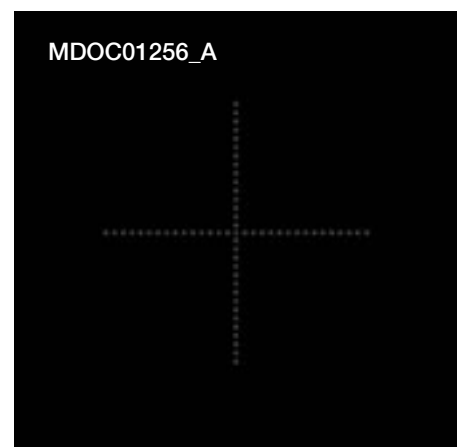
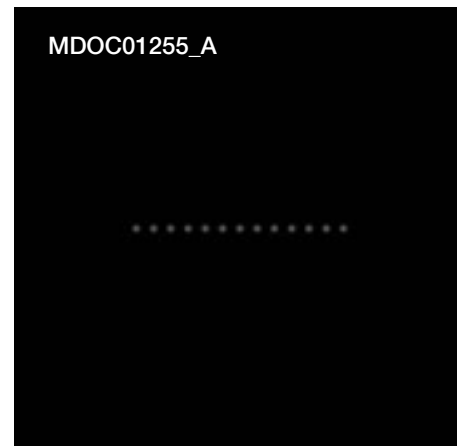


Micro-Optic Solutions for Pattern Generators



DigitalOptics Corporation™ (DOC) is a world-wide leader in the design and manufacture of diffractive optical elements (DOEs). Using wafer-based lithography, DOC produces its OptiML™ DOEs with exceptional thermal, mechanical, and optical performance characteristics. Wafer-level processing provides excellent manufacturing repeatability and economies of scale. Available materials include crystal-quartz, fused-silica, glass, silicon and advanced synthetic substrates.

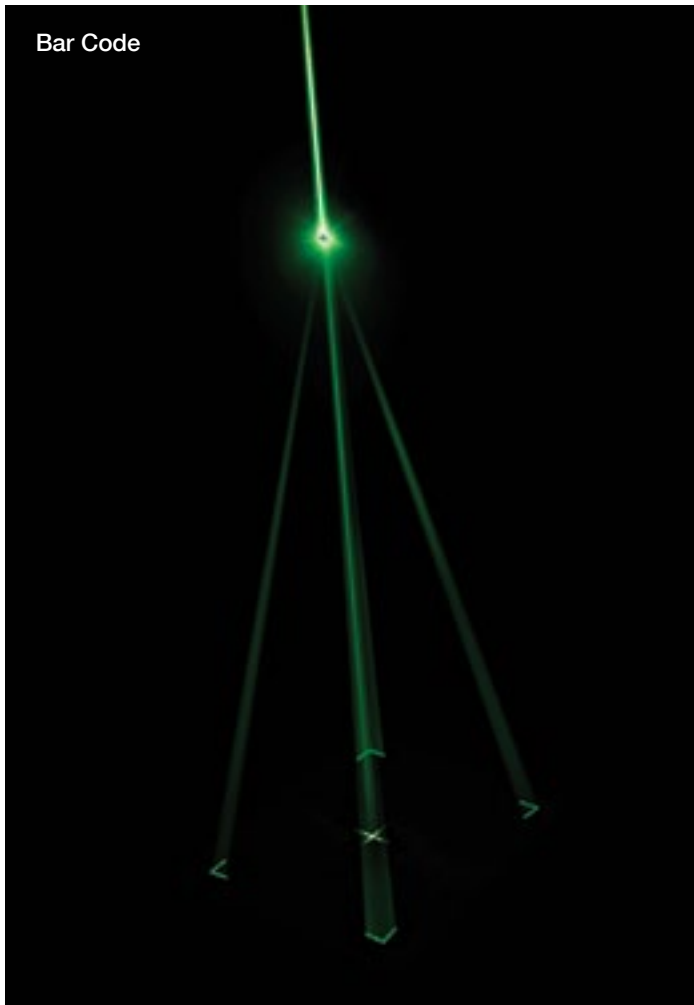


Pattern generator DOEs redistribute laser beam energy to create precise patterns:

- QWERTY keyboards for virtual input devices
- Structured light for 3D measurement/perception
- Frame generators for data capture systems (e.g. barcode scanners)
- Targets for laser scopes and sights
- Spot arrays for inspection & processing

OptiML DOEs are fully customizable to meet the needs of the most demanding laser-based applications and are meticulously designed to maximize transmission efficiency while minimizing zero-order transmission. They are easy to integrate into complex optical systems, as they can be insensitive to input beam and angular alignment.

Both custom and stock designs are available.



Technical Specifications - DOEs

Feature Control	As small as 100nm, with 15nm overlay control and ~100nm corner rounding
Wavelength	193nm to 14µm
Materials	Quartz, fused-silica, silicon, germanium or advanced synthetic substrates
Dimensions	0.5mm to 125.0mm
Projection Angles	Wide: up to 120° (full angle)
Coatings	Anti-reflective coating and metallization capabilities
Zero Order	Typically < 1.5%
Efficiency	Varies by design

Specifications of Available Products

DOC P/N	MDOC01255_A	MDOC01256_A
Output Pattern	1X13 Spot Array	Cross Hair
Die Size (mm)	15x15x1	15x15x1
Substrate	Optical Grade Fused- Silica	
Phase Levels	8	8
Wavelength (nm)	650	650
Pattern Angle (Max X°)	0.00°	7.11°
Pattern Angle (Max Y°)	5.83°	7.11°
Transmission Efficiency	>80%	>80%
Non Uniformity	5%	5%

DOC P/N	MDOC01176_A
Output Pattern	Line
Die Size (mm)	15x15x1
Substrate	Optical Grade Fused- Silica
Wavelength (nm)	650
Full Angle	13.6°
0 th Order	<1.2%
Transmission Efficiency	> 77%
Non Uniformity	<10%

Contact a DOC sales representative for more information.

3025 Orchard Parkway | San Jose, CA 95134 | τ +1.704.887.3154 | www.doc.com

DigitalOptics, the DigitalOptics logo, OptiML, µPILR, µZ and µBGA are trademarks or registered trademarks of DigitalOptics Corporation or its affiliated companies in the United States and other countries.