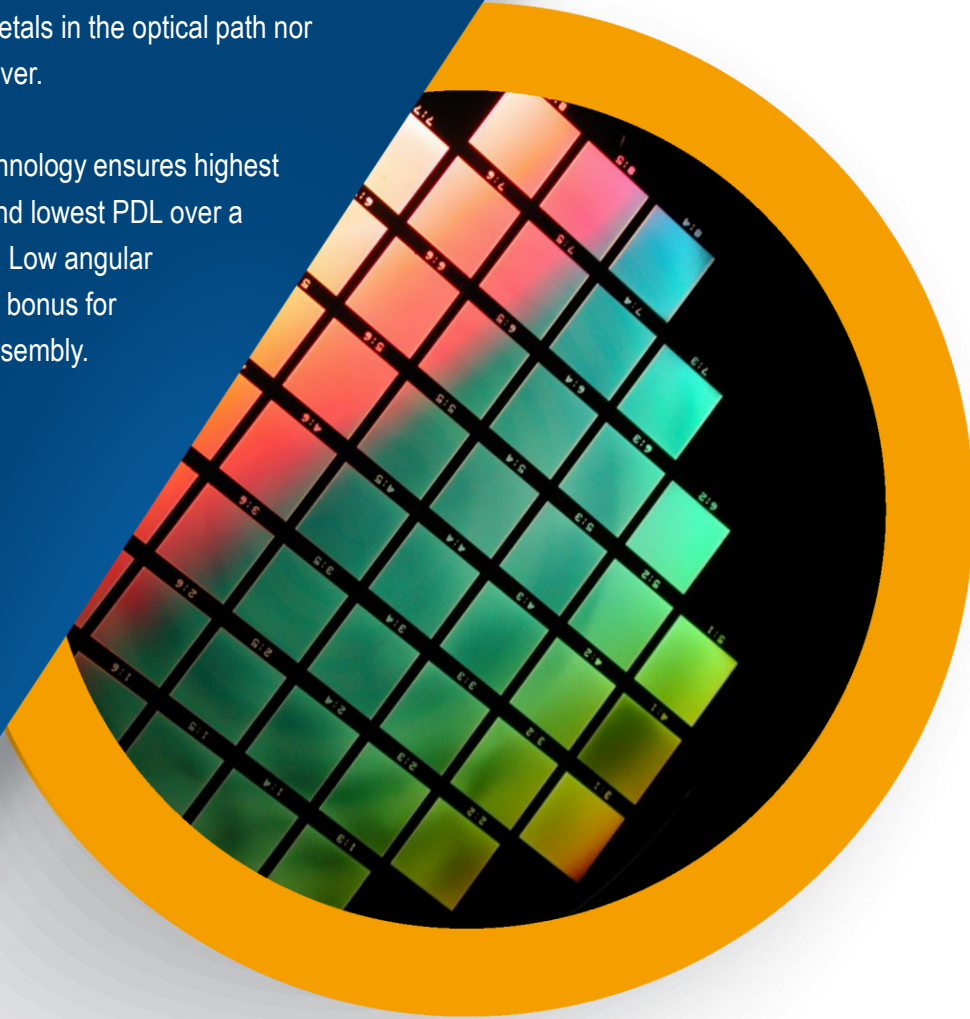


**100% dielectric gratings offer unbeatable environmental and thermal stability combined with high efficiency, low PDL performance**



Polarization independent (PING) telecom gratings from Ibsen are produced by holographic/lithographic stepper technology in 100% dielectric materials. This leads to unbeatable thermal and environmental stability, with no polymers, epoxies, gelatins or metals in the optical path nor in the grating whatsoever.

Advanced etching technology ensures highest diffraction efficiency and lowest PDL over a very broad bandwidth. Low angular sensitivity is an added bonus for module design and assembly.



## **PING Grating**

**600 I/mm PING for Telecom C-band**

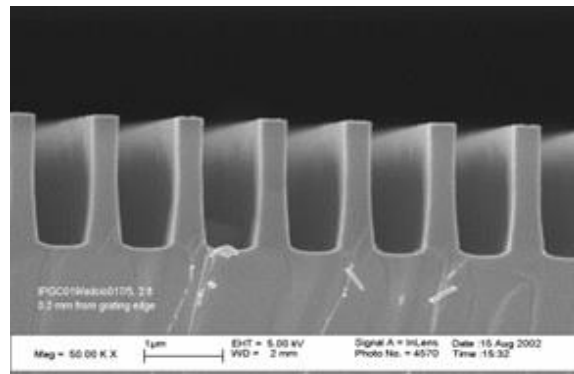
**PING-600-045**

# 600 l/mm PING for Telecom C-band

## PING-600-045

### Benefits

- High efficiency, low PDL, broad spectral bandwidth
- Transmission gratings give much greater alignment tolerances
- Low transmitted wavefront distortion
- High tolerance to illumination angle of incidence
- Two grating designs are possible, offering compact design possibilities
- Unbeatable thermal & environmental stability & lifetime



### Parameter

### Specification

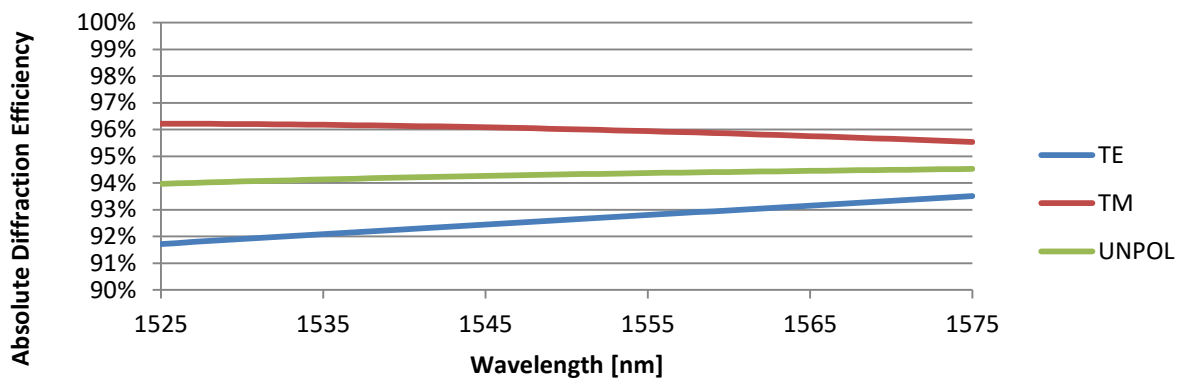
Parameter	Specification
Materials	100% dielectric materials
Grating area	40 mm x 40 mm
Chip size	42 mm x 42 mm
Chip thickness	1 mm
Grating resolution	600 l/mm
PDL	<0.25 dB
Angle of incidence (AOI)	27.7 degrees
Diffraction efficiency (TE & TM)	>90%
Bandwidth	1525 nm – 1575 nm
Production technology	Holographic/lithographic stepper and RIE etching
Maximum operating temperature	>500 degrees C
Packaging and shipment	Gelpak containers. Manufactured and sealed in class 10 cleanroom
Cleaning recommendation	First contact. Available from Photonic Cleaning

# 600 l/mm PING for Telecom C-band

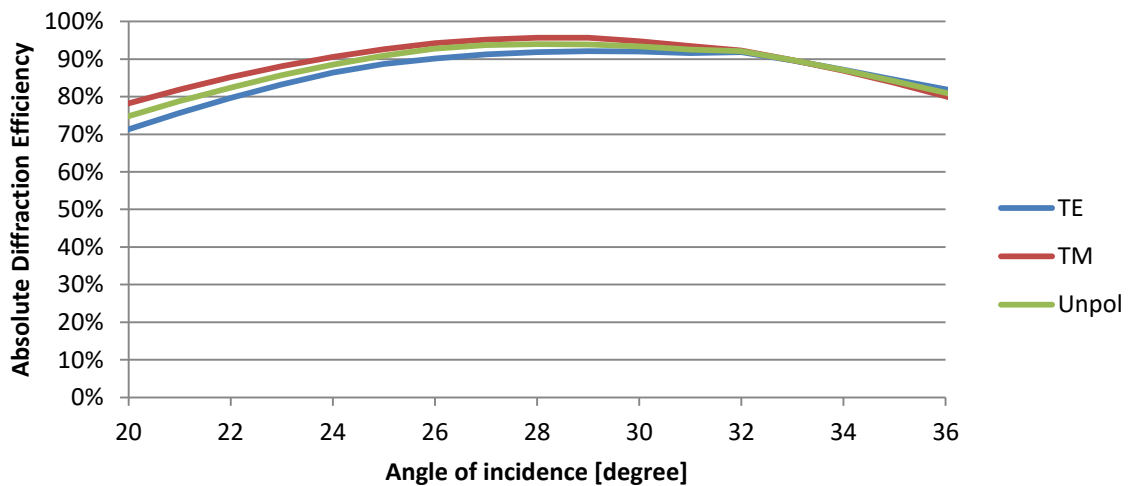
## PING-600-045

### Typical Grating Performance

#### C-band PING Typical Diffraction Efficiency



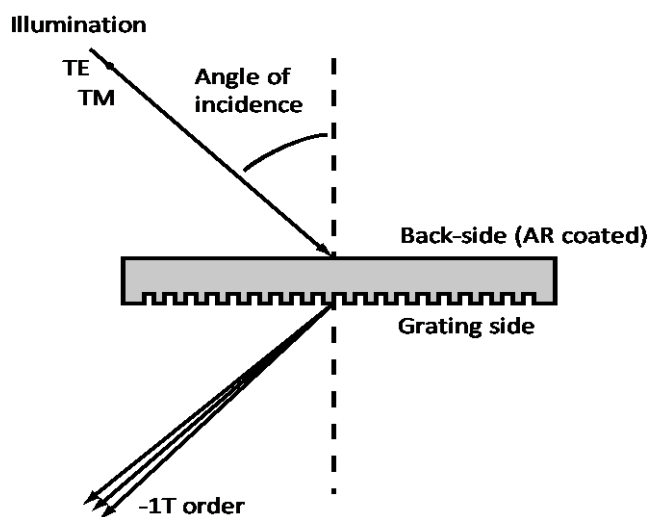
#### Diffraction Efficiency vs Incident Angle



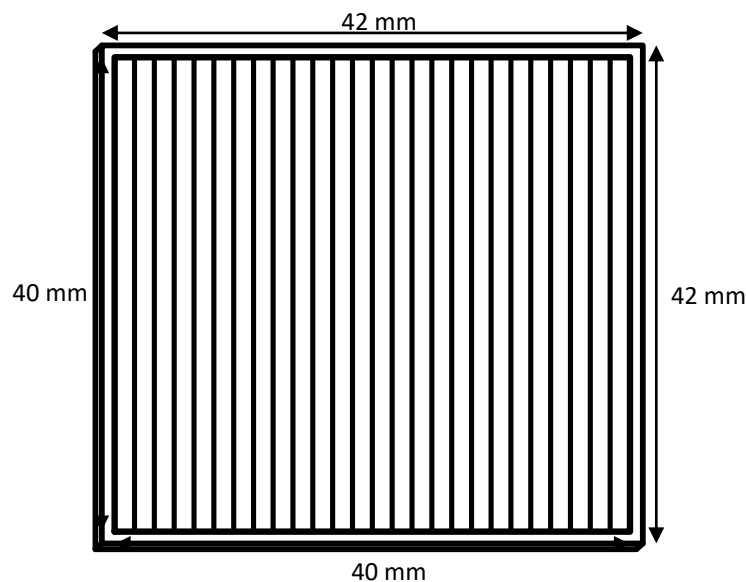
# 600 l/mm PING for Telecom C-band

## PING-600-045

### 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.