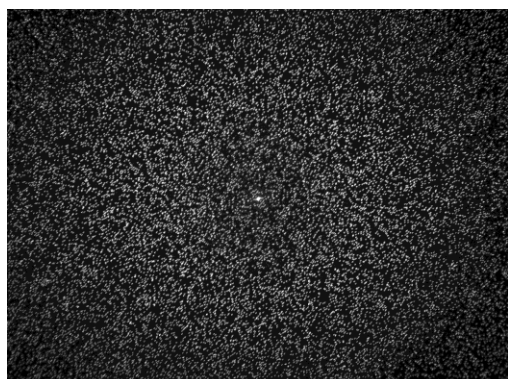
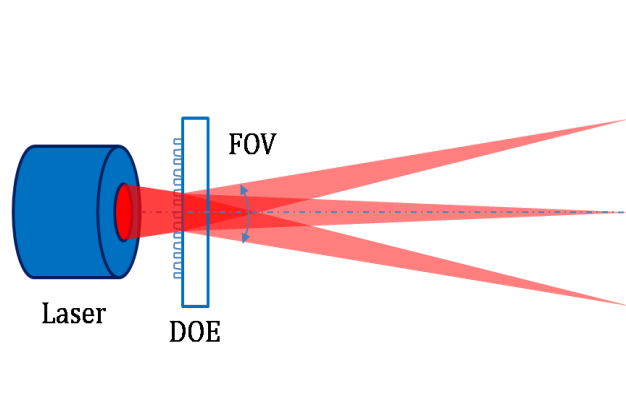


DTC-RD02 Diffractive Optical Element



- **Element Number: DTC-RD02**
- Description: Random dots pattern
- Number of dots: 10,000
- Substrate material: PET/PMMA/GLASS
- DOE active area: 4 x 4 mm
- Design wavelength: 850 nm
- Minimum recommended beam diameter (FWHM): 2 mm

Pattern Specifications



A DOE functions with a laser light source that emits a diffractive pattern. Each DOE pattern is characterized by a specific laser wavelength, focal length, and transverse mode. Each laser wavelength will result in a different zero order intensity. The focal length is dependent on the DOE and the object distance which can be adjusted using a collimating lens (CL). The transverse mode will affect the dot shape.

Field of View (FOV)	59° × 46°(HxV)
Aspect Ratio	4:3
Contrast ¹ (calculated by gray level)	≥ 9
Uniformity ² (calculated by gray level)	≥ 50%
Zero order	≤ 0.3%

¹ **Contrast:** in the defined area, the ratio of the 95th percentile of the grayscale value over the mode grayscale value of the background, $C=I_{95\%}/I_{\text{median}}$

² **Uniformity:** the ratio of the grayscale value of the dots at a given location to the grayscale value of the dots in the center of the pattern, $U=I_{\text{each area}}/I_{\text{max of each area}}$