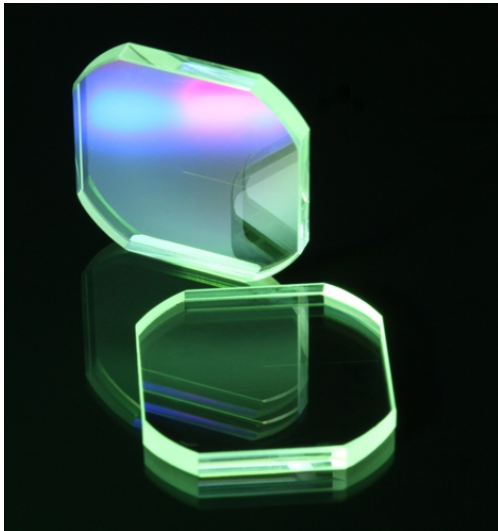
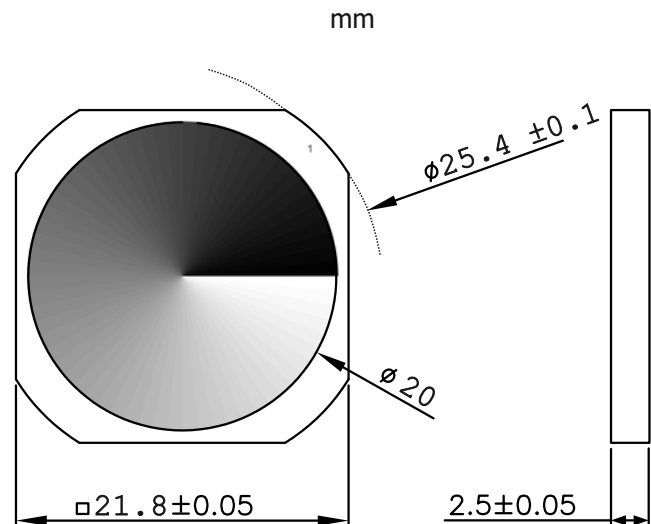


Spiral Phase Plates / Vortex Lenses



Dimensions



Specifications

Wavelengths:	193 to 1550 nm
Topological charges:	$m = 1$ to 8, 16, 24, 32
Number of sectors:	equal to topological charge
Number of steps:	64 per sector
Measured total depth:	± 5 nm to theoretical
Material:	fused silica
Coating:	none, custom coating options

Applications

- Atomic and molecular excitation
- Optical tweezers and manipulations
- STED and MINIFLUX microscopy
- Optical vortex coronagraphs
- Nano-Lithography
- Laser cutting and machining
- Data transfer

Part number information

V - 532 - 20 - 8

Model	Wavelength	Spiral diameter	Topological charge
V: Vortex Lens alias Spiral Phase Plate	193 to 1550nm laser wavelength or custom	20: 20 mm on a 21.8 x 21.0 mm substrate	$m = 1$ to 8, 16, 24, 32 or custom TC

Application Notes

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