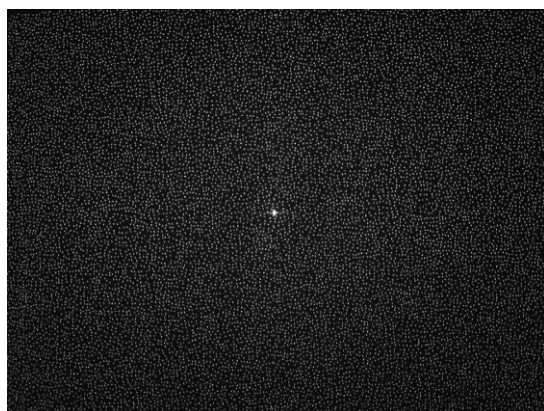
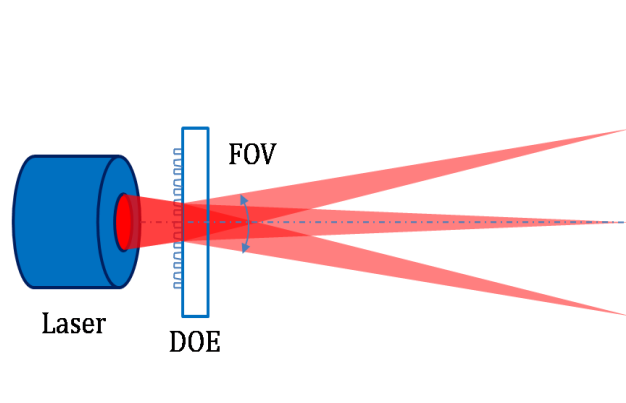


DTC-RD09 Diffractive Optical Element



- **Element Number: DTC-RD09**
- Description: Random dots pattern
- Number of dots: 15,000
- Substrate material: PET/PMMA/GLASS
- DOE active area: 5 x 5 mm
- Design wavelength: 830 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)	60° × 46.8°(HxV)
Aspect Ratio	4:3
Contrast ¹ (calculated by gray level)	≥ 10
Uniformity ² (calculated by gray level)	≥ 45%
Zero order	≤ 0.2%

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

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