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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 high-power diode laser components and materials, laser optics, as well as photonics module and system solutions focusing on optical communication, automotive, pan-semiconductor, and medical and health applications. Focuslight has expanded its global footprint through strategic acquisitions including LIMO GmbH in 2017 and SUSS MicroOptics SA in 2024 (now as Focuslight Switzerland SA). With the acquisition of assets from ams OSRAM in 2024, Focuslight extends its business to be a global photonics foundry by providing global photonics industry process development and manufacturing service under the brand of Heptagon.

Focuslight Technologies Inc.

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OPTICAL SOLUTIONS FOR LIFE SCIENCE APPLICATIONS

Microlens Arrays

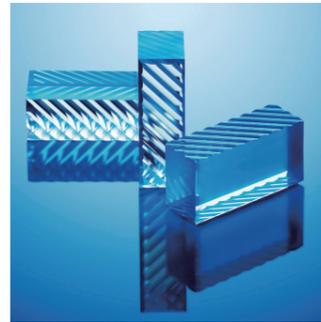
Refractive microlenses cover a range of 10 μm to 2 mm diameters. Refractive microlenses are an alternative for all applications where miniaturization, reduction of alignment and packaging costs are necessary.

Features

- Angular spectrum: Typ. $< 1 - 20$ degrees
- Material: Fused silica (various grades), silicon
- Area of illumination: Linear, circular, rectangular, square
- AR coating: UV, VIS, NIR – front side, back side, to air, to glue
- Lens array dimensions: According to customer requirement

Applications

- 3D Scanning
- Sensing
- Metabolic Screening
- PoC
- DNA Sequencing



Nipkow Discs

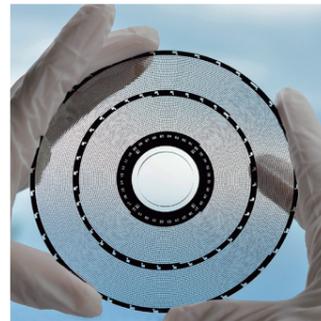
Focuslight manufactures high quality lens and pinhole discs, which are the integral components of confocal microscopes. Our discs support the generation of high contrast, sharply focused images and 3D reconstructions of biological and other miniature difficult-to-image structures.

Features

- Disc diameter: ≤ 160 mm
- Material: Fused silica
- Pinhole/lens pattern: Custom
- AR coating: UV, VIS, NIR – front side, back side, to air, to glue
- Cr coating: Custom

Applications

- Confocal microscopy



Beam Homogenizer

Most laser applications such as dermatological applications, laser materials processing and semiconductor industry require a uniform light distribution in order to achieve the best possible results. With Focuslight's homogenization components, you will have an easy solution even for very demanding applications that are suitable for homogenizing of a wide variety of modern light emitters from line-narrowed Excimer Lasers to high-power LEDs.

Features

- Perfect uniformity in working plane (flat-top profile)
- High-power laser applications, High efficiency
- Flat-top shapes: Square, rectangular, circular, line, laser sheet
- Spectral wavelength 193 nm - 5 μm
- Compact design, Easy to use
- Anti-reflection coating optional
- Various working distances and flat-top sizes

Applications

- Skin treatment
- Ophthalmology
- Fluorescence microscopy



Shack-Hartmann Arrays

Shack-Hartmann wave front sensors are used to measure the intensity distribution and phase distortion accurately and in real time. They are widely used in measurement and diagnostic instruments.

Features

- 2D Microlens arrays
- Highest quality and precision
- Material: Fused silica, silicon
- Wavelength range: DUV (193nm) to IR (5 μm)
- Lens profile: plano-convex, bi-convex, aspheres, spheres
- Additional features: alignment marks, pinholes, apertures
- Circular and square lens shape



Applications

- Ophthalmology
- Microscopy Inspection

Diffraction Optical Elements

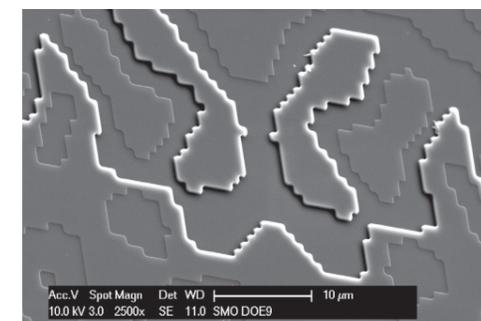
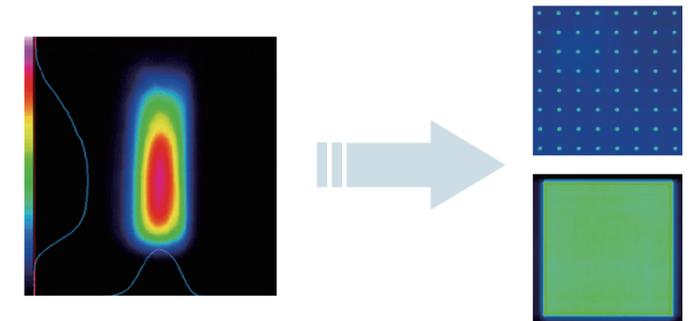
Our premium high-end Diffractive Optical Elements (DOE) are suitable for very demanding applications like metrology, medical laser treatments, diagnostic instruments and others. DOE are used to pattern light in work areas for a custom illumination.

Features

- Materials: Fused silica (various grades) and silicon
- 2(binary) to 16 levels
- Typ. overlay error < 70 nm
- Wavelength range: 190nm to 5 μm
- Minimum feature size: 500nm to 1 μm depending on step height and/or etch depths
- Efficiency: up to 96%

Applications

- 3D Scanning
- Ophthalmology
- Sensing



Diffractive Optical Elements (DOEs) can be used instead of microlenses where size in an application is a concern.

They are also excellent beam homogenizers and shapers and – unlike their microlens counterparts – have no shape constraint for the illumination they produce.