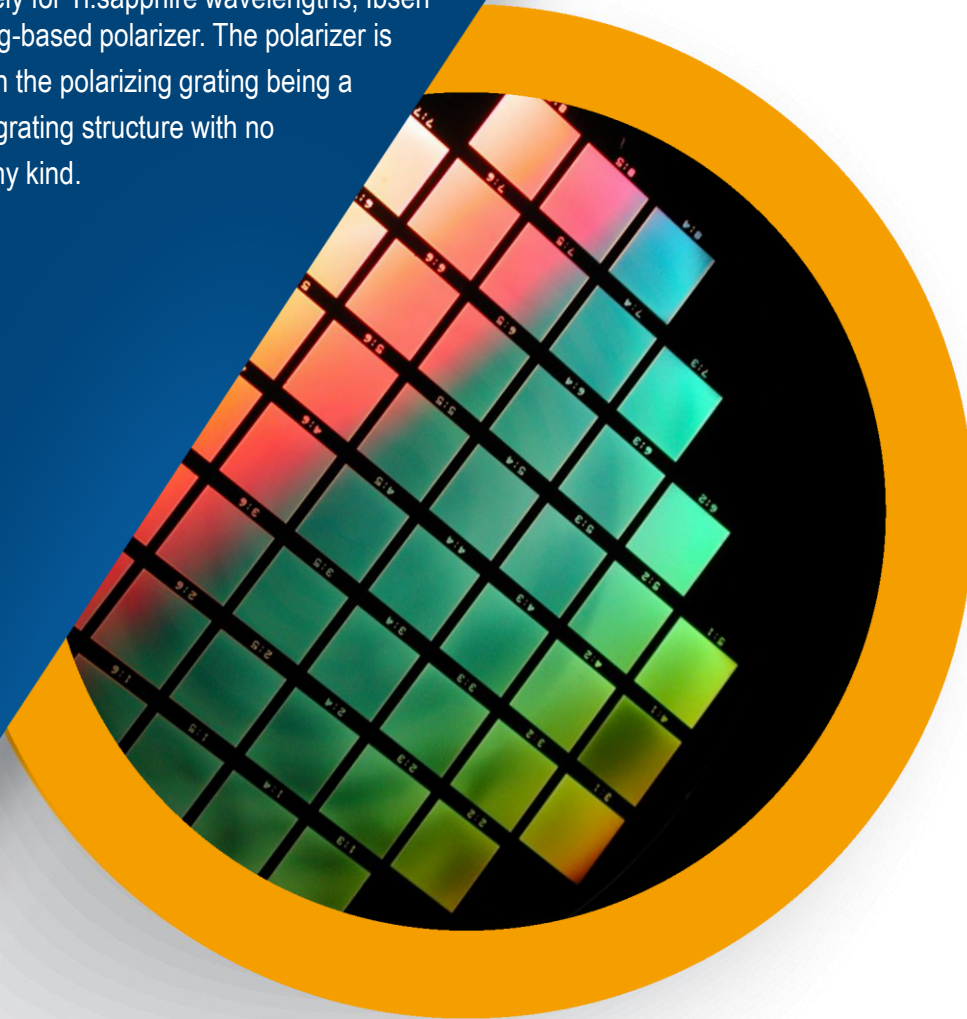


Grating polarizer for variable attenuation of Ti:sapphire lasers

For high energy, ultrafast laser applications, common polarizer technologies used for variable attenuation do not fulfill the complete set of requirements to extinction ratio, transmission level, bandwidth, transmitted wavefront distortion, GDD ripple and energy handling capability. For these applications, and initially developed solely for Ti:sapphire wavelengths, Ibsen offers a unique, grating-based polarizer. The polarizer is 100% fused silica, with the polarizing grating being a surface relief, etched grating structure with no thin-film coatings of any kind.



Grating Polarizer

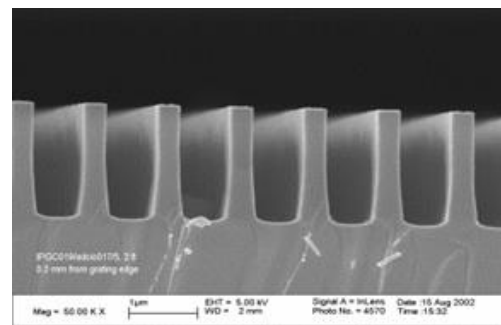
2174 l/m for 800 nm

PDG-2174-800-801

2174 l/m for 800 nm

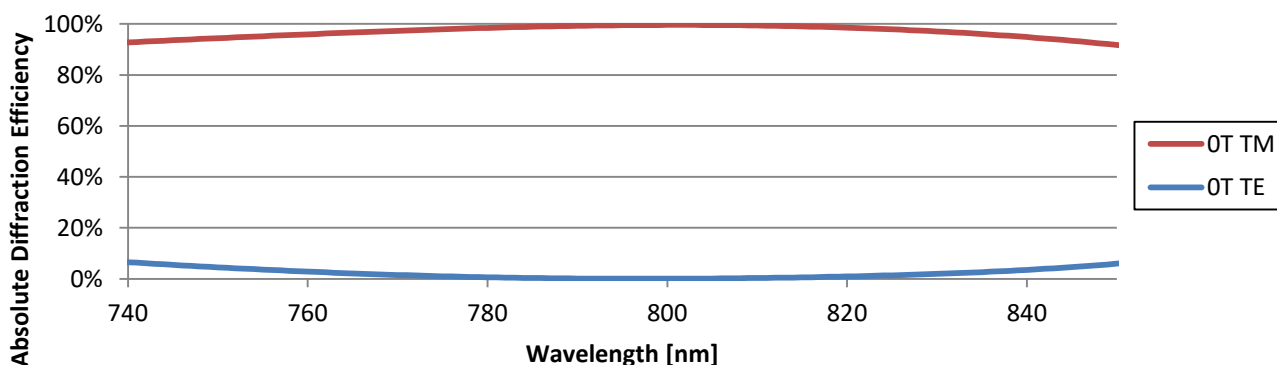
PDG-2174-800-801

Benefits
High extinction ratio
Low loss
High bandwidth
Low TWD and GDD ripple
High energy handling capability



Parameter	Specification
Materials	100% fused silica, no thin film coatings
Grating size	36 mm x 18 mm
Substrate size	38 mm x 20 mm
Substrate thickness	1 mm
Grating resolution	2174 l/mm
Angle of incidence (AOI)	59.5 deg (nominal, to be rotated for optimal contrast and for attenuation)
Central wavelength of operation	800 nm
Non-deflected polarization	TM (p)
Extinction ratio OT (TM:TE)	>50:1 (contact us for >100:1)
Transmission OT (TM):	>95% (contact us for >99%)
Cleaning recommendation	First contact. Available from Photonic Cleaning

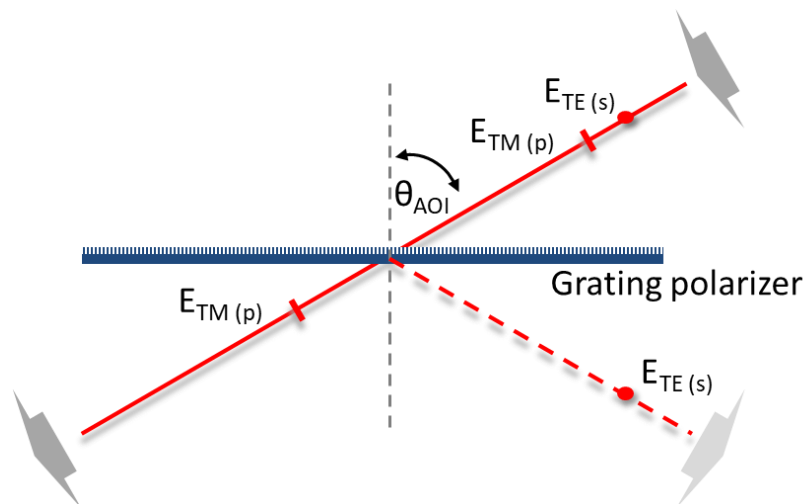
OT TM and TE of grating polarizer PDG-2174/800-801



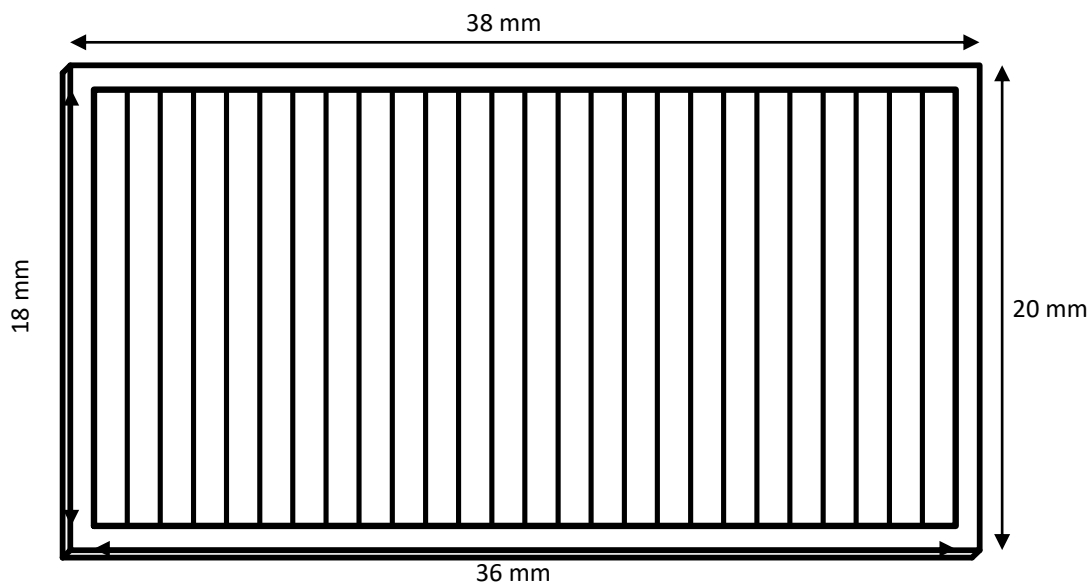
2174 l/m for 800 nm

PDG-2174-800-801

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.