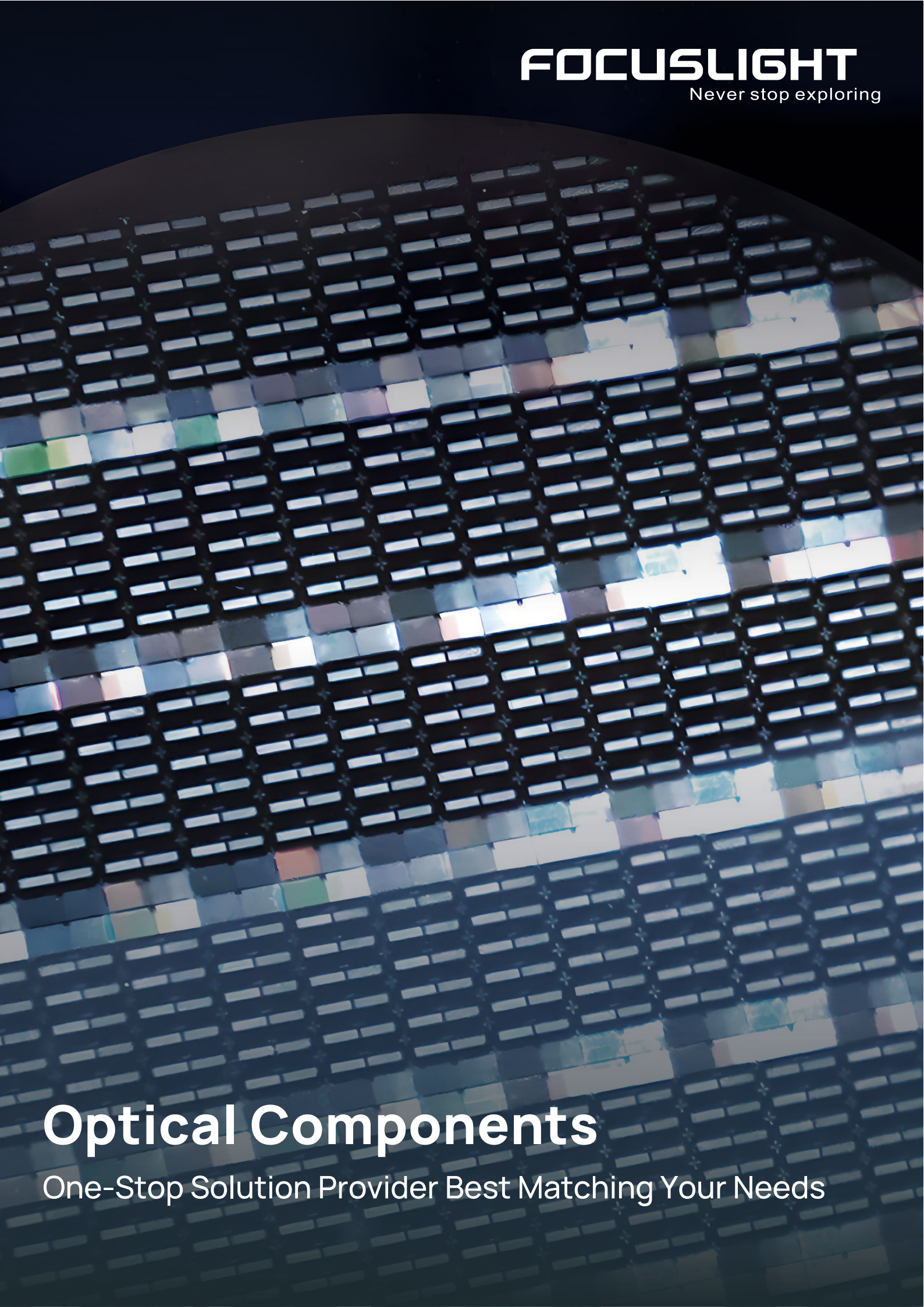




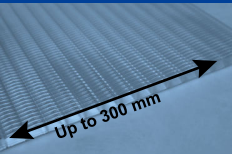
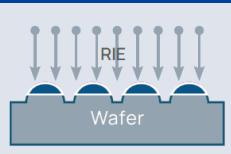
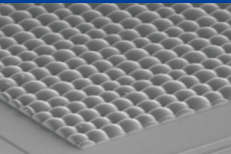
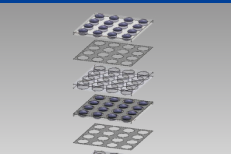
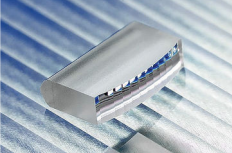
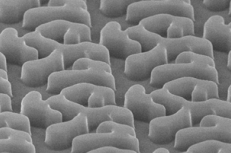
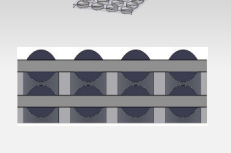
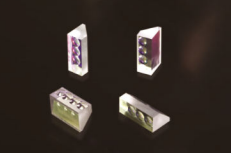
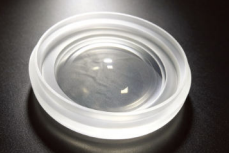
FOCUSLIGHT
Never stop exploring

Optical Components

One-Stop Solution Provider Best Matching Your Needs

Focuslight -- Optics Manufacturing Excellence under One Integrated Roof

With over 30 years of expertise in optical design, simulation, and volume production, Focuslight employs advanced, innovative technologies to deliver diverse beam-shaping solutions. Our high-precision micro-optics, manufactured with multiple major process technologies, enable a wide range of applications with exceptional performance and quality, making us your reliable, long-term partner for optical components and modules.

Wafer Level Simultaneous Structuring	Wafer Level Photolithography-RIE (reactive ion etching)	Wafer-Level Optics (WLO) Precision Imprinting	Wafer-Level Stacking (WLS)	Precision Glass Molding	Cold Processing
					
					
With inorganic materials: Glass, Fused Silica, Silicon, CaF2		With polymer on glass		With moldable Glass	With inorganic materials

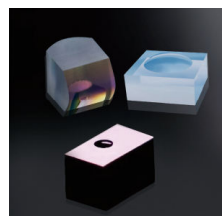
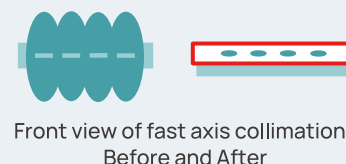
High LIDT Optical Coating: Anti-reflection, high-reflection, beam splitter, band filter, and various customization (UV, VIS, IR)

Single Lenses



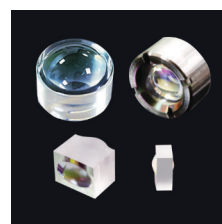
Fast Axis Collimators (FAC)

Specifications	
Material	High-index optical glass, fused silica
Effective Focal Length	0.11 – 7.7 mm, customizable
Back Focal Length	0.034 – 5.000 mm, customizable
AR Coating	770 – 1070 nm, 790 – 990 nm, 400 – 480 nm



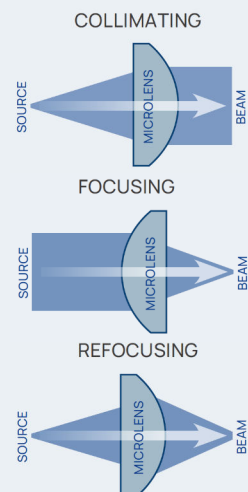
Fiber Couplers and Collimators

Specifications	
Material	Fused silica, silicon
Beam Diameter / Output	50 to 400 μm , or customizable
Fiber / Waveguide types	SMF, MMF, LD, PIC, Si-Photonics
Lens Type	Circular, cylindrical
Lens Profile	Spherical, aspherical, DOEs
AR Coating	VIS, NIR



Focusing Lens / FAC-SAC Monolithic Collimation Lens

Specifications	
Material	Moldable materials (e.g. D-ZK3 or D-LAK6)
Outer Diameter Range	1.5 – 45 $\pm$ 0.003 mm
Transmission Decenter	30" – 90"
PV	0.2 – 1.0 μm
Coating	VIS, NIR



Single Lenses

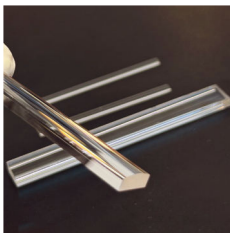


Convex/Concave Axicons

Specifications	
Material	H-K9L, Fused Silica
Lens Size	Φ8mm – Φ150mm
Angular Tolerance	1' – 3'
Surface Quality	S/D 60 – 40



Hollow laser beam generated by combination of convex and concave axicons



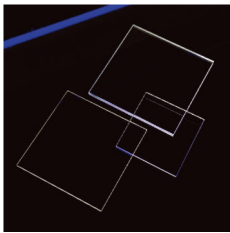
Large Cylindrical Lenses

Specifications	
Material	Optical Glass, Quartz
Lens Size	Up to 500mm
Surface Figure	RMS $\lambda/2$ – $\lambda/20$
Surface Quality	60/40, 40/20



Large Spherical Lenses

Specifications	
Material	Optical Glass, Quartz
Lens Size	Φ50mm – Φ650mm
Surface Figure	RMS 20nm–3nm, PV $\lambda/2$ – $\lambda/10$
Surface Quality	60/40, 40/20



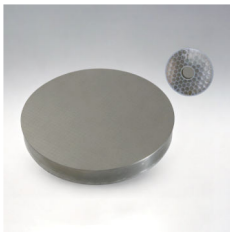
Optical Windows

Specifications	
Material	Optical Materials & IR/UV Crystals
Size	Up to 1500mm
Surface Figure (Reflection)	$V < \lambda/20$, RMS $< 1/200$
Parallelism Error	$< 1''$



Waveplates

Specifications	
Material	Quartz Crystal
Size	Φ1mm – Φ120mm or Square-Shaped
Retardation	$\lambda/2$, $\lambda/4$
Retardation Tolerance	$\lambda/50$, $\lambda/100$, $\lambda/300$
Parallelism Error	$1''$ – $10''$



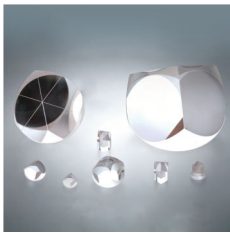
Large Plano Optics

Specifications	
Material	Quartz, K9, BZ33, QF50, FK61, Silicon, K90, CaF2, SiC, Colored Glass
Size	Up to 1800 mm
Thickness	0.05 – 200 mm
Flatness	$\leq \lambda/10$ @ Φ300 mm



Polarization Rotators

Specifications	
Material	Single Crystal Quartz
Size	Φ1mm – Φ120mm or Square-Shaped
Rotation Angle	0° – $90^\circ \pm 0.05^\circ$
Surface Quality	Customizable upon request



Corner Cube Prisms

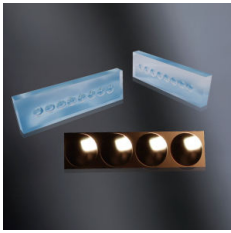
Specifications	
Material	Quartz, K9
Pyramid Angle Accuracy	2 – 8 arcsec



Beam Splitter Prisms

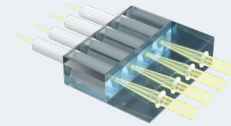
Specifications	
Material	Quartz, K9
Size	10 – 300 mm
Splitting Function	Beam Splitting, Polarizing Beam Splitting (PBS), Non-Polarizing Beam Splitting (NPBS)
Surface Figure	$\lambda/4$ @632.8nm
Split Ratio	Customizable upon request
Extinction Ratio	TP/TS > 500:1

Linear Lens Arrays

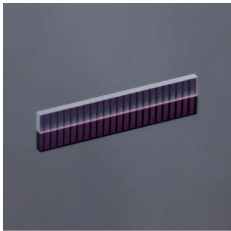


Fiber Coupler and Collimator Arrays

Specifications	
Material	Fused silica, silicon
Lens Dimension	Diameter 0.02 – 1.5 mm, center thickness 0.25 – 3.0 mm, aspherical lens units
Pitch	127 / 250 / 500 / 750 μ m and customized, 1D / 2D arrays
Coating	Low loss ARC and metallization

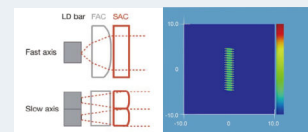


Fiber array collimation in optical communications



Slow Axis Collimator Arrays

Specifications	
Material	Optical glass, fused silica
Pitch	0.4 / 0.5 / 1.0 mm
Structure	Single sided (SAC arrays) or double sided (Telescope arrays)
AR Coating	VIS, NIR

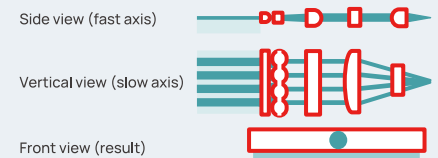


Collimation of laser bars



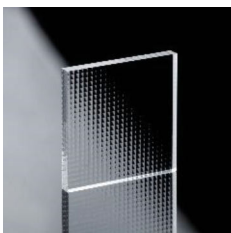
Beam Transformation System (BTS)

Specifications	
Material	Optical glass, fused silica
Effective Focal Length	0.11 – 7.7 mm, customizable
Back Focal Length	0.034 / 0.052 / 0.090 mm
Pitch	0.2 / 0.225 / 0.4 / 0.5 mm, customizable
AR Coating	420 – 465, 790 – 990, 600 – 700, 1000 – 1600 nm



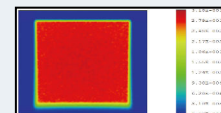
Fiber coupling of laser bars with BTS

Area Lens Arrays



Homogenizers

Specifications	
Material	High refractive index optical glass, fused silica, silicon, CaF ₂ , polymer on glass (PoG)
Lens Type	Cylindrical, circular, hexagonal, square
Lens Arrangement	Linear, quad, hexagonal and customizable
Coating	AR, HR, chrome

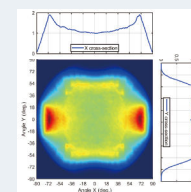


Typical homogeneity > 95% used in pan-semi applications

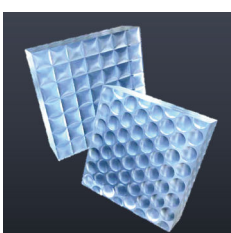


Diffusers

Specifications	
Material	Optical glass
FOV	Up to 160° in one direction
Working Temperature	-40 °C – 150 °C
Intensity Distribution	Top-hat, cos-2, bat-wing (> 90% homogeneity)
Suitable Laser Source	EEL, VCSEL, DPSSL, Fiber laser etc.

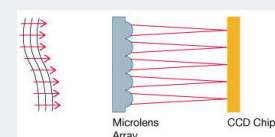


Typical bat-wing distribution with FOV 160° x 120° used in flash LiDAR



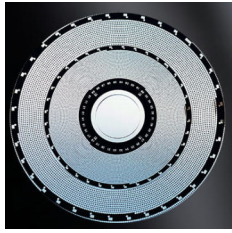
Shack-Hartmann Arrays

Specifications	
Material	Fused silica, silicon
Lens Diameter	30 μ m to 2.0 mm
F-number (F#)	Typ. F/5 to F/100
Effective Focal Length	Typ. 1 to 100 mm
Wavefront Error (Surface profile deviation)	10 to 50 nm (Typical)
Array Size	Customizable
AR Coating	UV, VIS, NIR



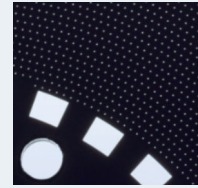
Wavefront sensing with Shack-Hartmann arrays

Area Lens Arrays

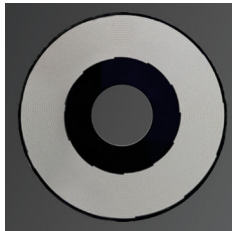


Pinhole Arrays

Specifications	
Disc Diameter	≤ 160 mm
Material	Fused silica
Pinhole/Lens Pattern	Custom
AR Coating	UV, VIS, NIR
Cr Coating	Customizable per request

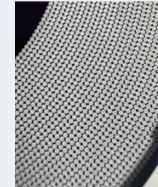


Arrays of precision pinholes essential to specific applications (e.g., confocal microscope)

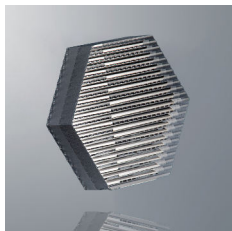


Microlens Array Discs

Specifications	
Disc Diameter	80-120 mm typically, up to 160 mm
Material	Fused silica
Lens surface	Custom
Lens pattern	Spiral
Single aperture	500-700 μm

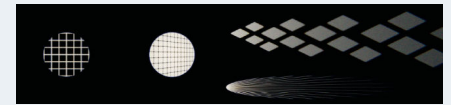


Array of microlenses arranged in a certain pattern to improve the efficiency of light delivery in confocal microscopes.

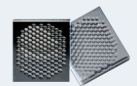


Micro Lens Arrays

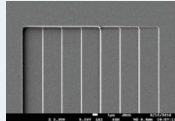
Specifications	
Material	Polymer on glass (PoG)
Lens Type	Convex, concave, arbitrary (freeform), with or without apertures
Lens Pitch / Diameter	10 μm to 2 mm
Lens SAG	2 to 450 μm
Alignment Accuracy	≤ 5 μm lens to lens, lens to aperture (same side / opposite sides)



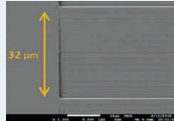
Pattern generation with MLAs with apertures



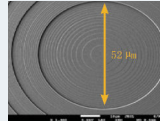
Diffractive Optical Elements (DOE)



■ 8-LEVEL GRATING

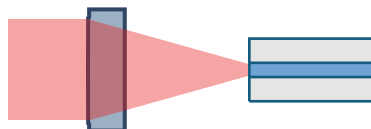
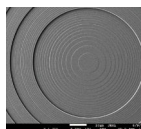


■ 16-LEVEL GRATING

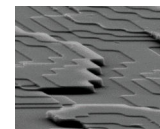
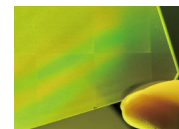


■ 16-LEVEL DOE LENSES
■ STEPPER TECHNOLOGY
■ DOUBLE-SIDE AR COATING

Up to 98% Diffraction Efficiency



Fiber coupling through "very flat" DOE



Beam shaping DOE for UV excimer laser

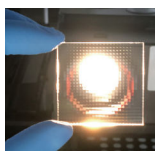
Specifications	
Material	Fused silica, silicon
Composition	Binary and up to 16 levels
Wavelength Range	190 nm – 5 μm
Minimum Feature Size	500 nm – 1 μm
Overlay Accuracy	< 70 nm

Precision Coating + Advanced Characterization

Focuslight offers advanced optical coating services, providing high-quality coatings across a broad wavelength range from deep ultraviolet (DUV) to infrared (IR). With precise design and ISO-compliant production, we ensure exceptional performance and long-term reliability of the coatings used in various industries, such as optical communications, medical and health, and automotive-grade applications.

Wide Coating Range from UV 248 nm to IR 3000 nm

- Anti-reflection
- High reflection
- Bandpass
- Splitter
- Polarizer



Anti-reflection coating on lens arrays



High reflection coating on micro prisms

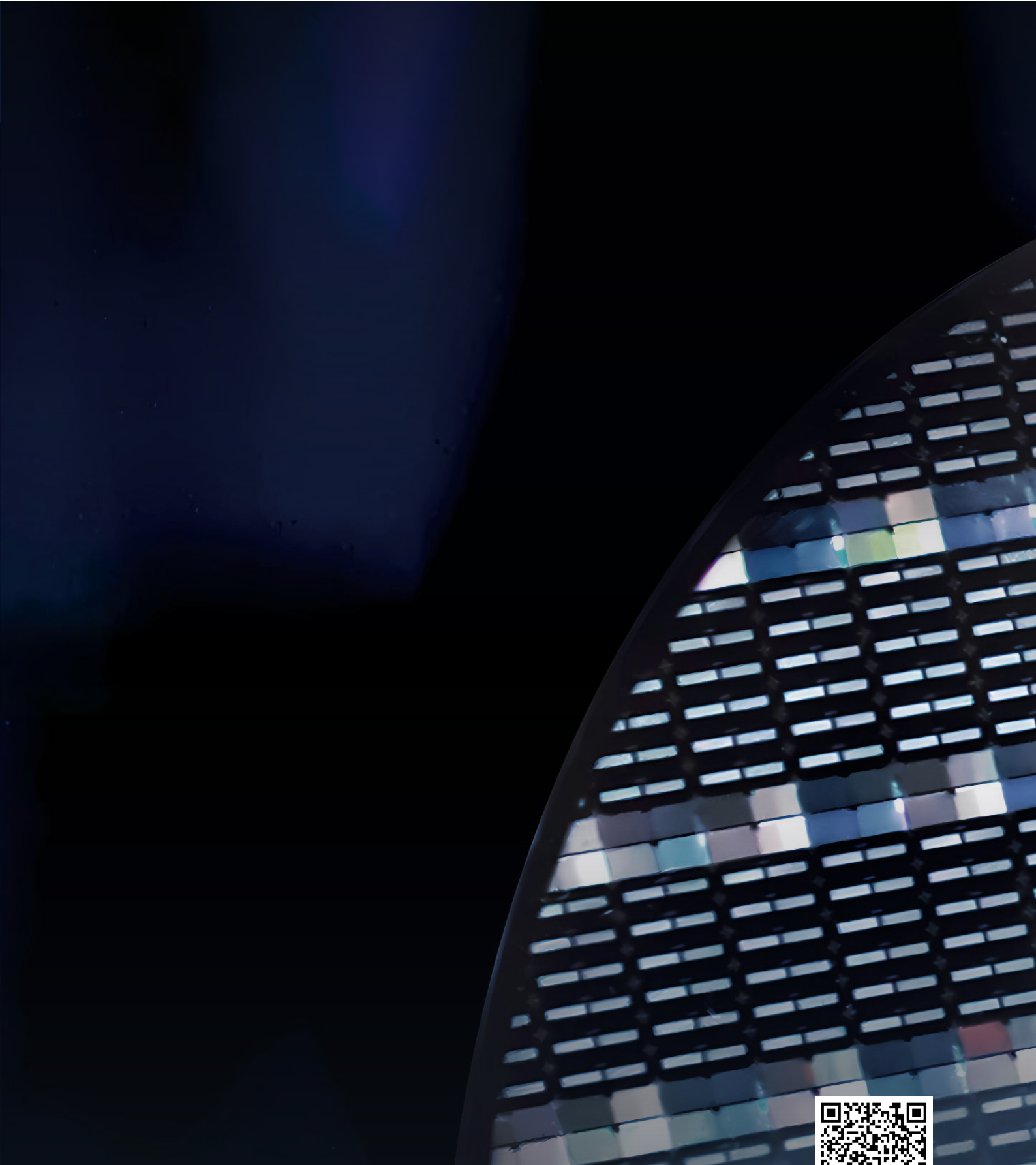
Advanced Coating Characterization

- Nano coating defect diagnosis
- Coating layer stress analysis
- Coating layer absorption and LIDT analysis

LIDT Measurement Capability and Service *

Specifications	
Wavelength	355 / 532 / 1064 nm
Laser Mode	Pulsed
Frequency	10 Hz
Pulse Width	10 ns
Pulse Number	200

* Test report available within 3 days after sample reception



www.focuslight.com

COMPANY INTRODUCTION

Founded in 2007 and headquartered in Xi'an, China, Focuslight Technologies Inc. is a fast-growing public company (Shanghai: 688167) that specializes in developing and manufacturing laser sources and materials, optical components, as well as photonics module and system solutions focusing on optical communication, consumer electronics, and pan-semiconductor applications. Focuslight has expanded its global footprint with manufacturing facilities and expert teams in China, Germany, Switzerland, Singapore, and Malaysia. With the relaunch of the Heptagon brand, the company extends its business to be a global photonics foundry by providing global photonics industry process development and manufacturing service.

Focuslight Technologies Inc.

Email: sales@focuslight.com