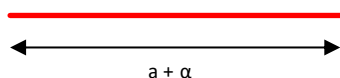


DE-R 369 Diffractive Optical Element



- **Element Number: DE-R 369**
- **Current Product Revision: A**
- Description: Quasi Continuous Line - 36
- Number of Spots on Line: 1501
- Substrate Material: Polycarbonate (PC)
- Size (Ø x Thickness): 8 x 1.2 mm
- Design Wavelengths: 639 nm
- Recommended Wavelength Range: ###-### nm
- Minimum Recommended Beam Diameter: 1.5 mm

Within the recommended wavelength range, the zeroth order is not brighter than the rest of the line. Line width and line angle and the intensity in the undiffracted central spot ('zero order intensity', see reverse page) will vary most with the wavelength.

Diffraction efficiencies given on this datasheet have been measured using elements of product revision A.

Pattern Geometry and Diffraction Angles

Wavelength	Line Width @ 100 mm Distance a	Spot-to-spot spacing @ 100 mm Distance	Pattern Angle α
515 nm	51 mm	68.6 μm	29°
532 nm	53 mm	71 μm	30°
639 nm	65 mm	86.6 μm	36°
650 nm	66 mm	88.3 μm	37°
730 nm	75 mm	100.6 μm	41°
780 nm	81 mm	108.6 μm	44°
801 nm	84 mm	112.0 mm	46°

MOUNTED VERSION

For testing or setups under laboratory conditions we offer a version mounted in 12.7 mm stainless steel frame for use with standard laboratory holders.



Ø 0.32" (Ø 8.0 mm)

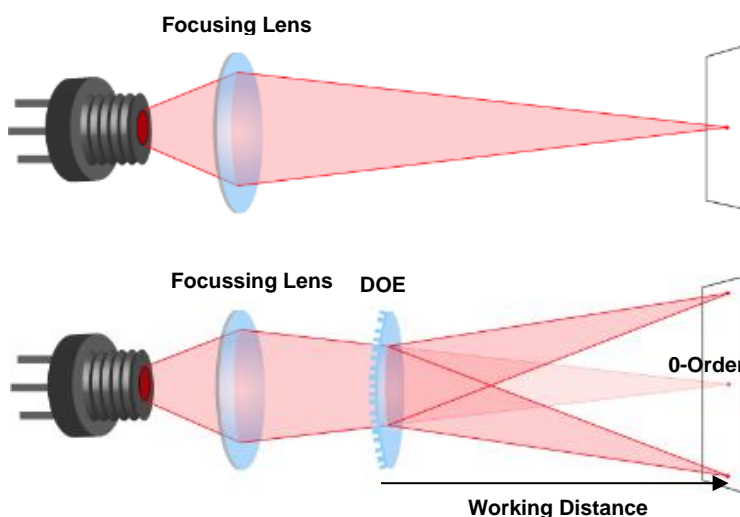
Thorlabs 8 mm steel lens adapter

COLLIMATED / CONVERGING LASER

The laser can be collimated for long range use or converging for a fixed working distance.

Please note that the size/thickness of each spot or line depends on the focusing of

Setup



Laser diodes are the most common light source to be used with diffractive optical elements, but other laser light sources may also be used.

The DOEs are best used with collimated or convergent laser sources. The microstructure surface should be oriented towards the laser.

The 0-order spot is equivalent in size and shape to the original beam, but its power is attenuated.

Diffraction Zero Order Intensity:

Wavelength	0-Order Intensity TM (min)	0-Order Intensity TM (typ.)	0-Order Intensity TM (max)	0-Order Intensity TE (min)	0-Order Intensity TE (typ.)	0-Order Intensity TE (max)
447	43%	46%	49%	40.7%	44.0%	47.1%
532	11.9%	13.7%	15.7%	16.5%	18.7%	21.4%
638	0.3%	0.9%	1.6%	1.1%	2.3%	3.8%
652	0.3%	0.6%	1.1%	0.9%	1.6%	2.6%
687	0.4%	1.0%	1.8%	0.2%	0.9%	2.0%
752	2.9%	4.0%	4.9%	1.2%	2.4%	3.6%
800	6.3%	7.5%	9.2%	3.1%	5.0%	6.5%

