

# >> DE-R 246 - Standard Diffractive Optical Element

**Element Number: DE-R 246**

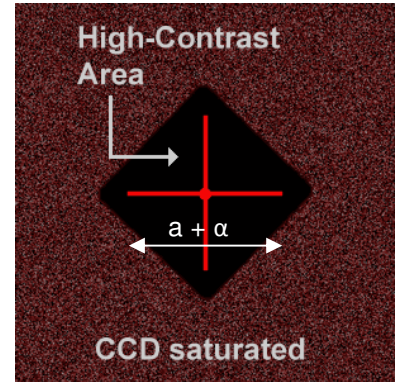
Description: Cross with surrounding high contrast area

Material: Polycarbonate (PC)

Size ( $\varnothing$  x Thickness): 8 x 1.2 mm

Optimum Wavelength: **594 nm**

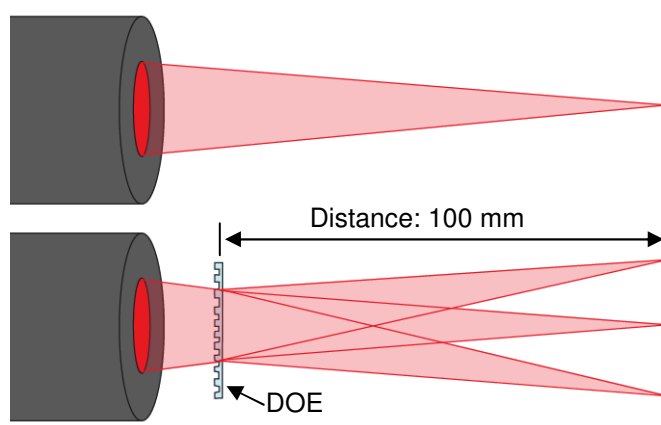
(The element is usable with a range of wavelengths, but the following parameters will vary most with the wavelength: pattern size (see table 1) and intensity in the undiffracted central spot ('zero order', see table 2). At the optimum wavelength given on this datasheet, the element shows the same intensity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



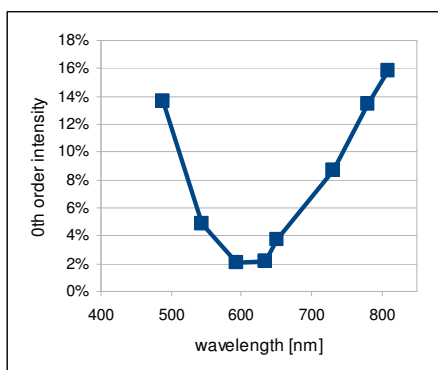
**Table 1**

Wavelength	Pattern Size @ 100 mm Distance	Pattern Angles
	<b>a</b>	<b><math>\alpha</math></b>
488 nm	13.5 mm	7.7°
543 nm	15.0 mm	8.6°
<b>594 nm</b>	<b>16.5 mm</b>	<b>9.4°</b>
635 nm	17.6 mm	10.1°
650 nm	18.0 mm	10.3°
730 nm	20 mm	11.6°
780 nm	22 mm	12.4°
808 nm	23 mm	12.8°

## Setup:



## Diffraction Zero Order Intensity:



**Table 2**

Wavelength	0th Order Intensity
488	14%
543	4.9%
<b>594</b>	<b>2.0%</b>
635	2.2%
650	3.8%
730	9%
780	14%
808	16%