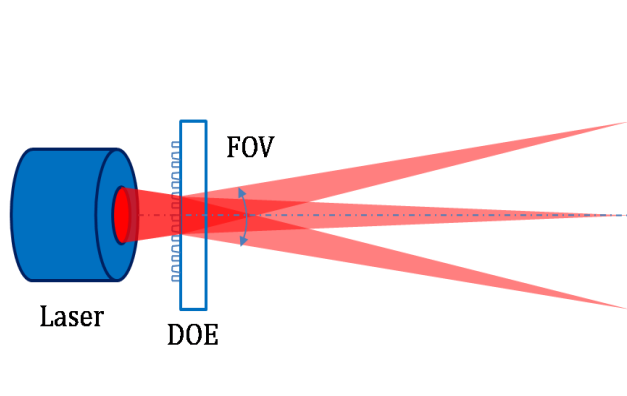


DTC-AA-38K Diffractive Optical Element



- **Element Number:** DTC-AA-38K
- **Description:** Random dots pattern
- **Number of dots:** 38,000
- **Substrate material:** PET/PMMA/GLASS
- **DOE active area:** 5 x 5 mm
- **Design wavelength:** 940 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)	68° × 48.5°(HxV)
Aspect Ratio	4:3
Contrast ¹ (calculated by gray level)	≥ 5
Uniformity ² (calculated by gray level)	≥ 30%
Zero order	≤ 0.2%

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