Digigram
Advanced DOE Optics

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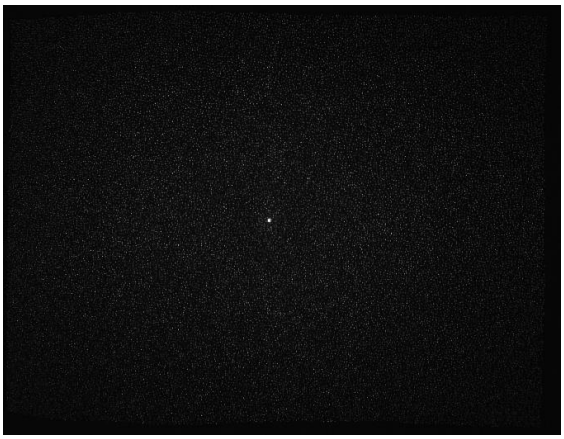
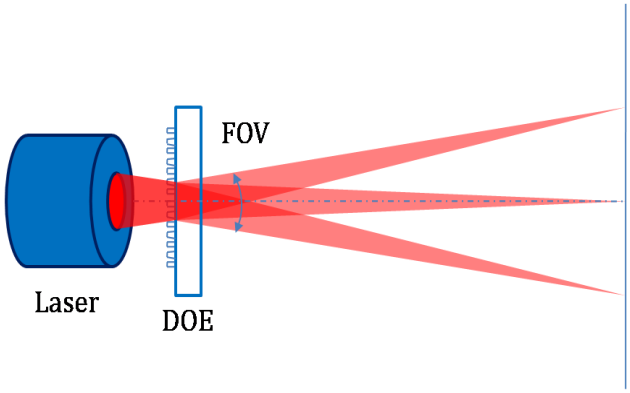
DTC-RD13 Diffractive Optical Element



- **Element Number: DTC-RD13**
- Description: Random dots pattern
- Number of dots: 30,000
- 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)	70° × 55.4°(HxV)
Aspect Ratio	4:3
Contrast[1] (calculated by gray level)	≧3
Uniformity[2] (calculated by gray level)	≧30%
Zero order	≦0.3%

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

[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, $U=I_{each\ area}/I_{max\ of\ each\ area}$

TEL: +886-3-355-1635 Website: http://www.digigram.com.tw Email: Echo@digigram.com.tw
Head Office:No.88, Ln. 1434, Chunri Rd., Taoyuan Dist., Taoyuan City 33051, Taiwan