FOCUSLIGHT

Never stop exploring

Photonics Solutions for

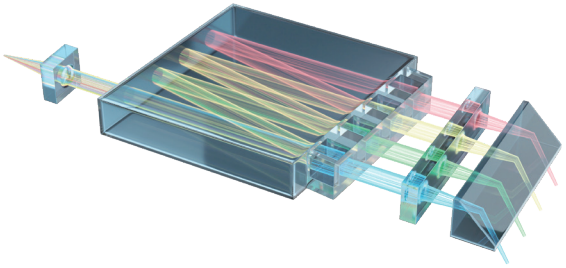
OPTICAL COMMUNICATIONS

Microlenses are at the heart of optical communication systems. They support efficient data transfer between key optical components. Micro-optics by Focuslight come with multiple benefits:

- Customization of optical and mechanical design features to address systems requirements at the maximum performance
- Wafer-level manufacturing for cost-effective production
- Integration features for reliable and fast handling in production environment, such as recessed lenses, fiducials, v-grooves, prisms and glue pockets

Optical Transceivers

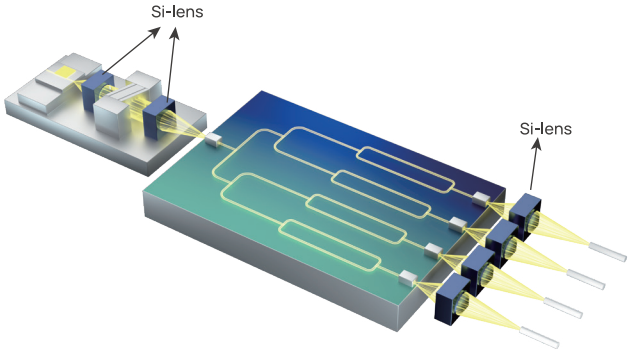
Our products effectively couple light between laser diodes, detectors, and fibers within the optical transceivers. Micro-optics optimize data transmission and enable energy-efficient communication in high-speed networks.



Single lenses and microlens arrays for light coupling in CWDM-based optical sub-assemblies

Photonic Integrated Circuits

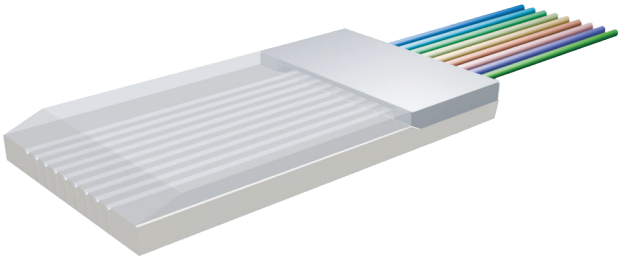
Micro-optics in silicon and InP photonics are key components for 800Gb and 1.6Tb optical transceivers utilized in data centers supporting AI technology. These transceivers rely on precise microlenses and microprisms for low-loss coupling of light between laser diodes, PIC waveguides and optical fibers, enhancing the efficiency of the data transfer.



Efficient laser diode to PIC coupling

Fiber Array Units (FAU)

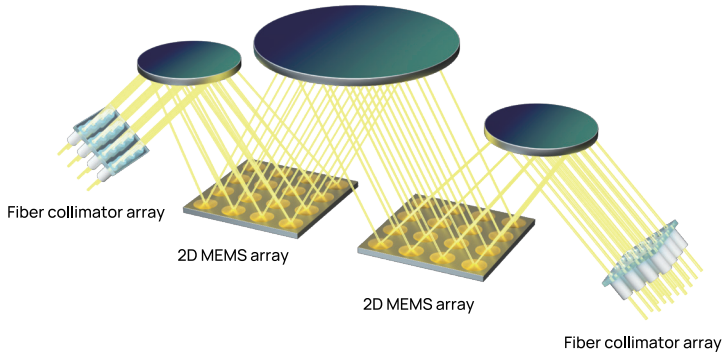
Focuslight provides key optical components for FAUs, including engineered V-groove arrays and protective lids, ensuring precise fiber alignment and durability. With large-scale manufacturing and automated assembly capabilities, we support high-precision, high-channel-count, and mass production needs for reliable optical communication system performance.



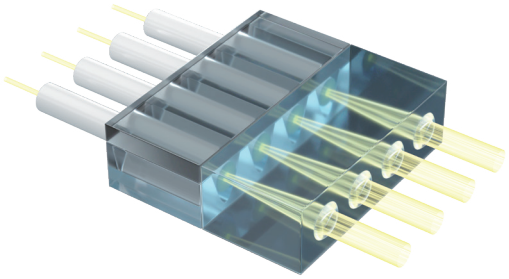
Fiber array unit with v-groove arrays, lid, and ribbon fiber

WSS / OCS

Wavelength selective switches (WSS) are key systems for reconfigurable optical telecom networks space. Optical circuit switches (OCS) enable scalable networks by supporting heterogeneous data-rack generations.
Micro-optics are the enabling technology to reduce the size of optical switches and expand their bandwidth by increasing the number of optical channels.



Optical circuit switch



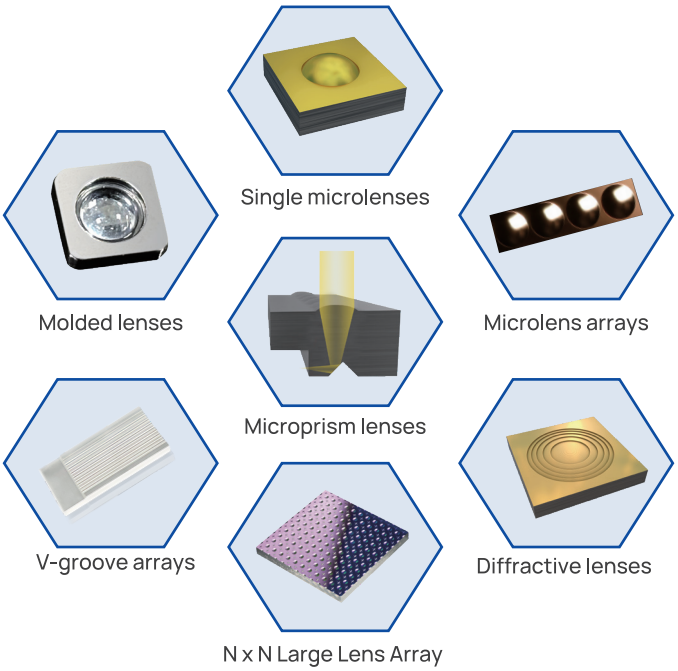
Microlens arrays for fiber collimation and extended beam connectors

Fiber Connectors

Fiber connectors route hardware in telecom and datacom networks and allow seamless and high-quality transmission of information. We design and manufacture microlens arrays to achieve optimal collimation and coupling of light from single and multimode fiber arrays.

Focuslight Solutions for Optical Communication

Microlens Features	Value
Material	Fused silica, Silicon, Molded glass
Type	Aspherical
Center thickness	0.25 – 3.0mm
Diameter	0.02 – 1.5mm
Configuration	Singlets, 1D and 2D Arrays
Pitch	127, 250, 500, 750 µm and customized
Coatings	Low loss ARC and metallization



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 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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