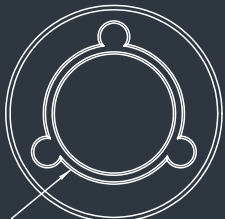
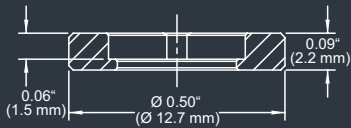


DE-R 352 Diffractive Optical Element

MOUNTED VERSION

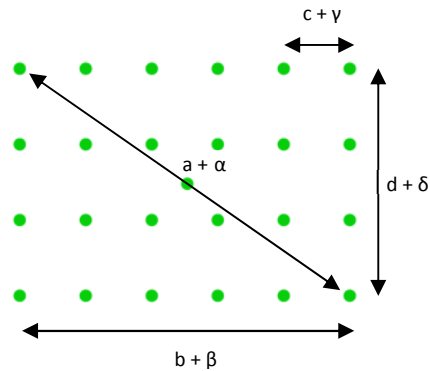
For testing or setups under laboratory conditions we offer a version mounted in 12.7 mm stainless steel frame for use with standard laboratory holders.



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 the laser.



- **Element Number:** DE-R 352
- **Current Product Revision:** A
- **Description:** Matrix 4 x 6 Dots
- **Number of Dots:** 24 + 1
- **Substrate material:** Polycarbonate (PC)
- **Size (Ø x Thickness):** 8 x 1.2 mm
- **Design wavelengths:** 532 nm
- **Recommended wavelength range:** 500 - 580 nm
- **Minimum recommended beam diameter:** 0.5 mm

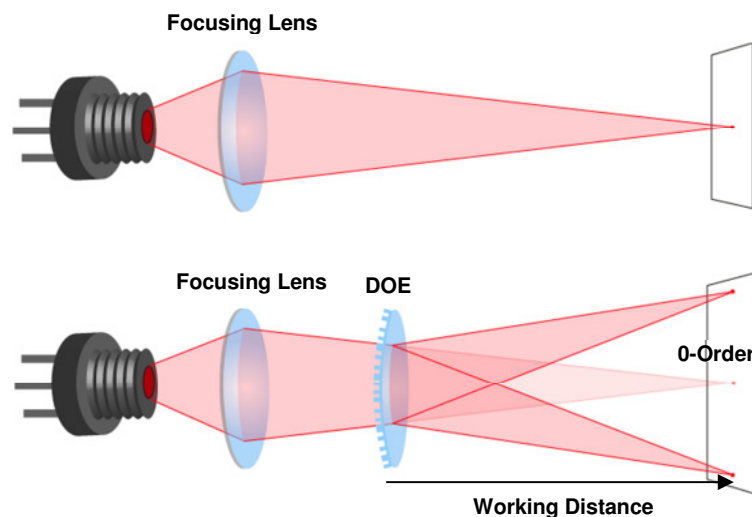
Pattern size and pattern angles and the intensity in the undiffracted central spot ('zero order intensity', see reverse page) will vary most with the wavelength. Within the recommended wavelength range, the element shows the lowest intensity in the central spot.

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

Geometry and Diffraction Angles

Wavelength	Pattern Size @ 100 mm Distance				Pattern Angles			
	a	b	c	d	α	β	γ	δ
448 nm	22.3 mm	11.5 mm	3.83 mm	19.2 mm	12.7°	6.58°	2.19°	10.9°
488 nm	24.4 mm	12.5 mm	4.18 mm	20.9 mm	13.9°	7.17°	2.39°	11.9°
516 nm	25.8 mm	13.3 mm	4.42 mm	22.1 mm	14.7°	7.59°	2.53°	12.6°
532 nm	26.6 mm	13.7 mm	4.56 mm	22.8 mm	15.1°	7.83°	2.61°	13.0°
594 nm	29.8 mm	15.3 mm	5.10 mm	25.5 mm	16.9°	8.76°	2.92°	14.5°
638 nm	32.0 mm	16.5 mm	5.49 mm	27.5 mm	18.2°	9.42°	3.14°	15.6°
660 nm	33.2 mm	17.1 mm	5.69 mm	28.4 mm	18.8°	9.75°	3.25°	16.2°

Setup



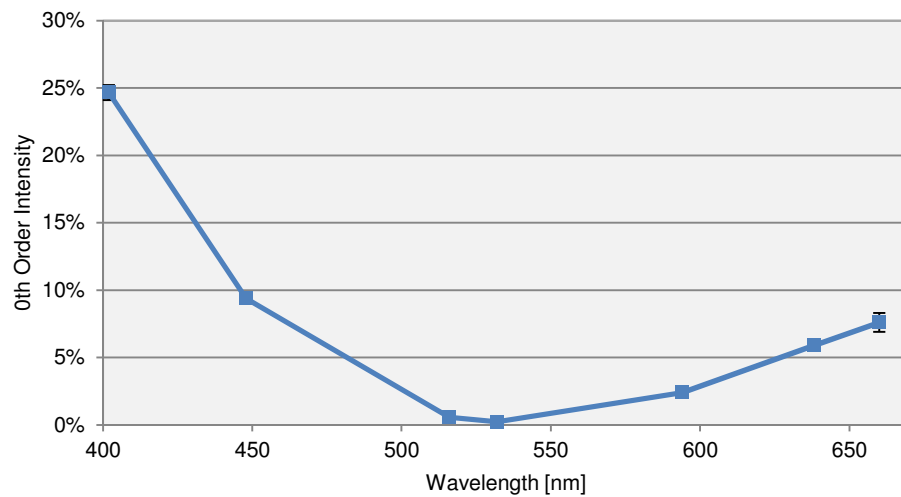
Laser diodes are the most common light source to be used with diffractive optical elements, but other laser light sources may also be used.

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
402	24.7%
448	9.4%
516	0.5%
532	0.2%
594	2.4%
638	5.9%
660	7.6%



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