

# >> DE-R 247 - Standard Diffractive Optical Element

Element Number: DE-R 247

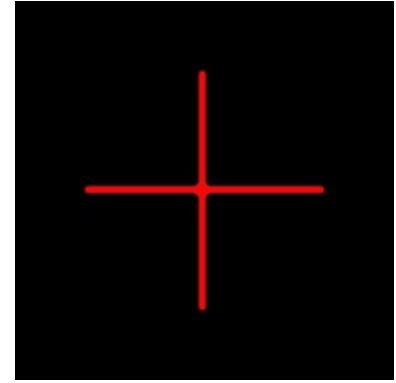
Description: Cross - 25

Material: Polycarbonate (PC)

Size (Ø x Thickness): 8 x 1.2 mm

Optimum Wavelength: 594 nm

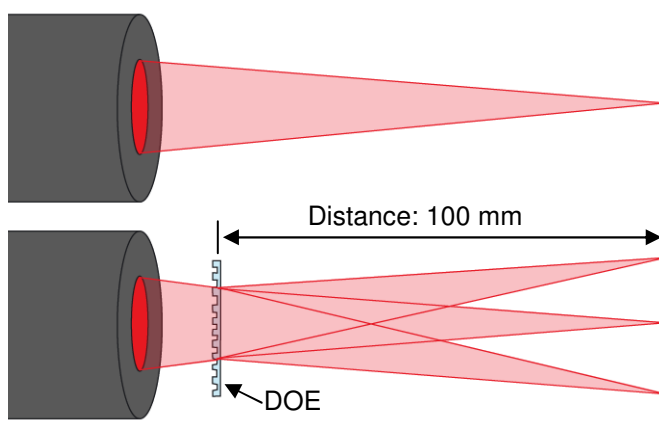
(The element is usable with a range of wavelengths, but the following parameters will vary most with the wavelength: pattern size (see table 1) and intensity in the undiffracted central spot ('zero order', see table 2). At the optimum wavelength given on this datasheet, the element shows the same intensity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



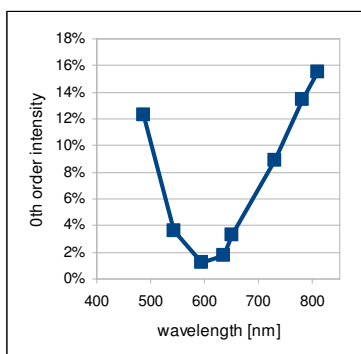
**Table 1**

Wavelength	Pattern Size @ 100 mm Distance	Pattern Angles
	<b>a</b>	<b>α</b>
488 nm	33 mm	18.8°
543 nm	37 mm	21°
594 nm	41 mm	23°
635 nm	44 mm	25°
650 nm	45 mm	25°
730 nm	51 mm	28°
780 nm	54 mm	30°
808 nm	56 mm	32°

## Setup:



## Diffraction Zero Order Intensity:



**Table 2**

Wavelength	0th Order Intensity
488	13%
543	3.7%
594	1.3%
635	1.8%
650	3.3%
730	9%
780	14%
808	16%