

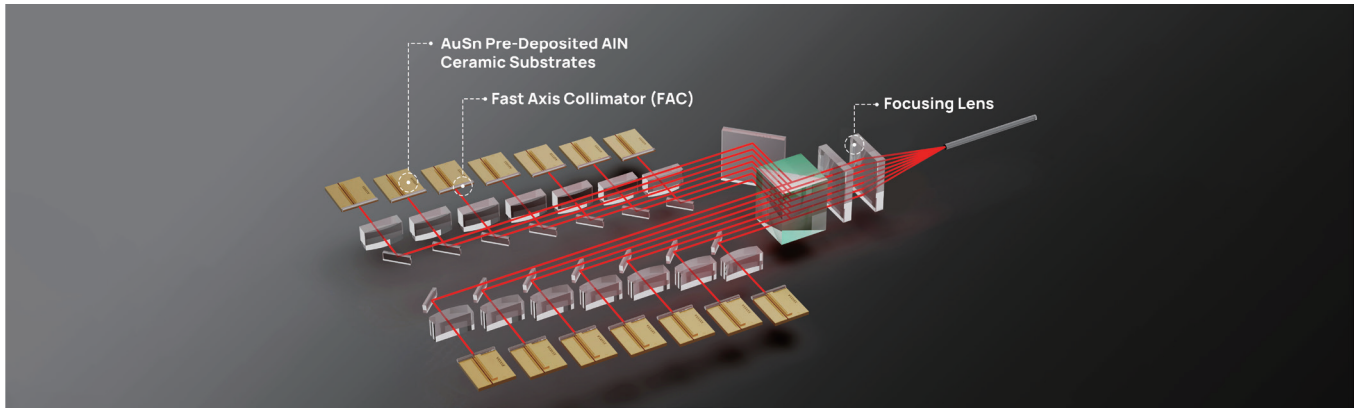
FOCUSLIGHT
Never stop exploring

Photonics Solutions for

INDUSTRIAL LASER PUMPING

Fiber Laser Pumping

To maximize the performance and reliability of fiber pumping modules, Focuslight offers high-quality AuSn pre-deposited ceramic substrates for optimized thermal management, as well as precision glass optics including fast axis collimators (FAC) and focusing lenses for precise beam coupling. With lean manufacturing practices and advanced AI-driven processes, Focuslight delivers high yield, quality, and consistency, meeting the growing demand for fiber laser applications worldwide.



Structure of a typical fiber laser pumping module

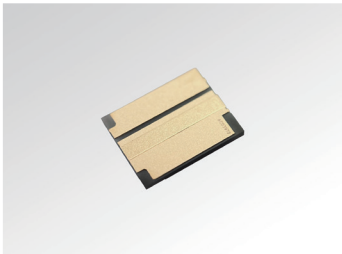
Fiber laser pumping components enabling high-performance, high-reliability pumping modules



Fast Axis Collimators

Acylindrical lenses for the collimation of the fast axis of diode lasers. The new revision has an increased power content of >92% within +2.2 mrad and >94% of the energy within Gaussian distribution (negligible side peaks).

Specifications	Value
AR Coating Spectrum	770 – 1070 nm
Back Focal Length	0.052 – 0.08 mm
Effective Focal Length	0.16 – 7.7 mm available



AuSn Pre-Deposited AlN Ceramic Substrates

Featuring gold-tin pre-deposited DPC materials and copper clad layer, the substrates are fully CTW matched for chip bonding, offering a low thermal resistance < 2 K/W and high reliability.

Specifications	Value
AuSn Thickness	4.5 ± 1 µm
Melting Point	280 – 320 °C
Thermal Resistance	< 2 K/W



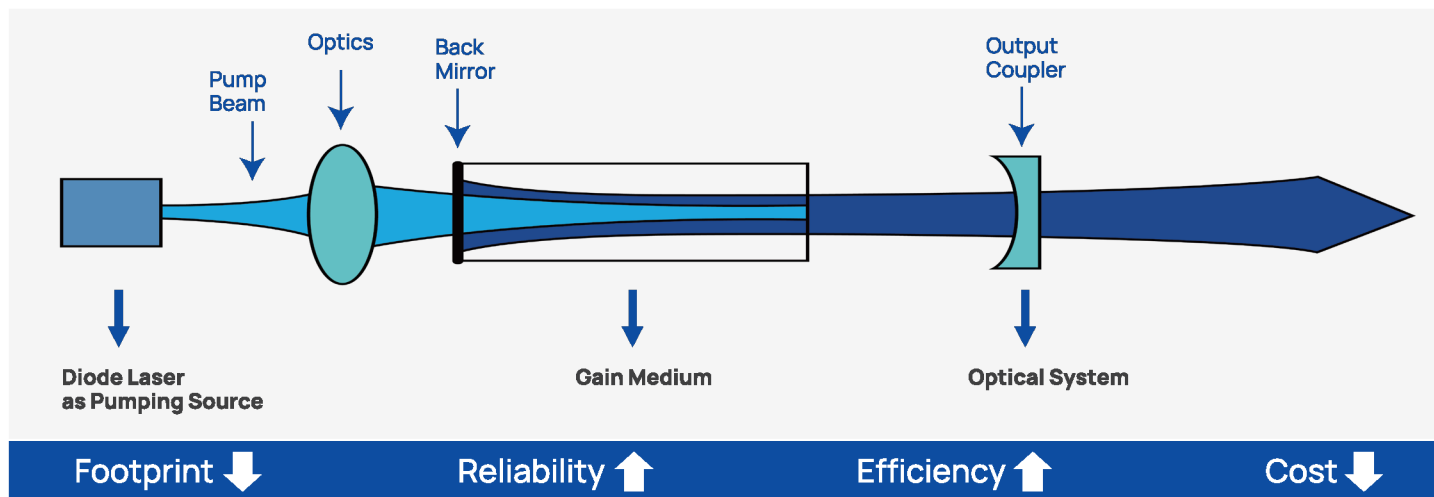
Rotational Symmetrical Aspherical Lenses

Made from moldable materials with different refractive indices (e.g., D-ZK3 or D-LAK6), the focusing lenses can couple the collimated laser beam precisely into the output fiber, with different coatings available.

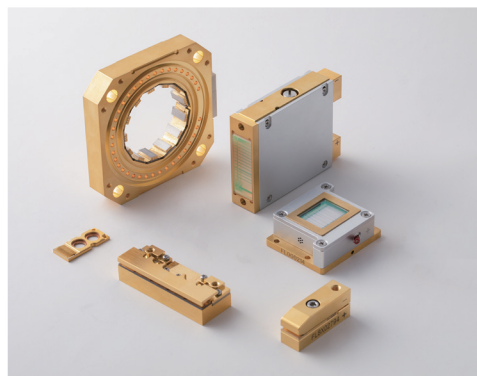
Specifications	Value
Outer Diameter Range	1.5 – 45 ± 0.003 mm
Thickness Tolerance	± 0.003 mm
Transmission Decenter	30° – 90°
PV	0.2 – 1.0 µm
Coating	AR, reflective, beam splitting, and more

Solid State Laser Pumping

Diode pumped solid state laser (DPSSLs), enjoying the advantages of high power, high beam quality output, less thermal effect, high efficiency and compact device structure, have gradually replaced the conventional lamp pumped lasers and gas lasers. To meet diverse solid-state laser applications, Focuslight offers micro-optics components, a range of diode lasers in various powers, wavelengths and platforms, as well as diode laser side pumped modules.



High-performance, high-reliability components and modules enabling efficient high-power DPSSLs



Micro-Channel Water Cooled Diode Laser Stacks

Specifications	Value
Power Output	100W/bar 808nm (CW) 200W/bar 940nm (CW)
Smile	< 2 μ m (typical)
Number of Bars	Up to 60 bars per stack
Fast Axis Collimation	Optional

G-Stacks and G-Stack-Based Arrays

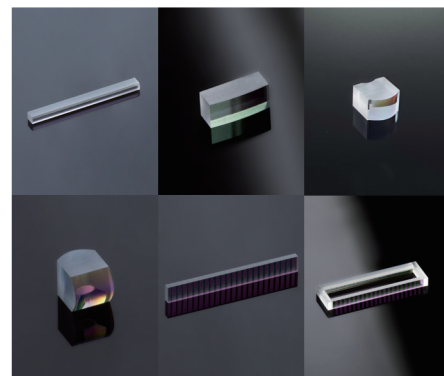
Specifications	Value
Power Output	500W/bar QCW 808/940nm
Duty Cycle	< 1% or few percent
Operation Temperature	-45 ~ 60 °C
Fast Axis Collimation	Optional



Diode Laser Side Pumped Modules

Featuring our advanced high-power diode laser as core components and our unique optical design, water flow design as well as the ASE (amplified spontaneous emission) effect control.

Specifications	SP17	SP18
Pumping Peak Power	30 kW QCW	5 kW QCW
Rod Diameter	10 mm	4 mm
Number of Bars	150	25
Small Signal Gain (SSG)	> 55	> 30



Beam Shaping Optics

Focuslight offers micro-optical lenses and arrays for various functions (e.g. collimation and coupling) in the solid-state laser pumping applications.

- Fast axis collimators (FACs)
- Slow axis collimators (SACs)
- Monolithic collimators/couplers
- SAC arrays
- Collimation modules



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

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