

# >> DE-R 264 - Standard Diffractive Optical Element

**Element Number: DE-R 264**

Description: 1 : 9 Dot Line

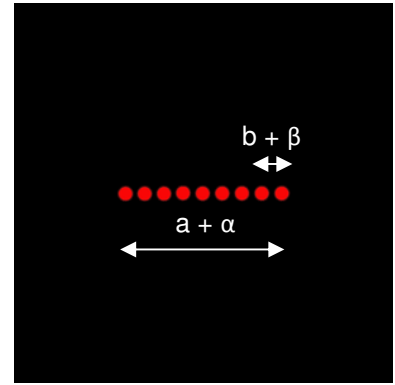
Number of Dots: 9 Dots

Material: Polycarbonate (PC)

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

Optimum Wavelength: **730 nm**

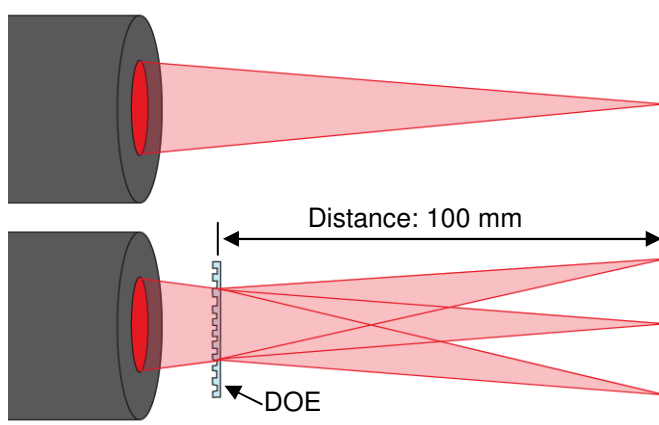
(The element is usable with a range of wavelengths, but the following parameters will vary most with the wavelength: pattern size (see table 1) and intensity in the undiffracted central spot ('zero order', see table 2). At the optimum wavelength given on this datasheet, the element shows the same intensity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



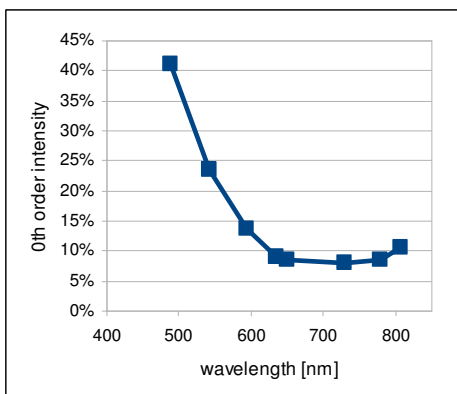
**Table 1**

Wavelength	Pattern Size @ 100 mm Distance		Pattern Angles	
	a	b	$\alpha$	$\beta$
488 nm	1.14 mm	0.14 mm	0.65°	0.08°
543 nm	1.27 mm	0.16 mm	0.73°	0.09°
594 nm	1.39 mm	0.17 mm	0.80°	0.10°
635 nm	1.49 mm	0.19 mm	0.85°	0.11°
650 nm	1.52 mm	0.19 mm	0.87°	0.11°
<b>730 nm</b>	<b>1.71 mm</b>	<b>0.21 mm</b>	<b>0.98°</b>	<b>0.12°</b>
780 nm	1.83 mm	0.23 mm	1.05°	0.13°
808 nm	1.89 mm	0.24 mm	1.08°	0.14°

## Setup:



## Diffraction Zero Order Intensity:



**Table 2**

Wavelength	0th Order Intensity
488	41%
543	24%
594	14%
635	9%
650	9%
<b>730</b>	<b>8%</b>
780	9%
808	11%