

Micro-Optic Technology Defense & Security Solutions



DigitalOptics Corporation™ (DOC) is a world-wide leader in the design and manufacture of precision micro-optics. Each day military aircraft, satellites, and ground-based war fighters depend on DOC's high-performance optics to complement and enable innovation in the most advanced laser-based optical systems, including Heads-Up Mounted Displays (HUD, HMD), Ultra-Compact Imaging Systems (including LWIR), Missile Guidance Systems, Target Acquisition Systems and Data Communication Systems.



With over 20 years of industry experience, DOC's optical design team offers unmatched design to fabrication correlation, consistently delivering products optimized for the highest optical performance. DOC's world class manufacturing facility is equipped with state-of-the-art photolithographic

equipment, enabling the fabrication of optics with precise patterning and alignment of optical features. In addition, wafer-based processing provides excellent repeatability and economy of scale for volume applications.

DOC's substrate material selection is wide, including crystal-quartz, fused-silica, glass, silicon and advanced materials suitable for LWIR.



The DOC family of high-performance defense and security products includes both diffractive and refractive solutions:

- **Beam Shapers**
- **Diffusers**
- **Beam Splitters**
- **Beam Homogenizers**
- **Pattern Generators**
- **Multi-Function Optics**
- **Gratings**
- **Refractive Lenses** (*available in LWIR*)
- **Micro-Lens Arrays**
- **Aspheric Lenses**

Features

- **Made in the USA**
- **ISO 9001 & 14001 Certified**
- **DDTC (ITAR) Registered**
- **ROHS compliant**



Technical Specifications - Diffractive Optics

Feature Control	Features as small as 100nm, with 15nm overlay control and ~100nm corner rounding
Wavelength	193nm to 14 μ m
Materials	Crystal-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

Technical Specifications - Refractive Optics

Wavelengths	Materials and applications from 193nm to 14 μ m
Lens Materials	Fused-silica, silicon, IR materials, polymers
Lens Diameters	0.01mm up to 10mm
Lens Sags	<10 μ m up to 750 μ m
Wafer Sizes	150mm and 200mm
Coatings	Anti-reflective coating and metallization capabilities

Contact a DOC sales representative for more information.

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