

>> DE-R 255 - Standard Diffractive Optical Element

Element Number: DE-R 255

Description: 65 Lines (Square – Central Line Thicker)

Number of Lines: 65 Lines

Material: Polycarbonate (PC)

Size (Ø x Thickness): 8 x 1.2 mm

Optimum Wavelength: **635 nm**

(The element is usable with a range of wavelengths, but the following parameters will vary most with the wavelength: pattern size (see table 1) and intensity in the undiffracted central spot ('zero order', see table 2). At the optimum wavelength given on this datasheet, the element shows the same intensity in the central spot as in the off-axis spots.)

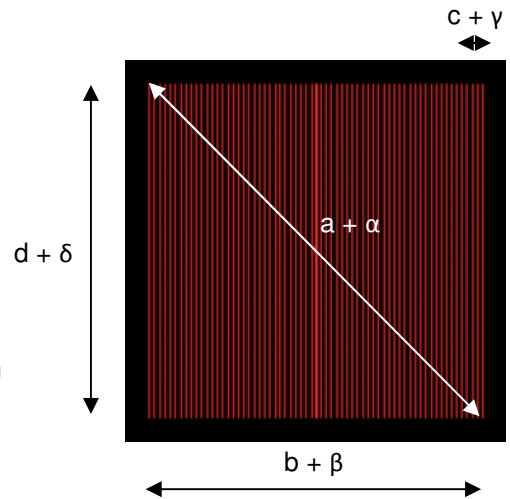
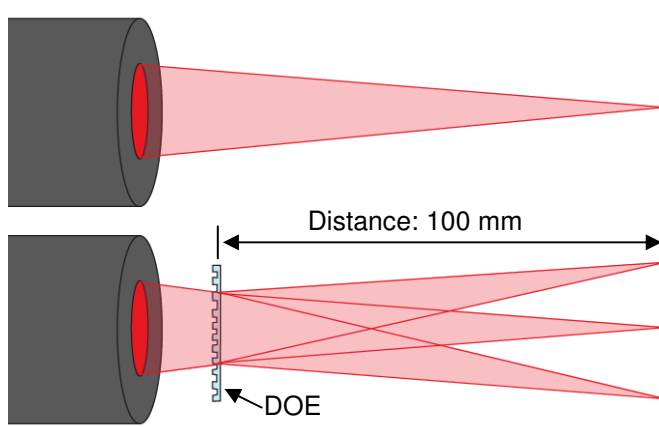


Table 1

Wavelength	Pattern Size @ 100 mm Distance				Pattern Angles			
	a	b	c	d	α	β	γ	δ
488 nm	33 mm	24 mm	0.37 mm	24 mm	18.9°	13.5°	0.21°	13.5°
543 nm	37 mm	26 mm	0.41 mm	26 mm	21°	15°	0.23°	15°
594 nm	41 mm	29 mm	0.45 mm	29 mm	23°	16.4°	0.26°	16.4°
635 nm	44 mm	31 mm	0.48 mm	31 mm	25°	17.6°	0.27°	17.6°
650 nm	45 mm	32 mm	0.50 mm	32 mm	25°	18°	0.28°	18°
730 nm	51 mm	36 mm	0.56 mm	36 mm	29°	20°	0.32°	20°
780 nm	54 mm	38 mm	0.60 mm	38 mm	30°	22°	0.34°	22°
808 nm	57 mm	40 mm	0.62 mm	40 mm	32°	22°	0.35°	22°

Setup:



Diffraction Zero Order Intensity:

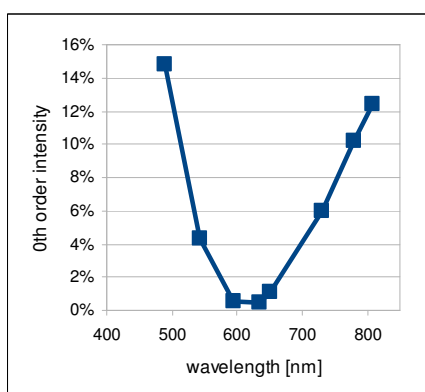


Table 2

Wavelength	0th Order Intensity
488	15%
543	4.5%
594	0.6%
635	0.5%
650	1.1%
730	6%
780	11%
808	13%