

Powell Lens (Laser Line Generator Lens)

The Powell Lens is one kind of Aspherical lens, which can transform laser beam into a straight laser line. At present our Powell Lens are available in fan angles of 5°, 10°, 15°, 20°, 30°, 45°, 53°, 60°, 70°, 75°, 85°, 90° and 96°. The optical line generator lens is optimized for a Φ 0.8mm, Φ 1mm, Φ 1.25mm, Φ 1.5mm, Φ 2mm, Φ 2.2mm, Φ 2.6mm, Φ 3mm, Φ 3.6mm, Φ 4mm, Φ 5mm and Φ 7mm input laser beam diameter. And it will convert the beam into a uniform, straight line. Using this lens design will result in an impressive, even distribution of energy along the length of the line.

These lenses offer excellent overall stability and line quality. They outperform cylindrical lenses that generate Gaussian beam profiles with hot-spot center points and fading edges. Originally designed for laser line generators, they are now offered unmounted for a variety of custom applications, including: use in alignment, machine vision systems, construction and process control.

Key Feature

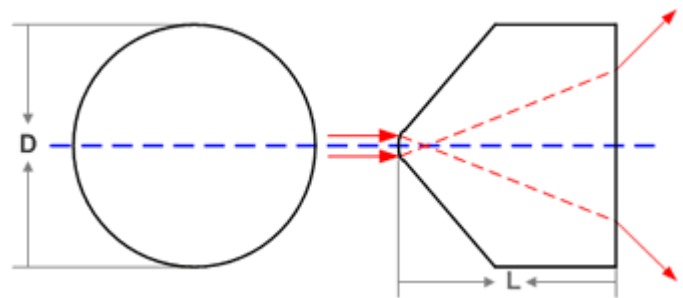
- Accurate Fan Angle
- 532nm Green Laser Module
- Excellent Uniformity Line Laser: <25%, <35%, <45% optional
- Lens Diameter: 8.92±0.02mm
- AR coating @ 532nm is available
- All Handmade with High Precision

Applications:

- Laser Scanning
- High Uniformity Line Laser

Standard Specifications:

Optical Material:	BK7, SF glass
Design Wavelength:	632.8nm
Clear Aperture:	>90%
Surface Quality:	60-40 s/d
Bevel:	<0.5mm X 45°
Coating:	available upon request



Standard Laser Line Generator Lens

Fan Angle	Input Beam Diameter	Line Intensity Uniformity	Material	Product Number
30°	1.0mm	<45%	N-BK7	UQT-PLPB0101
45°	2.0mm	<45%	N-SF6	UQT-PLPB0102
60°	2.0mm	<45%	N-SF6	UQT-PLPB0103
90°	2.0mm	<45%	N-SF6	UQT-PLPB0104

Please Contact [ultiQuest](#) for other dimensions in prototype and production quantities.

NOTES!

- ➔ If you need AR coating for Powell lens, please request us.
- ➔ Every edge of these prisms is chamfered (beveled) for chipping prevention. The dimensions of these prisms are values not including chamfer.
- ➔ Be sure to wear laser safety goggles when checking optical path and adjusting optical axis.