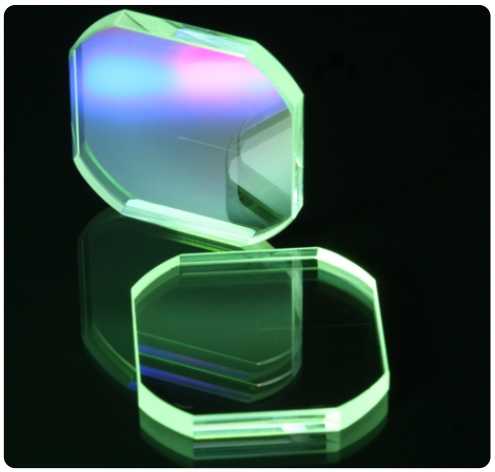
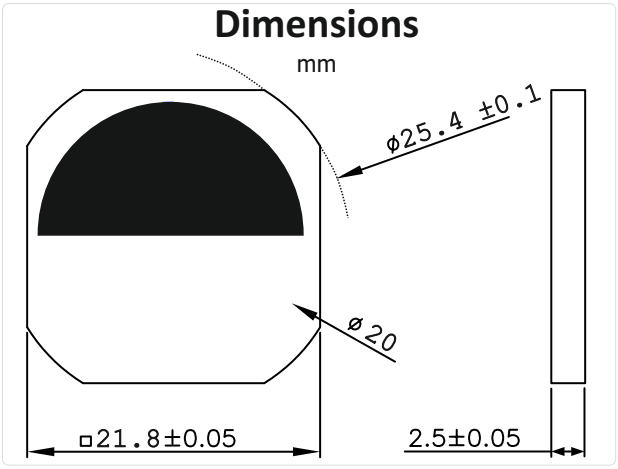
vortex photonics

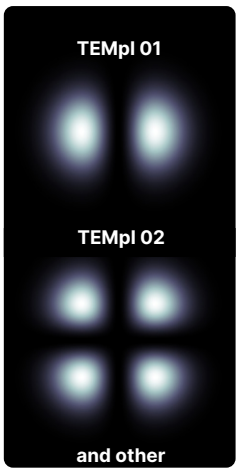
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Pi Phase Step / Mode Converters

High-precision fused-silica phase element for generating higher-order spatial modes up to 20 mm







Specifications

Wavelengths:	193 to 3500 nm
Generated modes:	TEMpl 01 to 16
Number of sectors:	1 to 16
Number of steps:	1 Pi-step per sector
Measured depth:	±5 nm to theoretical
Material:	fused silica
Coating:	none or custom coating

Applications

- Superresolution microscopy
- Laser materials processing
- Optical edge detection and spatial filtering
- Precision optical alignment and metrology
- Quantum optics and spatial mode multiplexing
- Quantitative phase imaging
- Optical trapping and manipulation

Part number information

Pi – 532 – 10 – 01

Model	Wavelength	Sector diameter	Mode Index
Mode Converter or Pi Phase Step	193 to 3500 nm laser wavelength	10 mm on a 21.8 mm x 21.8 mm substrate	01 to 16 or custom

Application Notes

1. Ensure good quality of the original laser beam.
   We recommend:
   a) a Gaussian beam profile (TEM00)
   b) a good laser wavelength stability over time and power
2. Mount the mode converter into a XY translation stage (best way to match the optical axis of the phase plate). The mode converter can be placed into any 1 inch lens mount.
3. Expand the laser beam over the phase boundary of the mode converter (<20 mm)
4. After the mode converter: adjust the beam size to match your focusing optics
5. Avoid touching the surface of the mode converter
6. **Always use laser safety goggles!**