



Photonics Solutions for

MEDICAL AND HEALTH

Fluorescence Angiography

Focuslight's fiber coupling modules and single emitter diode lasers can be applied in fluorescence endoscopy and other various laser medical treatment systems as core components with high reliability and excellent performance. A variety options of 808nm, 780nm, 650nm, and 450nm wavelength are provided.





Single-Emitter-Based Fiber Coupled Modules: FCMSE55

FCMSE55 Key Specs	Value
Power Output	15 – 25 W
Fiber Core Diameter	105/200 μm
Wavelength	808/780/650/450 nm



Dust-Proof CW Single-Emitter Diode Laser: NV02

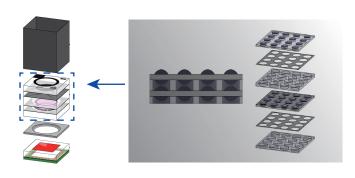
NV02 Key Specs	Value
Power Output	10 – 12 W
Fast Axis Collimation	1:1 Beam Ratio
Wavelength	808/780/650/450 nm

Disposable Endoscopy

Focuslight's high-quality wafer-level optics and wafer-level stacking technologies enable miniaturized micro-optical modules that can be easily integrated into disposable endoscopes. These precise elements improve the image quality and enhance the system performance.



Our Solution: Micro-Optical Modules Powered by Wafer-Level Optics and Stacking Technologies



Key Features

- Tiny footprint of 1x1mm
- Full wafer-scale process for high volume production
- Micro-precision of wafer stacking
- Customization of optical performance available
- Leading thermal performance, ensuring simple thermal design

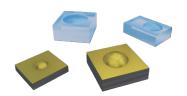
Health Monitoring

Focuslight optical components are used as an integral part of medical optical sensors, enabling real-time, non-invasive monitoring and device miniaturization in applications such as point of care, glucose monitoring and smart wearables.



Our Solutions for Health Monitoring:

- Shack-Hartmann Arrays
- Microlens Arrays
- Diffractive Optical Elements







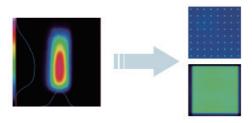
Single Microlenses

Shack Hartmann Arrays

Microlens Arrays

Intraoral Scanner

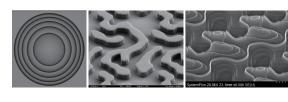
Intraoral scanners typically employ structured light or laser projection systems to illuminate dental surfaces for 3D imaging. Diffractive optical elements (DOE) are used to shape or pattern the illumination, enabling detailed analysis of the dental structures. Microlens arrays (MLA) are integral to laser-based systems, where they help focus the laser beams for precise scanning.



Spot generator and flat top beam

Our Solutions for Intraoral Scanners:

- Diffractive Optical Elements
- Microlens Array



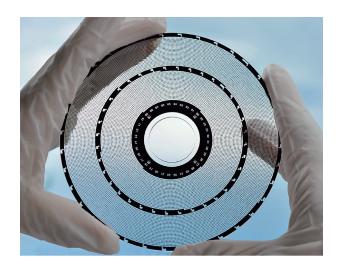
Diffractive optical elements

DOE Features	Value
Materials	FS and Si
Levels	2 (binary) to 16 levels
Wavelength Range	190nm to 5µm
Minimum Size	500nm to 1µm
Efficiency	Up to 96%

MLA Features	Value
Angular Spectrum	Typical < 1 - 20 degrees
Materials	Fused Silica, Silicon
Area of Illumination	Linear, circular, rectangular, square
AR Coating	UV, VIS, NIR

Confocal Microscopy

Focuslight produces high-precision lens discs and pinhole discs which are essential components of confocal microscopes. Our discs facilitate the generation of high-resolution, high-contrast, and sharply focused images for the 3D reconstruction of imaged samples.



Pinhole Disc Features	Value
Disc diameter	≤ 160 mm
Material	Fused Silica
Pinhole / lens pattern	Custom
AR coating	UV, VIS, NIR
Chrome coating	Customized

Laser Surgery

Based on different absorption efficiencies of biological tissues, different wavelengths of laser are applied in various surgery applications. Focuslight offers various fiber coupled diode laser modules that create precise and concentrated laser output, which is essential in energy applications such as laser surgeries.



Urinary Surgery



Multi-Bar-Based Fiber Coupled Modules

Specifications	Value
Power Output	100 - 400 W (QCW)
Fiber Core Diameter	200/400 μm
Wavelength	808/980 nm

Side-Pumped Modules

Specifications	Value
Power Output	Up to 5000 W (QCW)
Crystal Diameter	4 mm
SSG	> 30

Dentistry



Single-Emitter-Based Fiber Coupled Modules

Specifications	Value
Power Output	25 - 35 W
Fiber Core Diameter	200 µm
Wavelength	808/976/ 1064 nm



Open Package Single Emitter Diode Laser

Specifications	Value
Power Output	10 – 12 W
Fast Axis Collimation	1:1 Beam Ratio Available
Wavelength	808/915/940/ 976 nm

Eye Surgery



Single-Bar-Based Fiber Coupled Modules

Specifications	Value
Power Output	15 - 25 W
Fiber Core Diameter	400 µm
Wavelength	808 nm

Laser Hair Removal

For cosmetic procedures where lasers are used to permanently remove unwanted hair, we offer optical components for beam shaping, as well as laser components and modules with integrated laser source, optics, and cooling.



Laser hair removal modules

Specifications	Value
Power Output	600 – 3000 W
Wavelength	755/808/1060 nm



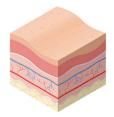
Laser hair removal engines: Vsilk 2, Vsilk 2 Pro

Specifications	Vsilk 2	Vsilk 2 Pro
Power Output	Up to 1800 W	Up to 3000 W
Work Mode	106A, 30% Duty Cycle	185A, 10% Duty Cycle

Laser Body Sculpting

The non-invasive form of fat removal is performed by modules which consist of the laser source, and modules for beam shaping, cooling and skin contact detection.





Skin and fat cells before and after laser body sculpting



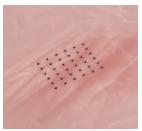
Laser body sculpting module: Fairy

Fairy FR06 Features	Value
Power Output	50 W
Wavelength	1064 ± 20 nm
Beam Size	80 x 40 mm ²
Weight	385 g

Laser Skin Rejuvenation

Laser technology can significantly reduce skin imperfections like acne marks, scars, or wrinkles. Skin rejuvenation module with 1470nm laser is eye safe and therefore suitable for home-use application.





Laser skin rejuvenation module and the dot matrix it generated





COMPANY INTRODUCTION

www.focuslight.com

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. Learn more at www.focuslight.com and www.hptg.com.

Focuslight Technologies Inc.

Email: sales@focuslight.com