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Focuslight Corporate Overview

2025-11

Focuslight Overview

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- Founded in 2007 by Dr. Victor X. Liu, headquartered in Xi'an, China.
- A fast-growing company that develops and manufactures:
  - **Laser sources and materials** (Photon Generation)
  - **Micro-optics** (Photon Control)
  - **Photonics module and system solutions** (Application Solutions) focusing on optical communication, consumer electronics, pan-semiconductor, automotive, and medical and health applications.
- A **global photonics foundry** offering process development and manufacturing services to the global photonics community.
- Publicly listed in the Shanghai Stock Exchange (Ticker Symbol: 688167).

Milestones

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2007

Founding of Focuslight

2018

Dongguan delivery and high-volume manufacturing center officially in operation

IPO

2021

Successful IPO at Shanghai Stock Market

HEPTAGON

2024

Acquisition of ams OSRAM's optical component assets;

Relaunch of Heptagon brand

LIMO
Lissotschenko Mikrooptik

2017

Acquisition of LIMO;

Started providing photon control and photonics application solutions

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2019

Global branding identity upgrade

SÜSS MicroOptics

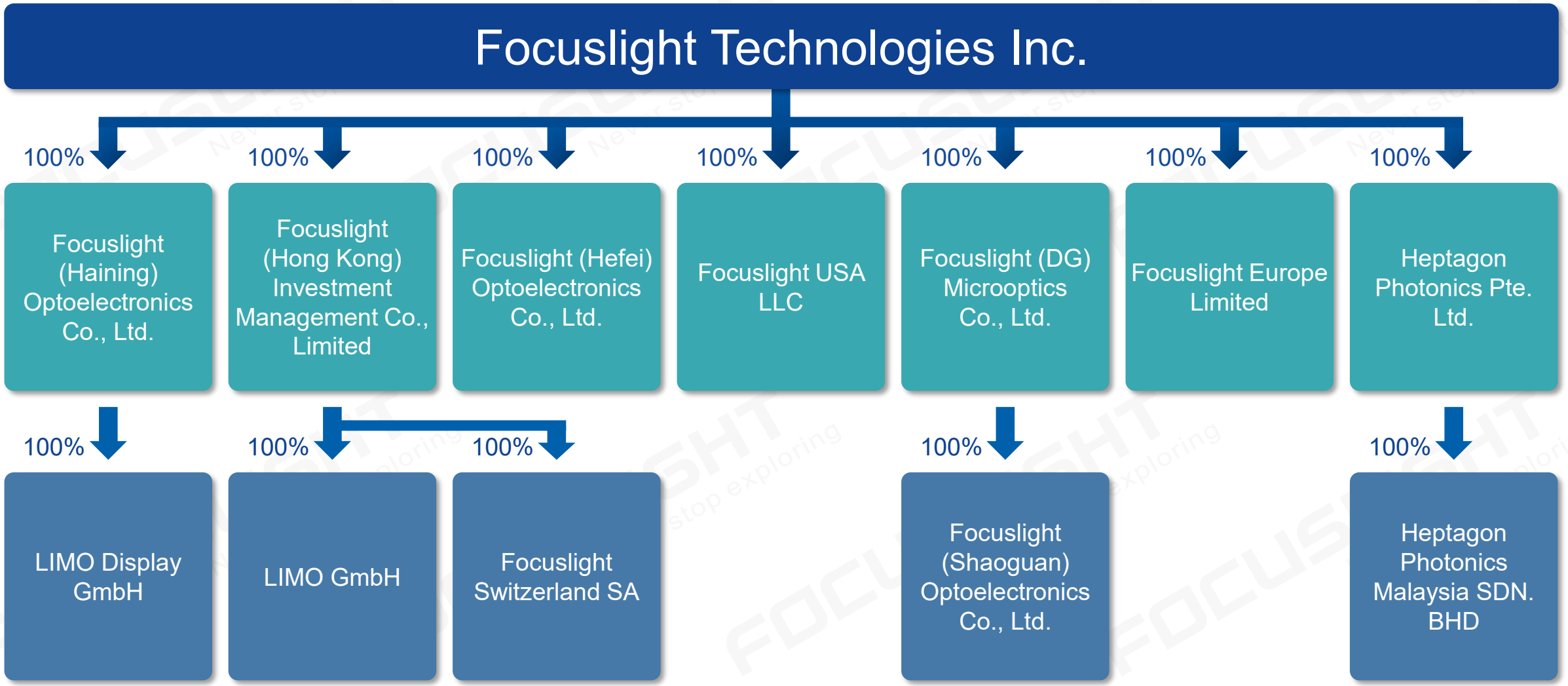
2024

Acquisition of SUSS MicroOptics

2024

Shaoguan Base officially in operation

Focuslight Corporate and Subsidiaries



Focuslight Global Operations System

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Zurich, Switzerland
R&D Office

Neuchâtel, Switzerland
Operations Center

Dortmund, Germany
Operations Center

Xi'an, China
Focuslight HQ, Operations Center

Hefei, China
Operations Center

Shaoguan, China
Operations Center

Dongguan, China
Operations Center

Iskandar Puteri, Malaysia
Operations Center
(being constructed)

Ang Mo Kio, Singapore
Operations Center
Business Center

In a world of evolving market dynamics, we provide the solutions that support you to stay ahead –

Optimized, efficient, cost-efficient, flexible, and forward-thinking.

Key Facts & Figures

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Employees

>900

Revenue Proportion Invested into R&D (2025H1)

~24%

Yearly Revenue (2024)

620M RMB

Patents Valid Worldwide

>560

Facility Worldwide

>49,000m²

Clean Room Worldwide

>17,000m²

ISO 9001
ISO 14001
ISO 45001
IATF 16949
Certified

Corporate Management Team

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Dr. Xingsheng Liu (Victor)

Chairman, CEO

Research and management experience in the US, with 100+ publications, 300+ patents, 30+ invited papers internationally

Committee Member of SPIE and IEEE

CORNING · COHERENT · nLIGHT

Dr. Chung-En Zah

CTO

30+ years of research experience in the US, with 300+ publications, 50+ patents in optoelectronics and telecommunication

IEEE Fellow, OSA Fellow, 2x R&D 100 award winner

THORLABS · CORNING · Bellcore Communications Research

Mr. Sinclair Vass

Corporate SVP of International Sales & Business Development

35+ years experience in international photonics markets, having held technical, commercial and general management leadership roles at major multinational companies

Velodyne · JDSU · Lucent Technologies Bell Labs Innovations · hp

Mr. Guowei Zhu (Gavin)

Corporate VP of Quality,
President of Automotive BU

20+ years in international automotive companies, rich experience in IATF QMS and plant operations management by World Class Manufacturing (WCM) & Lean manufacturing

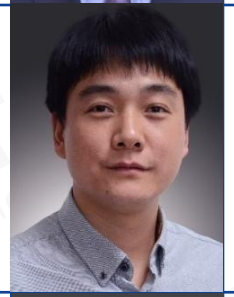
MAGNETI MARELLI · BorgWarner · GST SETON AUTOLEATHER

Mr. Tan Chee Huo (Michael)

Corporate SVP of Business Process and IT

25+ years in IT leadership, specializes in digital business transformation, global project management, multicultural team leadership in fast-paced international industries, and strategic decision-making

NOKIA · ThermoFisher SCIENTIFIC · Tupperware · EVIDENT



Mr. Ye Dai (Robert)

Corporate VP of Global Sales

Excellent track record in worldwide sales, product line and business unit management leadership roles

20+ patents granted

IVO · APPLIED MATERIALS

Ms. Yiping Ye (Alison)

Board Director, CFO

Over 15 years management experience and multi-field business practices

In-depth understanding in LTC, IPD, intercultural cooperation and rich operational experience in market development, project operation and business management

HUAWEI · Hanergy 汉能

Mr. Qichuan Yu

Chief Product/Process Officer

Over 25 years of experience in wafer-level optics, optical sensor and camera packaging, SAW/BAW filter R&D, and NPD execution, with a strong focus on mastering, tooling, and wafer-level processes

ams · OSRAM · HEPTAGON · EPCOS

Corporate Management Team

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Ms. Xuefeng Zhang (Jennifer)

Board Director, Board Secretary, Marketing Director

14 years photonics industry international business experience, in-depth understanding and rich experience in sales, marketing and business development

RMD A Dynasil Company · RAYSUNG

Mr. Hong Wang

Corporate R&D Director

PhD in physics and Master in computer science. 20+ years in quantitative analytics, capital market risk modeling and architecting. Expert in building analytic infrastructure and system. Rich experience in multinational team management.

WELLS FARGO · citi · Sabre

Mr. Lucas Zhang

Global Operations Vice President

20 years of global supply chain management experience at multiple Fortune 500 companies, with strong expertise in in supply chain planning and management within the consumer electronics industry

HUAWEI · LCFC · Quanta Computer

Mr. Jinchao Qu

President of Laser Source BU, President of Medical & Health BU

Extensive years of product marketing and sales management experience

Outstanding track record in previous roles as Asia Sales Director and Head of the Application Systems Special Task Force

ALSTOM · SIEMENS

Mr. Dirk Walter Bogs

President of Laser Optics BU

Over 25 years' experience in ultra-precision tooling, optic manufacturing, engineering & project management, and operational management

Very deep knowledge of technology development and optimization

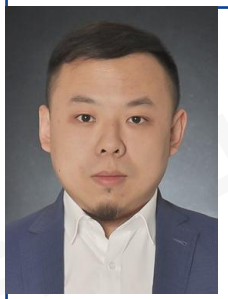
LIMO A Focuslight Company

Mr. Yong Tian (York)

VP of Laser Optics BU

20+ years of operation & R&D management, very deep knowledge with organic optical materials and optical coating technology, published SCI articles and owns patented technologies. Experienced in Lean Manufacturing & Industry 4.0

IBM · ZEISS



Mr. Weiyi Gu

President of Pan-Semiconductor Solutions BU

12 years experience in photonics R&D and product management, with rich track records of leaderships in developing and delivering system solutions for pan-semiconductor and industrial applications

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Dr. Tobias Senn

President of Strategic Growth Division

15+ years of experience in micro-optical component development for the consumer market. Expert in design for manufacturing and process development, with a strong focus on high-volume production and yield improvement

ams OSRAM · NIL TECHNOLOGY · HZB Helmholtz Zentrum Berlin

Mr. Hongyuan Liu (Tom)

President of Global Photonics Foundry BU

20+ years in R&D and operations management, specializing in optical imaging and non-imaging system design, WLO process & integration, and optical component manufacturing. Proven track record in new product development and scaling high-volume production

ams OSRAM · UNISTEEL · flex

BU: Business Unit

Business and Branding

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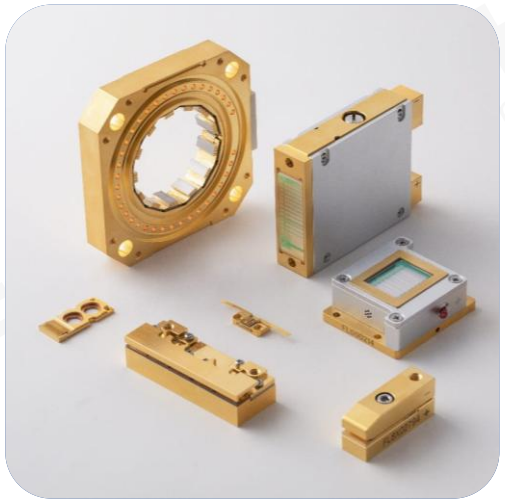
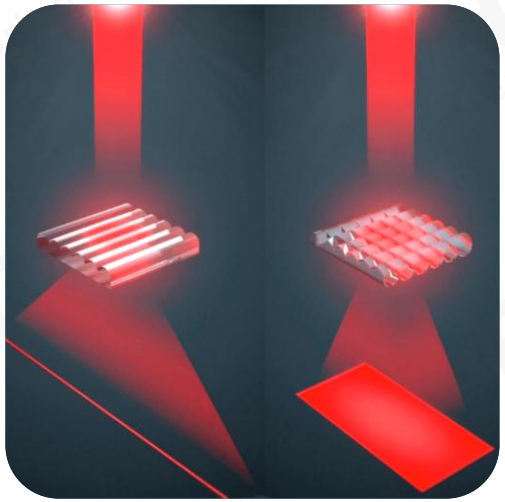


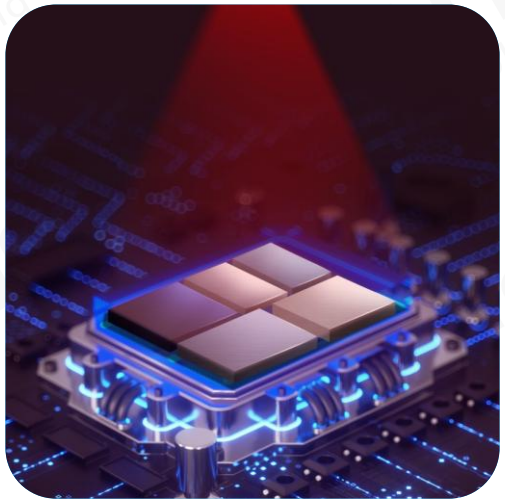
Photon Generation

+



Photon Control

+



Photonics Application Solutions

+

Global Photonics Foundry

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+
HEPTAGON

Markets

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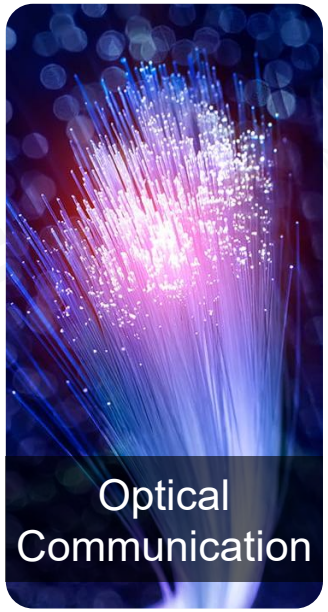
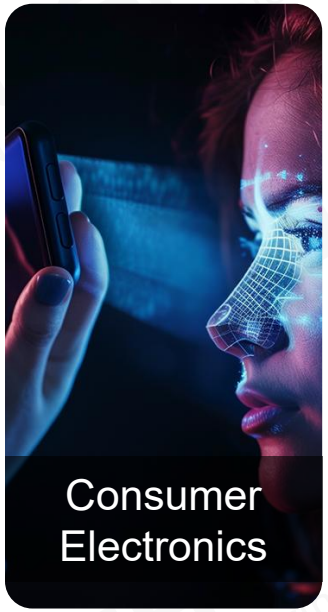
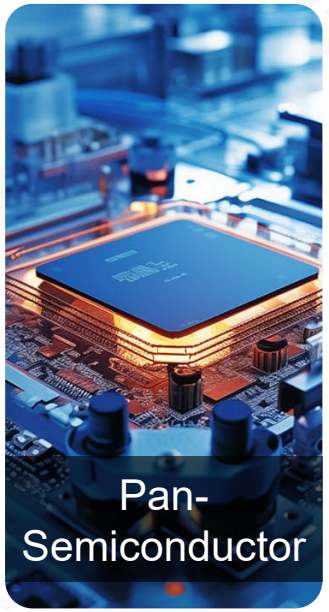


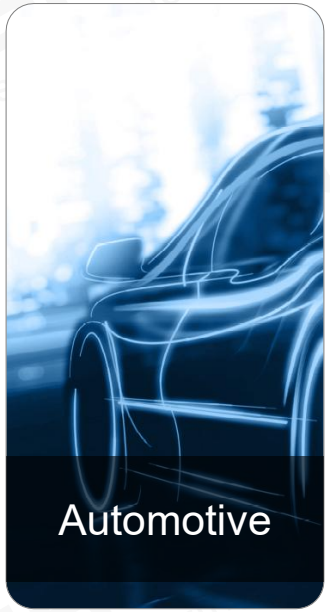
7%
revenue



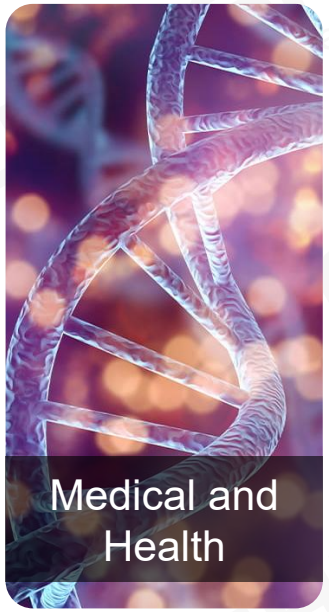
9%
revenue



21%
revenue

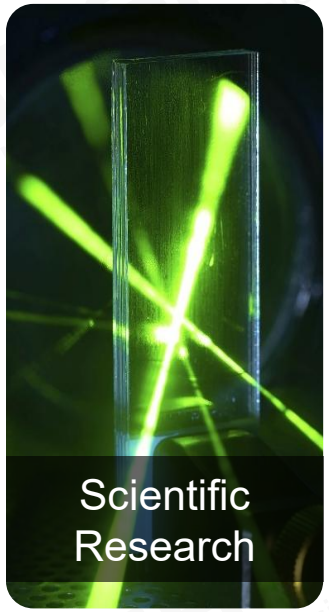


19%
revenue



12%
revenue

30%
revenue



2%
revenue

** Based on accumulated revenue data from 2025 Q1-Q3 (figures unaudited)*

Value Proposition

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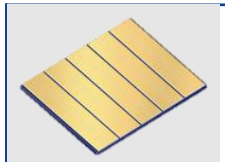
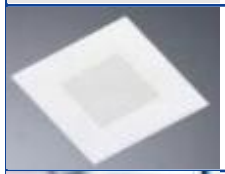
Total Solution and Service in **Full Value Chain**

Raw Materials → Components, Devices → Modules, Subsystems, Application Systems → Solution, Support, Service



Chips (Strategic collaboration with Suppliers)



Packaging Materials

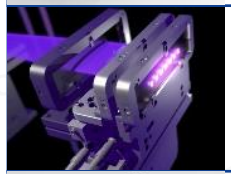
Optics Substrate

Light Sources

Optical Components

Fiber Coupled Modules

Laser Subsystems



Optical Subsystems

Integrated Modules

Application Centers

Technical Support

Field Service Centers

Industry Leader + Strong Financial Backing + Healthy Stable Company + Invest in the Future

Value Proposition

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Do what we do best

Offer the best value

Optimize to the extreme

Achieve the best performance / quality-to-price ratio

Commitment to Customers

- Lowest cost manufacturing for high volume products
- Willing to take technical risk, but request customer commit market share in return
- Willing to take investment risk in R&D and capital including M&A for customer but request customer commit market share in return
- Collaboration transparency, fast response, IP protection and long-term partnership

What we don't do

Take high market risk

Be greedy

Be too aggressive

Compete against our customers

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Vision

To unlock the potential of photonics
to enhance and enrich people's life

Mission

Be the global trusted photonics solution provider through innovation, operational excellence and fast response

Company Organization

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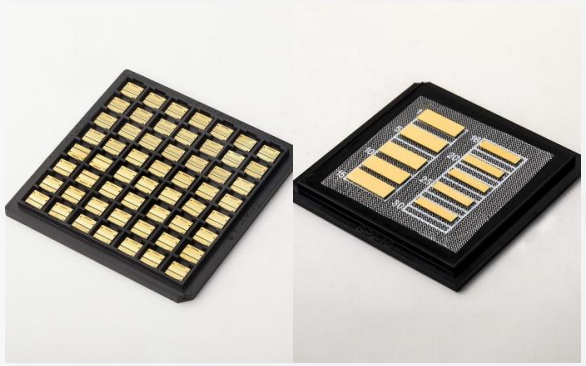
Focuslight Technologies

- Laser Source Business Unit
- Laser Optics Business Unit
- Automotive Business Unit
- Pan-Semiconductor Solutions Business Unit
- Medical & Health Business Unit
- Global Photonics Foundry Business Unit
- Global Operations Center
- Centralized Corporate Functions + Shared Service Center

Products – Laser Sources and Materials

Under Focuslight Brand



Advanced Materials

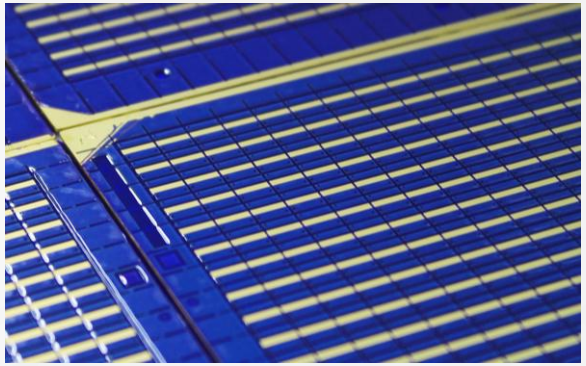
- AuSn Pre-Deposited AlN Ceramic Submounts
- AuSn Pre-Deposited CuW Submounts

Open-Package Diode Lasers

- Single Emitter Components
- Single Bar Components
- Micro-Channel Cooled Stacks
- Conduction Cooled Stacks
- Pumped Modules

Fiber-Coupled Diode Lasers

- Emitter-Based Modules
- Bar-Based Modules



Technical Services

- Thin Film Metallization Service

Products – Micro-Optics

Under Focuslight Brand

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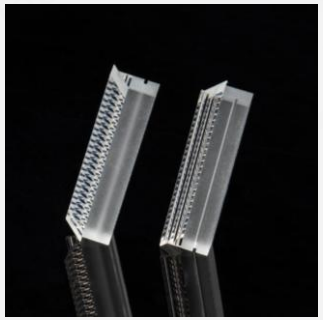
Single Lenses and Linear Lens Arrays

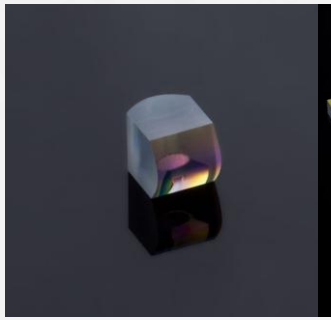
FAC

SAC

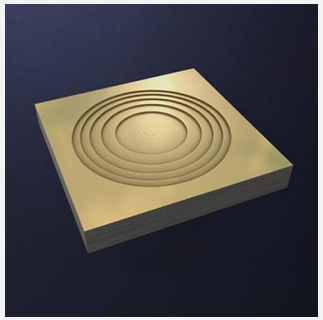
SAC array



BTS



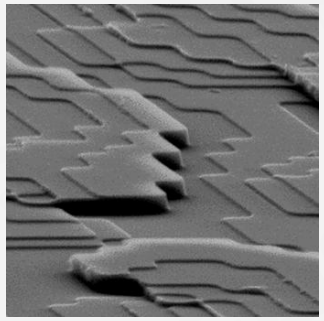
Fiber coupler and collimator



Collimating DOE

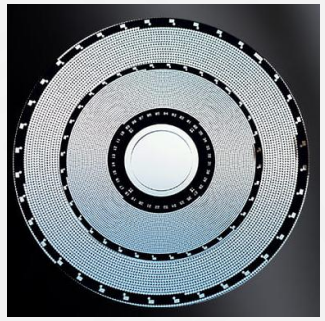
Area Lens Arrays

Homogenizer and diffuser



DOE beam splitter, dot or line generator

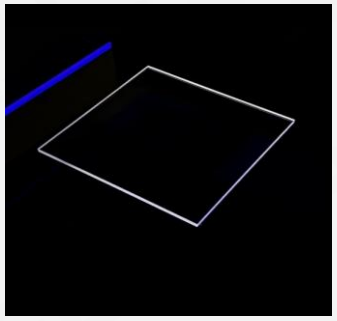
Shack-Hartmann array



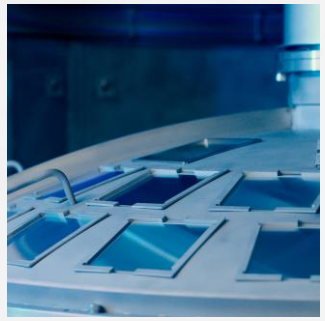
Pinhole array

Plano Optics and Coatings

Micro prism



Window



Optical Coating

Products – Automotive Application Solutions

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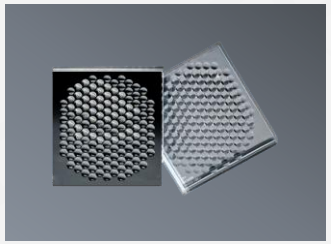
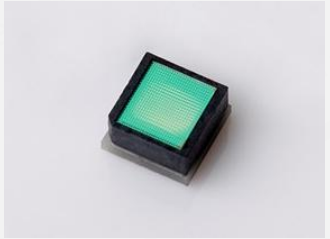
Under Focuslight Brand

Projected Lighting

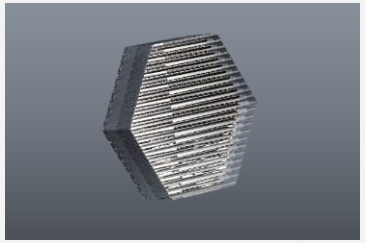


Microlens Arrays for Projection



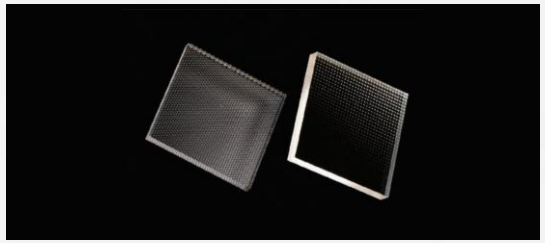
MLA-Based Dot Projectors

Smart Headlights



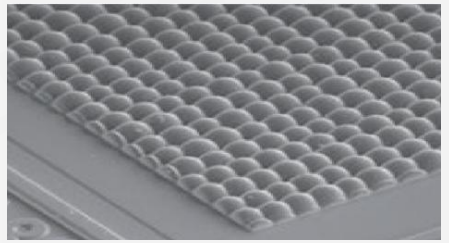
Microlens Arrays

Driver Monitoring System



Homogenizers / Diffusers for Illuminators

AR HUD

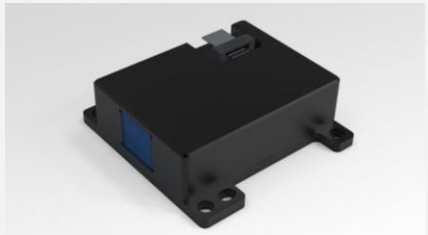


Homogenizers / Diffusers

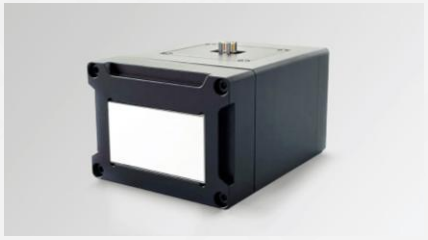
LiDAR

EEL / VCSEL Based LiDAR Transmitter Modules

VCSEL Flash Transmitter 700W

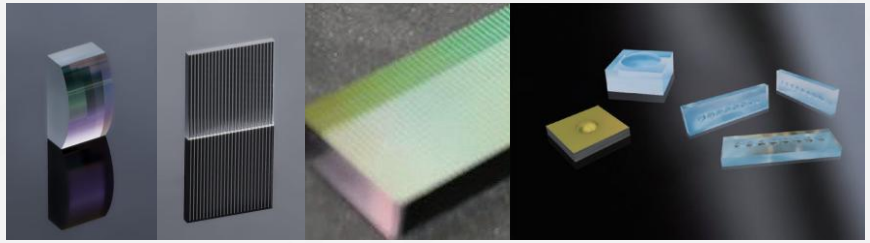


905nm 700W EEL Line Beam Transmitter



VCSEL Line Transmitter 1000W

Beam Shaping Optics



Fast Axis Collimators, Diffusers, Homogenizers, Collimators and Arrays in Glass, Polymer and Silicon

Products – Pan-Semiconductor Application Solutions

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Under Focuslight Brand

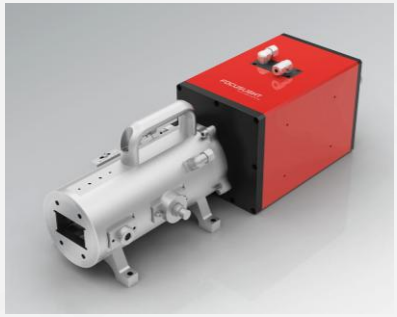
Advanced Display Manufacturing

Solid-State Laser Lift-Off (LLO) System

Solid-State Laser Annealing (SLA) System

Variable Beam Laser System
(Mini and Micro LED Processing)

IC Manufacturing



IC Wafer Annealing System

Variable Beam Laser System
(Advanced Chip Packaging)

Industrial Solutions

IR Line System

Industrial Laser Module

Technical Service

End-to-end Technical Services

Products – Medical and Health Application Solutions

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Under Focuslight Brand

Laser Hair Removal Modules

Laser Skin Rejuvenation Modules

Laser Body Sculpting Modules

Diode Laser Drivers

Products and Services – Based on WLO and WLS

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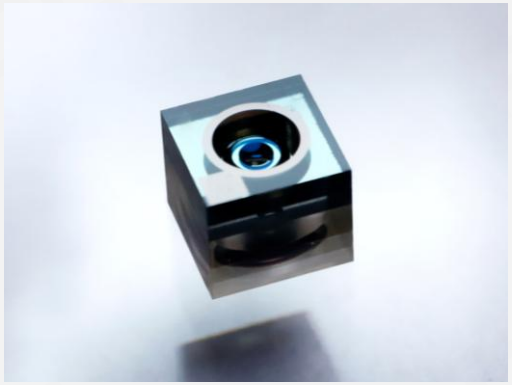
Under Heptagon Brand

Wafer-Level Optics

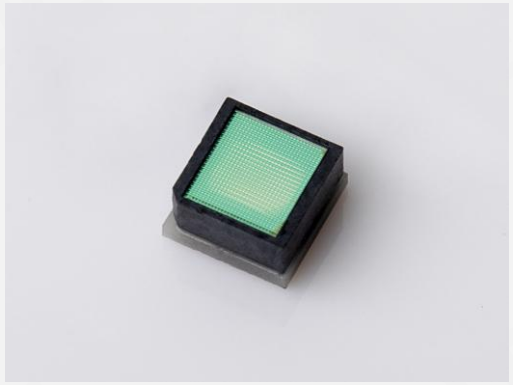
Micro lens arrays, diffusers, DOEs, Fresnel lenses

Wafer-Level Lens Modules



Stacked imaging lens modules compatible with CMOS

Sensor Module Packaging Service



Packaging service for sensor modules

Semiconductor Foundry Service

Imprinting of optical components or lens modules on silicon wafers (e.g., for sensors, VCSELs, MicroLEDs)

Global Photonics Foundry Services

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From Concept to Mass Production

Specification Requirements

(ERS, RFI, sharing)

Design Feasibility Study

Outcome: Concept & prelim. Design (fulfilling requirements, dimensions, est. cost),

DFM* Stage

Outcome: Full-fleshed Design for WLO-Technology, Manufacturability and Risk Analysis

*DFM: Design For Manufacturing

Design Verification / POC Stage

Outcome: 1st Gen Working Samples manufactured, testing data results for e.g. yield analysis

Product Validation & Qualification

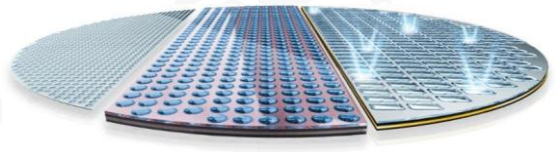
Outcome: 2nd or xth Gen working samples, Creation of Product Documentation (e.g. delivery req. specifications, drawings, technical datasheets etc.), cost analysis

Ramp-Up

Mass Production

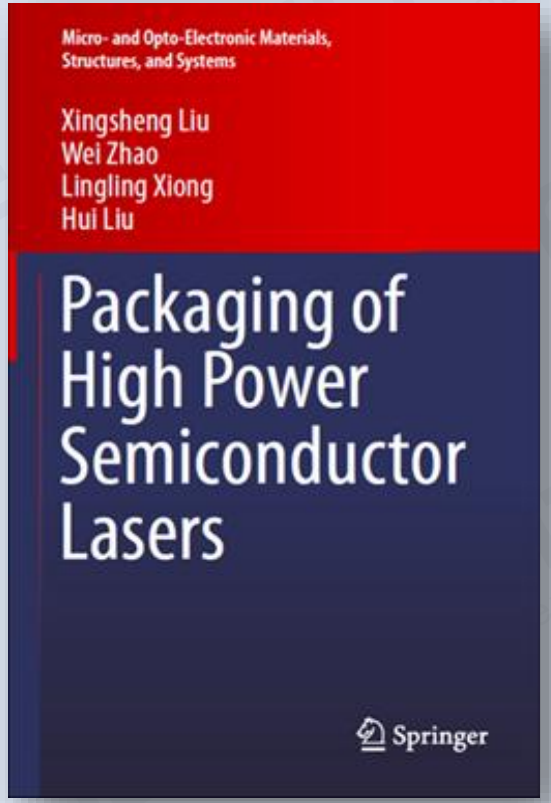
WLO Components fully compliant according to Product Requirements and Test Specs.

Wafer Level Optics (WLO)

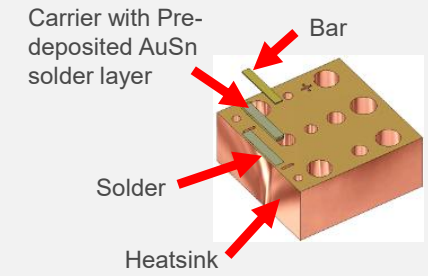


Core Competence

Diode Laser

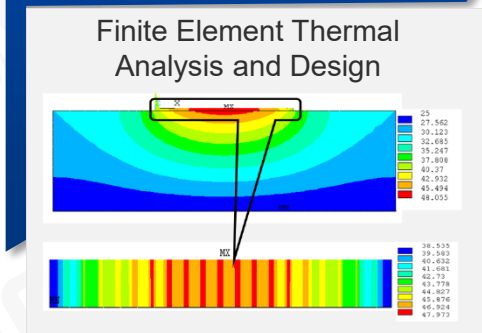


Eutectic Bonding



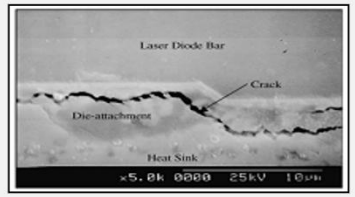
Significantly enhances thermal conductivity, reducing thermal stress, and thus improving the products' performance and lifetime

Thermal Management



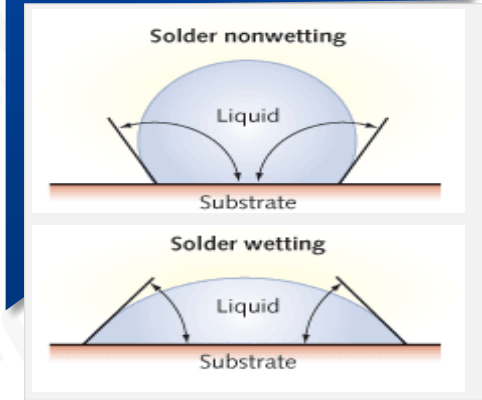
Effectively improves the ability of heat dissipation to ensure a higher output power

Thermal Stress Control



Lowers and homogenizes the thermal stress, and improve the device performance

Interface Materials and Surface Engineering



Greatly improves wettability and bonding strength of packaging materials, enhancing long-term reliability

Core Competence

FOCUSLIGHT
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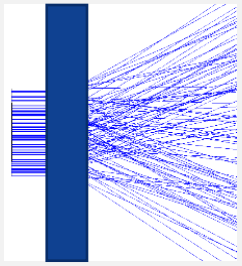
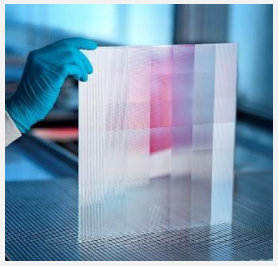
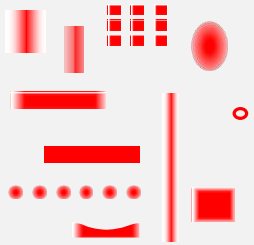
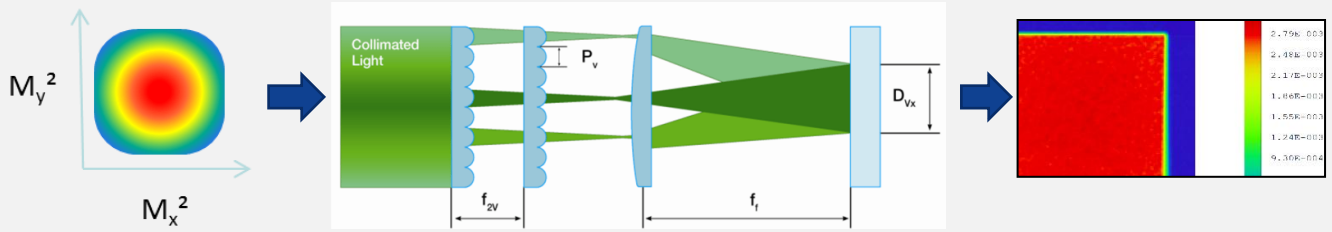
Beam Shaping – ***The Right Photon at the Right Place and Time!***

Micro Optics Design and Simulation

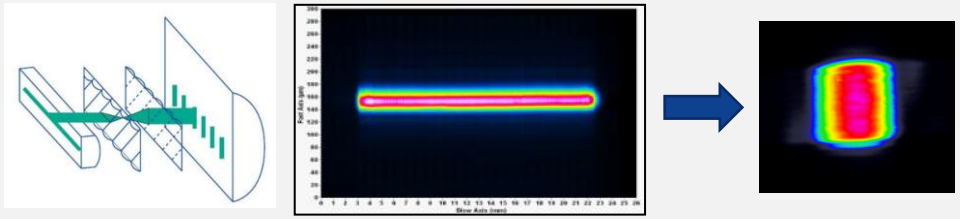
Acylindrical free-form micro-optics / arrays / diffusers / DOE splitters / beam shaping systems

Homogenization

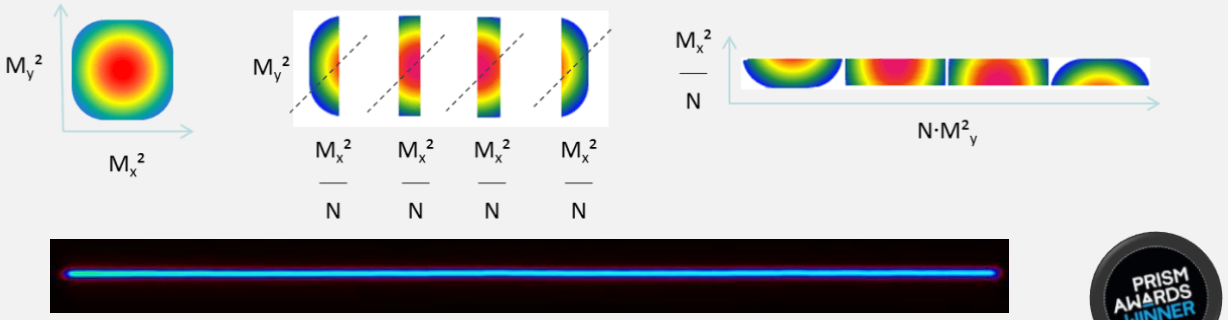


Uniform and homogeneous illumination in any desired shape

Beam Transformation



Asymmetrical → Symmetrical beam



Symmetrical beam → High density line beam

Our UV-L750 System for Laser Lift-Off (LLO) was Prism Awards winner in 2018

Core Competence

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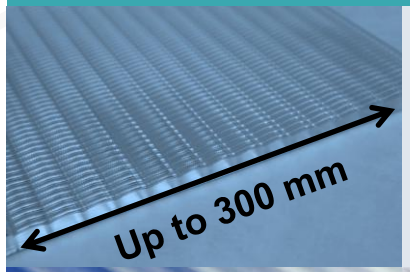
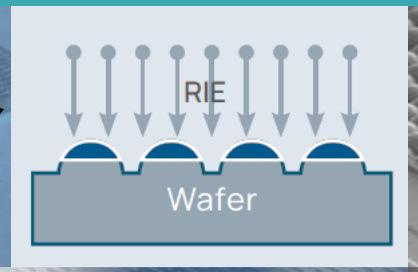
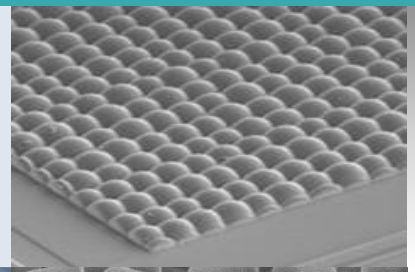
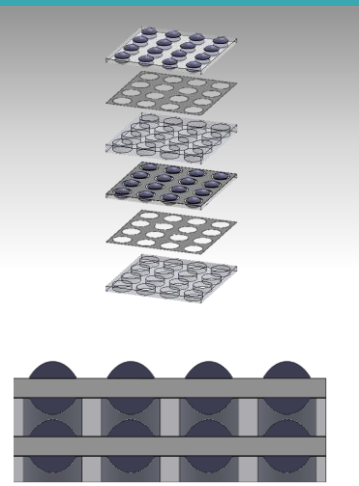
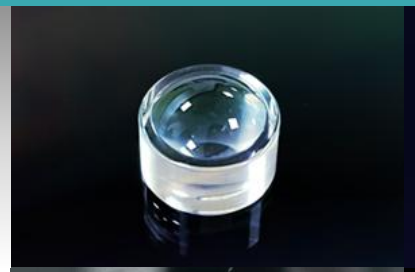
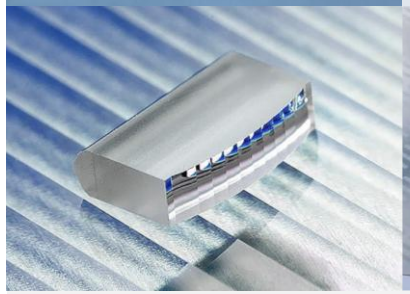
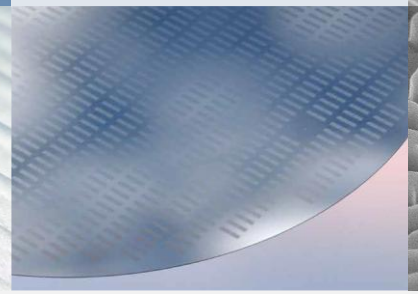
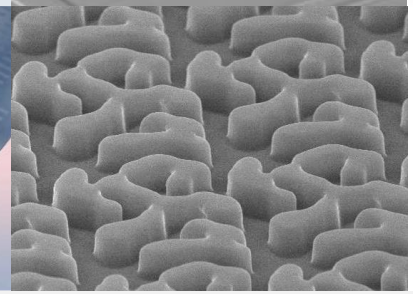
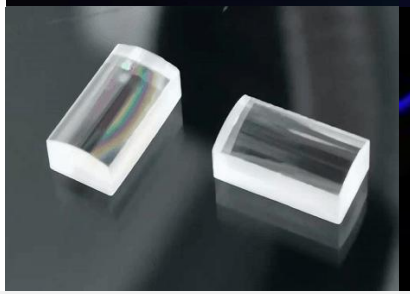
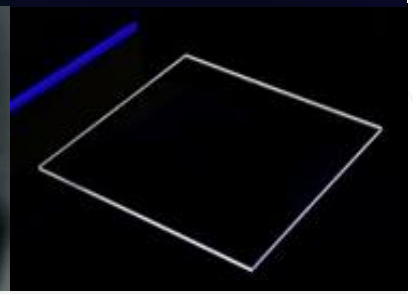
Optics Manufacturing

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
FE: Dortmund, Germany BE: Asia	FE: Neuchâtel, Switzerland BE: Asia	Shaoguan, China Singapore	Singapore	Dongguan, China	Dongguan, China
					
					
With inorganic materials: Glass, Fused Silica, Silicon, CaF_2		With polymer on glass		With inorganic materials: Glass, Fused Silica, Silicon, CaF_2	

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

FE: Frontend; BE: Backend

Core Competence

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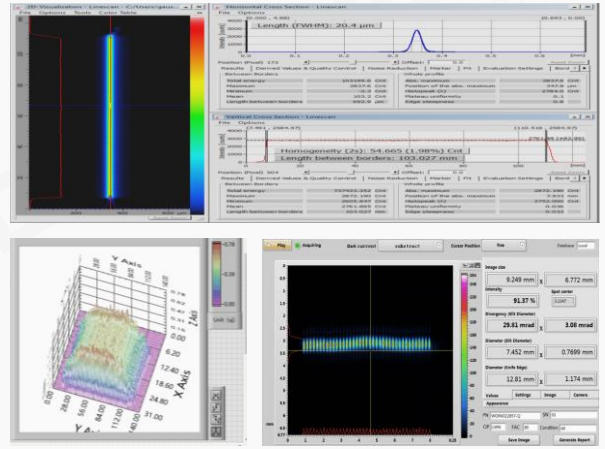
Test, Analysis and Diagnosis

Test and Characterization of High-Power Diode Laser

A comprehensive physical diagnostic model allows full characterization of a set of key parameters, such as:

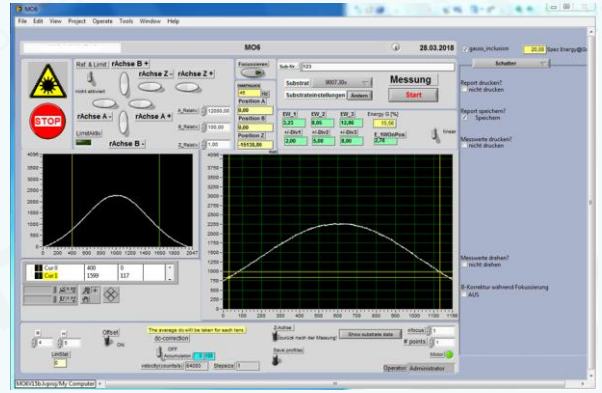
- LIV
- Spectrum
- Polarization
- Far-field / Near-field
- Spatial spectrum
- Spatial polarization
- Spatial beam profile
- Smile effect
- Lifetime



Metrology and Analysis of Optical Components

Wave optics models are used in conjunction with tactile surface measurements for precise analysis of optical functions such as:

- Focusing
- Collimation quality
- Beam uniformity



Core Competence

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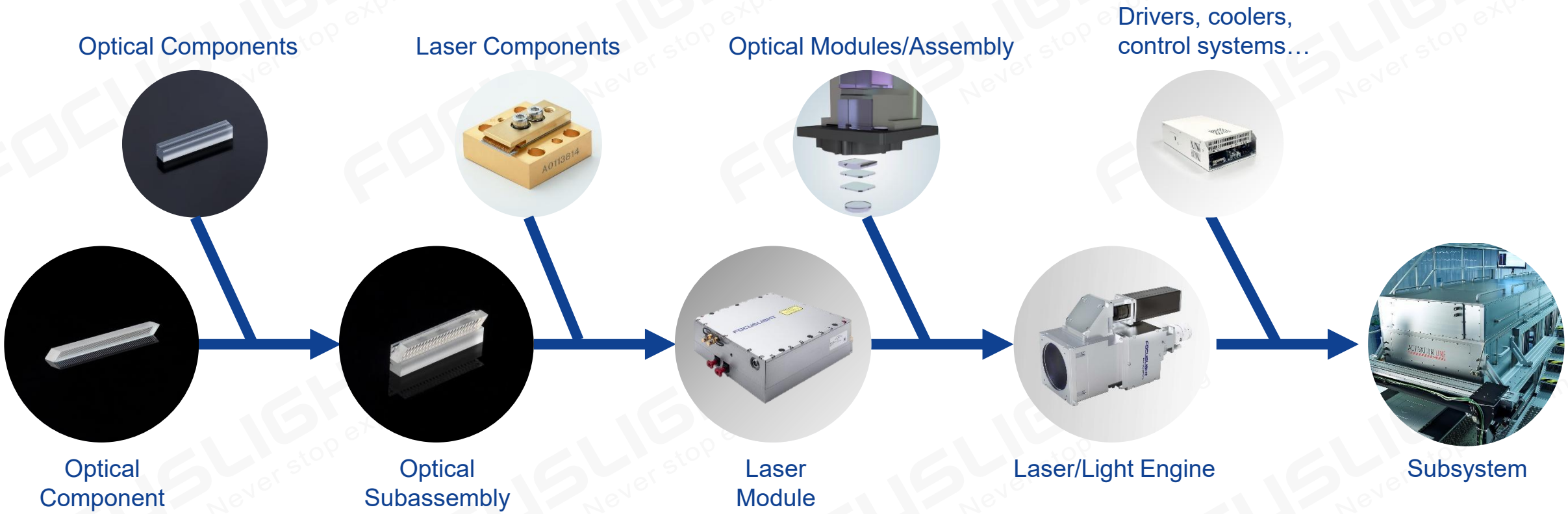
Never stop exploring

High Precision Optical Assembling Process and In-house Equipment: From Components to Subsystems



A Unified Quality Management System

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Governance Framework That Drives Enterprise-Wide Quality Excellence

- ISO9001 Certified Quality Management System (QMS)
- ISO14001 Certified Environmental Management System (EMS)
- IATF16949 Certified Automotive Quality Management System
- ISO45001 Certified Occupational Health and Safety Management System
- Failure Mode and Effect Analysis (FMEA)
- Statistical Process Control (SPC)
- Production Traceability Database
- Control Plan (CP)

Quality Assurance System

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Ensuring Product Reliability Through Rigorous Controls and Verification

Built-in Quality to Meet Customer's Needs

Assurance of Design Quality	Design of the Optimal Design Quality to Meet Customer Needs	Assurance of Manufacturing Quality	Built-in Optimal Design Quality	Assurance of Service Quality

NPI / APQP | Mass Production | RMA / Warranty

Planning
Research & Development
Production Engineering
Manufacture
After Service

Promotion of Consistent Quality Assurance Activities

Quality Control System of Design	Quality Control System of Manufacture		Quality Control Evaluation System
• QFD • Critical Characteristic, Special Characteristics • Tolerance Chain Design • FMEA, FTA • Design Validation • Design Review	• Parameter design • Process FMEA • Process Capability Study • Automatic Inspection, • Poka Yoke / Error Proof • Measurement System Analysis	• QA Network • Supplier Quality Management • Production Validation • Control Plan • QC Circles • Production Part Approval Process	• QC diagnosis • Quality assurance Meeting • Quality Auditing Improvement Meeting

Focuslight Manufacturing System (FLMS)

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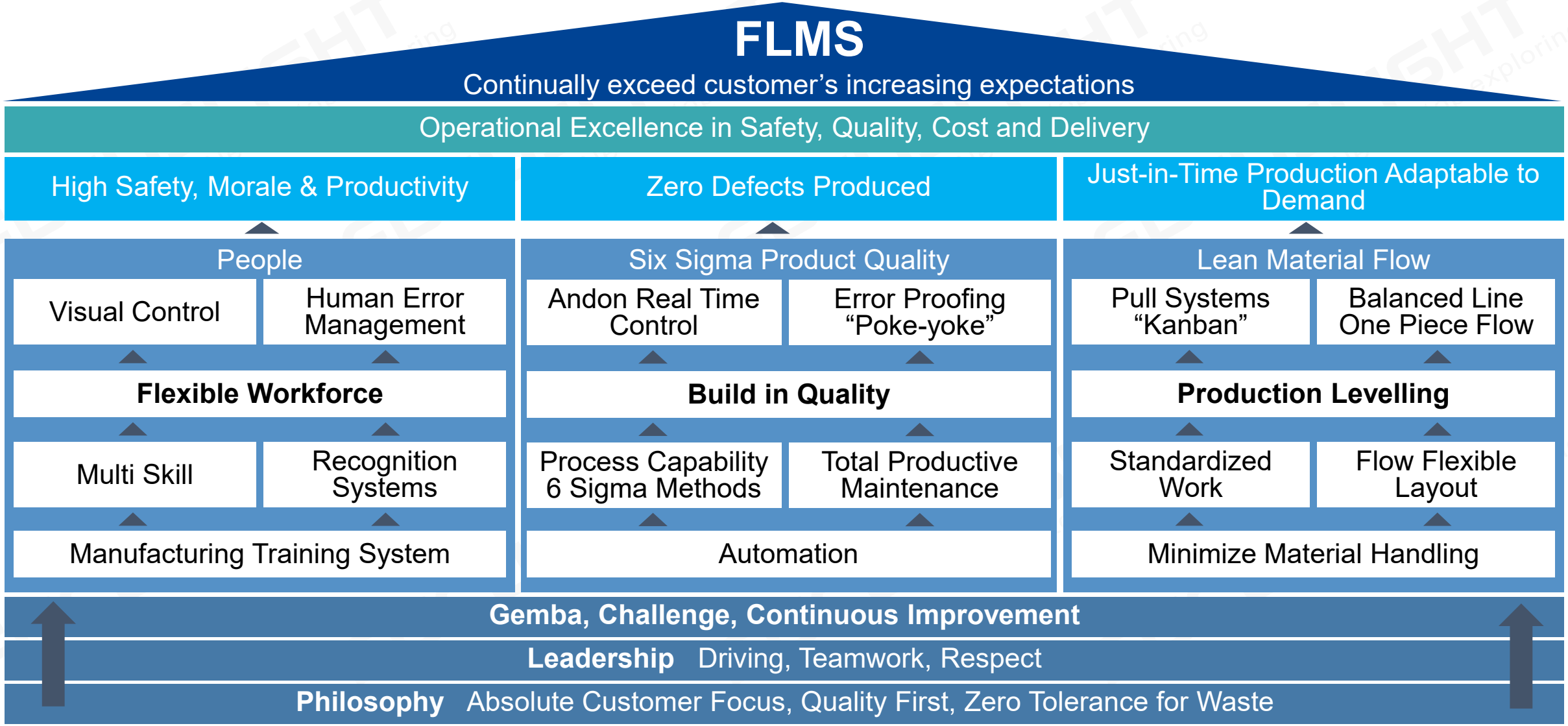
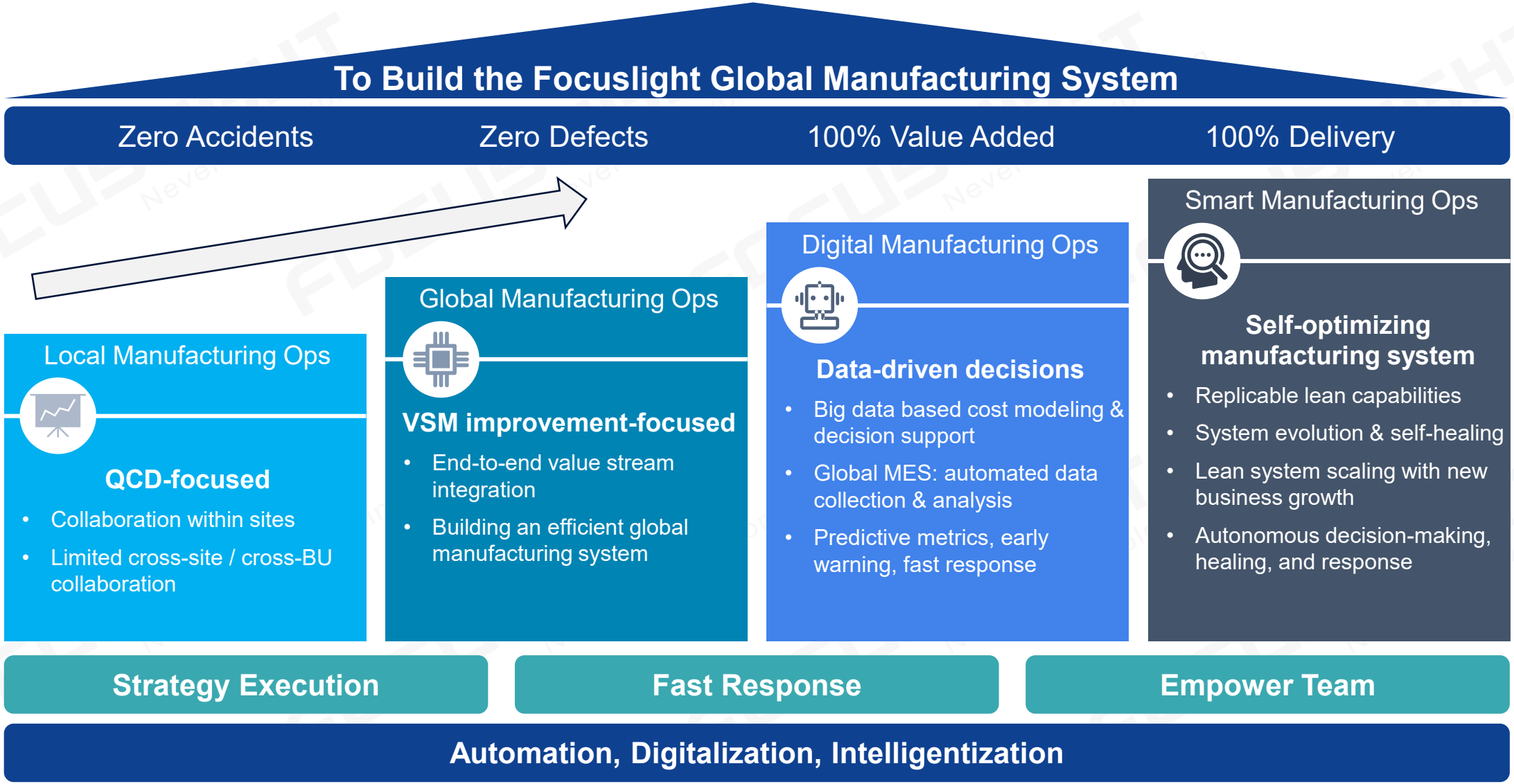
Building Stable, Efficient, and Scalable Production Capabilities



Lean Operation



Manufacturing Technology Engineering

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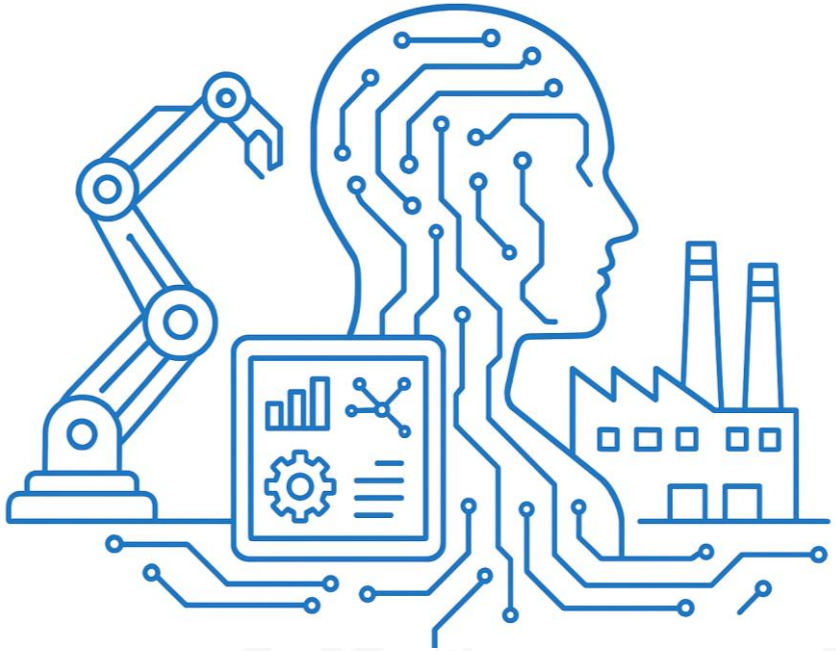

Equipment interconnection

MES

- Improved efficiency
- Big data enhances quality through visibility

Big data boosts decision

Testing

- AA (Active alignment)
- PA (Passive alignment)

Automation

- AOI
- P&P (pick & place)
- CD (collaborative development)

Automation Powered Operational Excellence

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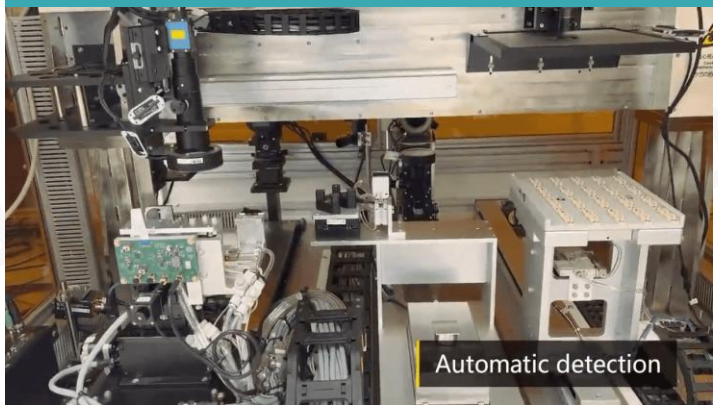
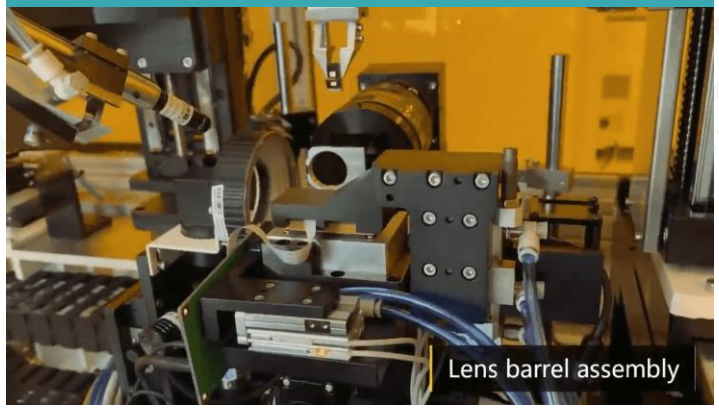
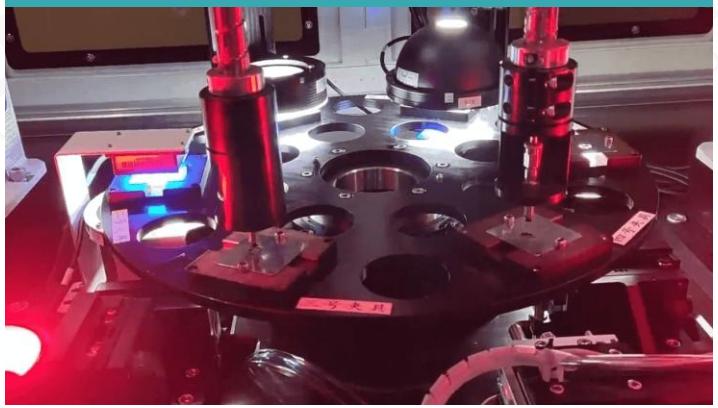
Automatic Optical Alignment



Automatic Assembly



Automated Optical Inspection



Laser Optics Production Line

LiDAR Transmitter Production Line

Big Data Powered Production

Video Link: https://www.focuslight.com/news-events/newslist/focuslight-autonomation-powered-manufacturing-excellence/

Manufacturing Capacity

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Advanced Materials

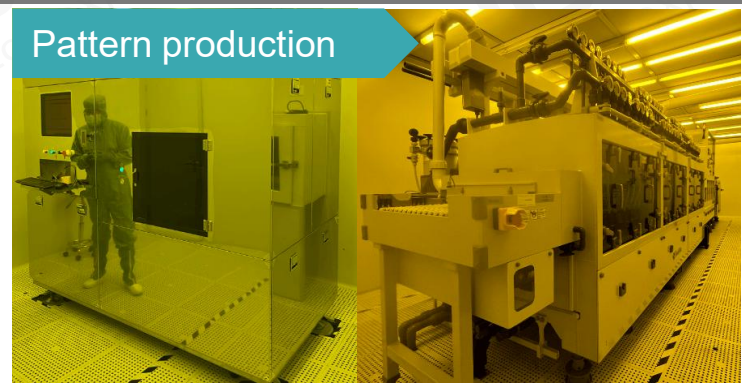
10+ years high-volume manufacturing experiences + self-owned core technologies

DPC production

Etching production

Au plating

Pattern production



Cleaning

AuSn deposition

Laser marking

Dicing

AOI inspection

Advanced Materials Manufacturing Capacity > 2M pcs / month

Manufacturing Capacity

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Laser Sources

Diode Laser Manufacturing Capacity > 500K pcs / year
Burn-in Capacity 600K pcs / year

Manufacturing Capacity

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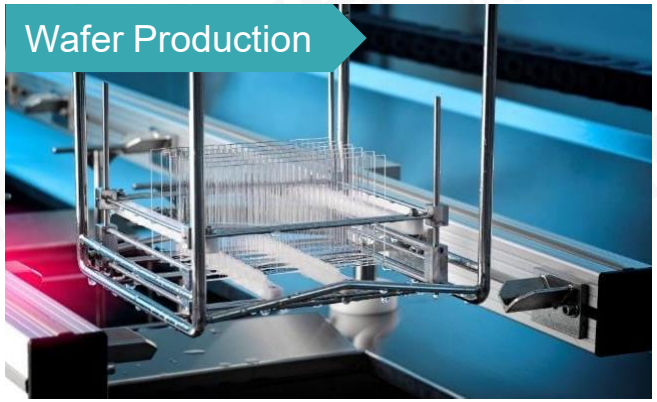
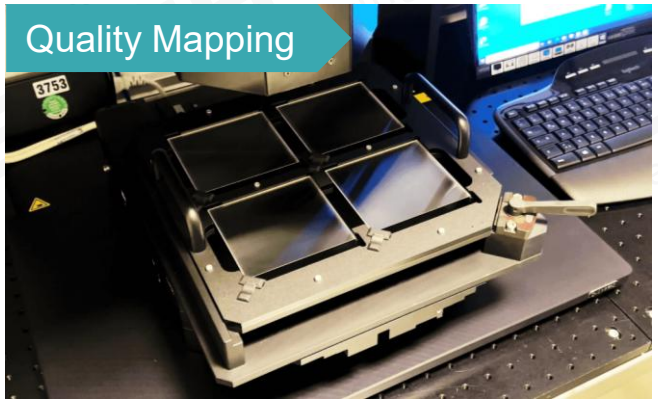
Micro-Optics: Wafer-Level Simultaneous Structuring Processing

Wafer Production

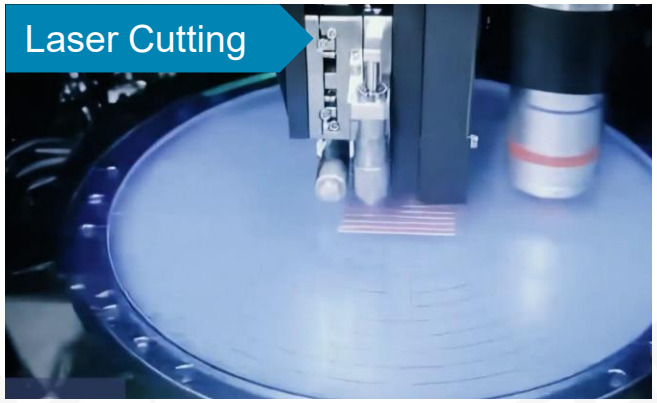


Quality Mapping



Coating

Laser Cutting



Auto Loading

Auto Packing

Wafer-Level Simultaneous Structuring Processing:
Manufacturing Capacity > 2K wafers / month or > 5M pcs lenses / month

Manufacturing Capacity

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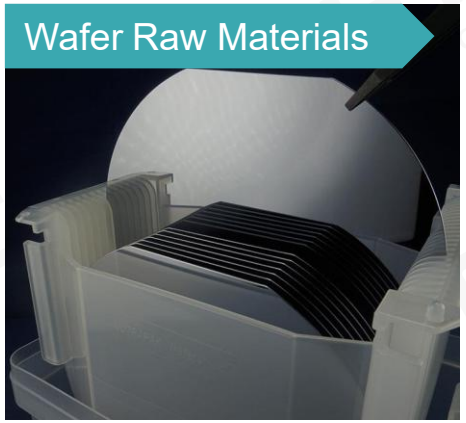
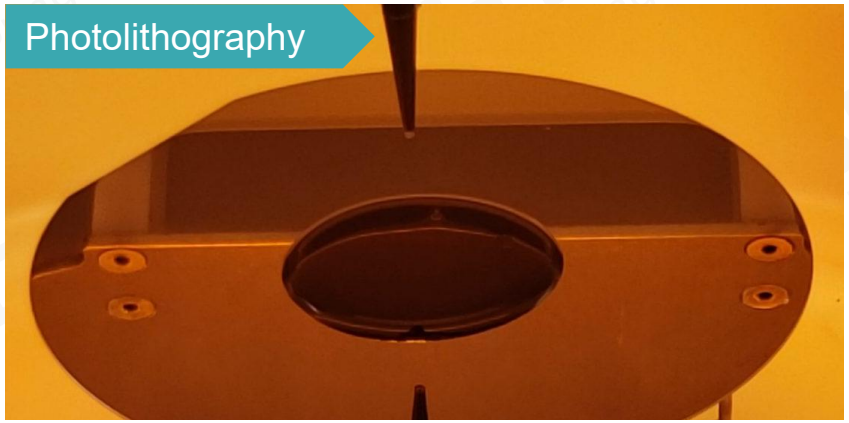
Micro-Optics: Photolithography-Reactive-Ion-Etching Processing

Wafer Raw Materials

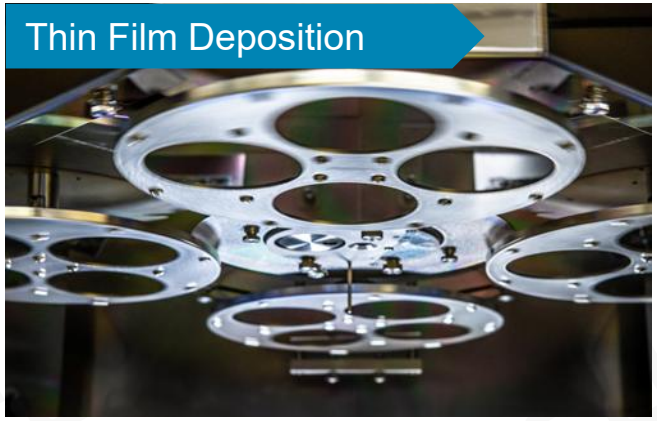


Photolithography



Dry Etching

Thin Film Deposition



Blade Dicing

Pick & Place

Photolithography-Reactive-Ion-Etching Processing:
Manufacturing Capacity > 300 wafers / month

Manufacturing Capacity

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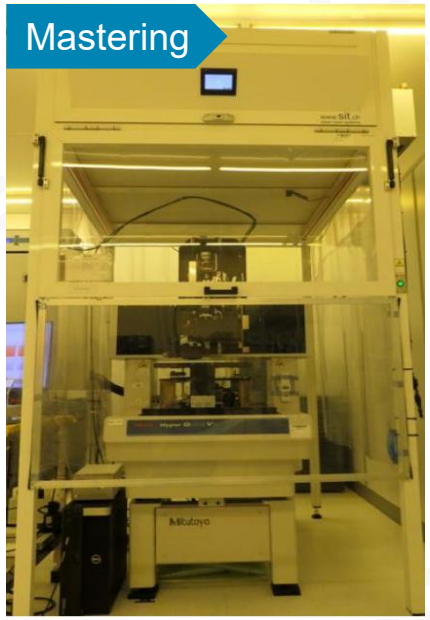
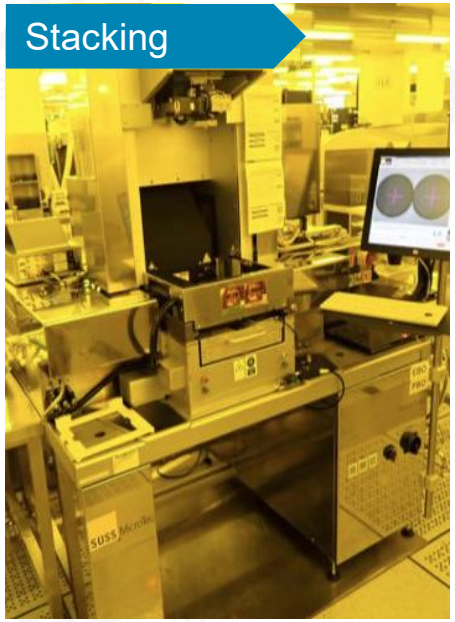
Micro-Optics: Imprinting Processing

Mastering



Replication

Stacking



Testing

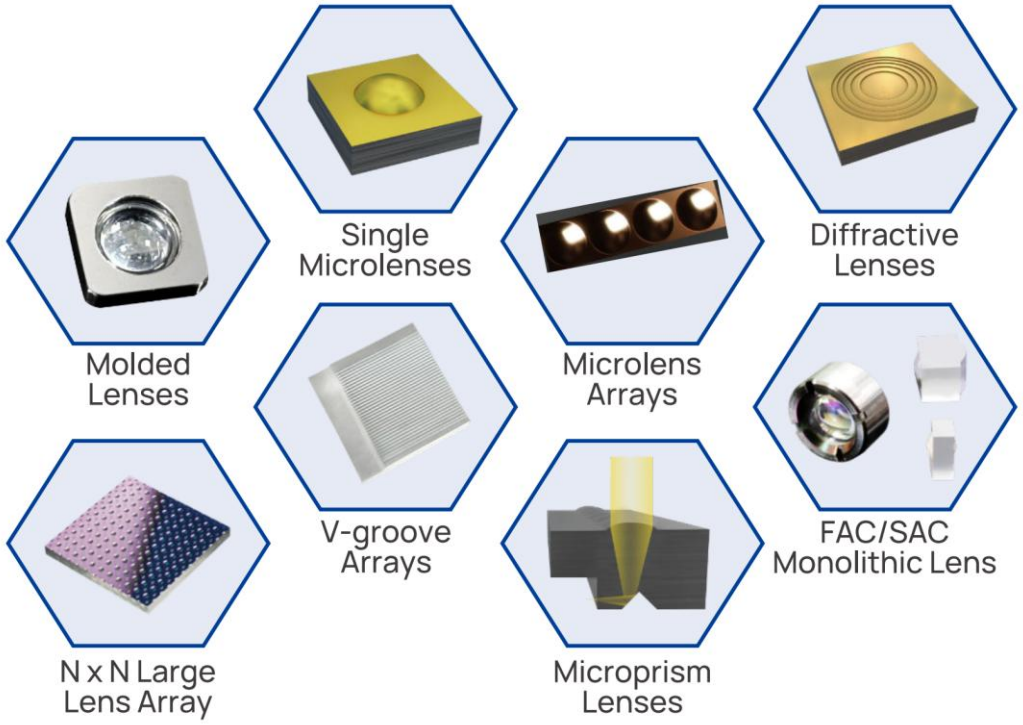
Singulation

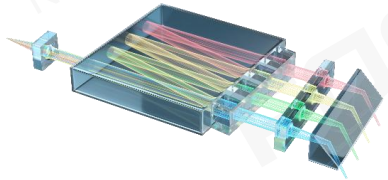
Imprinting Processing:
Manufacturing Capacity > 15K wafers / year or > 30M pcs lenses / year

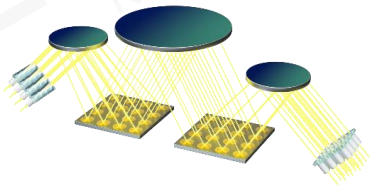
Typical Applications

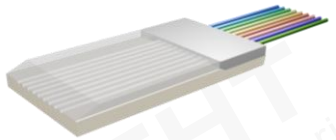
Optical Communication

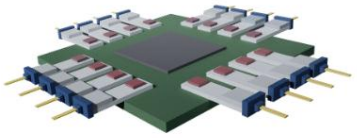
- High precision micro-optics are at the heart of optical communication systems.
- They support efficient data transfer between key optical components.

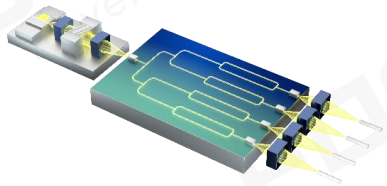


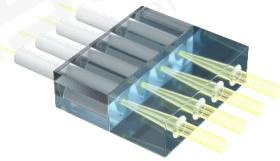

Optical Transceivers


WSS / OCS


FAU


CPO


PIC

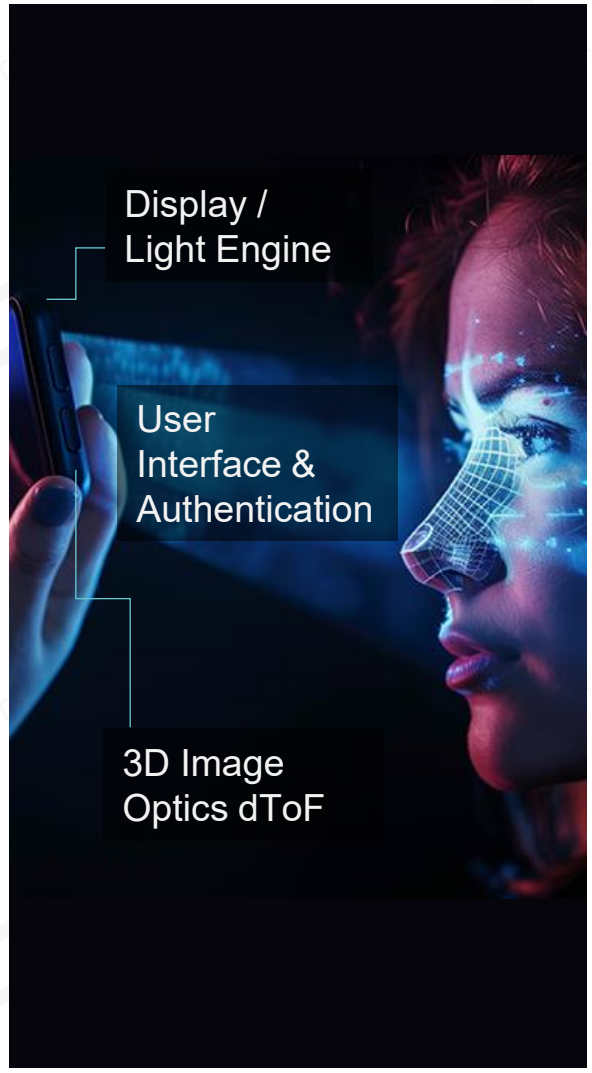

Fiber Connectors

Typical Application

Consumer Electronics

Optical Sensing, Empowering AR/VR and AI to See

Multi-aperture wafer-level optical lens for AR-Light Engine	Face recognition, under-display face recognition
Micro-optics Modules for Vis & NiR solutions with multiple FoV options	Complex micro dot projectors optics
Wafer level stacking that is fully reflowable and thus mass manufacturable	Multi-Zone 3D sensor solutions, including dToF, Proximity sensor optics
Leading thermal performance, ensuring simple thermal design	Leading thermal performance, ensuring simple thermal design



Typical Applications

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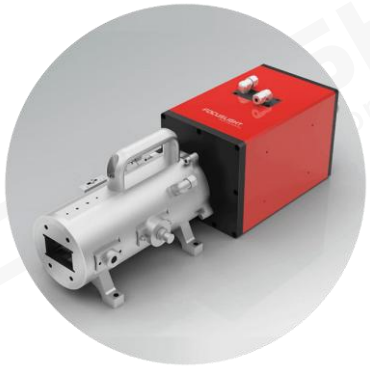
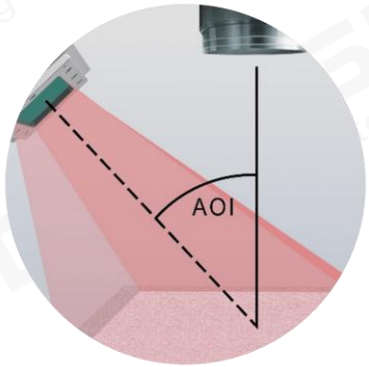
Semiconductor

- Beam homogenization technology powers the illumination system – key optical component in **pan-semiconductor systems**
- > 15 years supply to the major manufacturer of semiconductor lithography tools



- Laser system solutions with high power density and different beam profiles, designed for various **laser-based wafer annealing processes** including IGBT backside annealing and SiC annealing

- Based on 976nm diode laser with adjustable beam output and >95% homogenization in energy distribution
- Ideal for **advanced chip packaging processes**, e.g. laser-assisted bonding



- Off-axis beam shaping technology powers laser surface treatment as well as surface inspection
- Typically used in **solar cell industry**

Typical Applications

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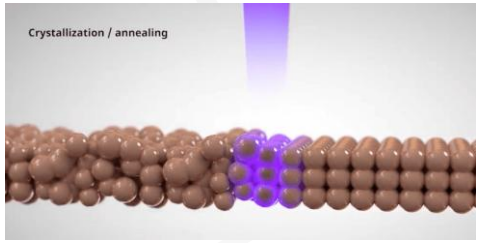
Never stop exploring

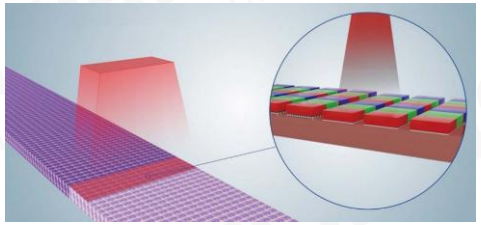
Display

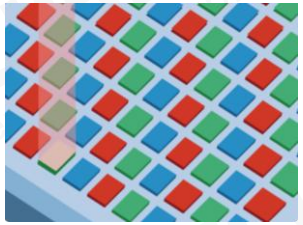
Solid-State Laser Lift-Off (LLO) for Flexible Displays

- Several tens of beam shapers (plasma display pixel structuring)
- Several green 100 mm line beam systems (laser lift-off)
- > 600 mm UV line beam production system (laser lift-off)



Next-gen LTPS Solid-state Laser Annealing Process





Mini and Micro LED Processing

- Laser Mass Transfer and Laser Mass Soldering
- Laser Chip Repair

Typical Applications

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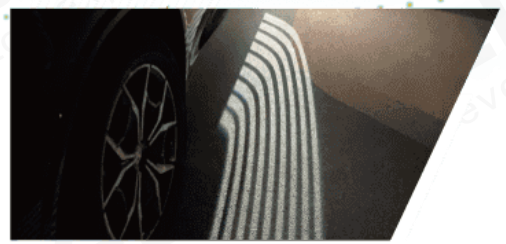
Automotive

LiDAR

Driver Monitoring System

Smart Headlight

AR HUD



Projected Lighting

- Optical Components
- Laser Transmitter / Illumination Modules
- *Focuslight does not produce LiDAR / Lighting full system*

Typical Applications

Medical and Health

Hair Removal

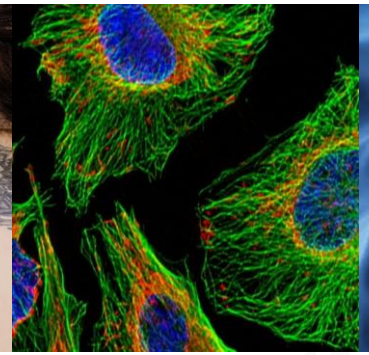
Body Sculpting

Skin Rejuvenation

Ophthalmology

3D Interoral Scanning

Dermatology



Confocal Microscopy

Endoscopy

Sensing

Laser Surgery

- Optical Components; Laser Components
- Optical Solutions; Laser+Optics Assembly; Application Handpiece
- Contract Manufacturing Services
- *Focuslight does not produce medical or health equipment*

Typical Applications

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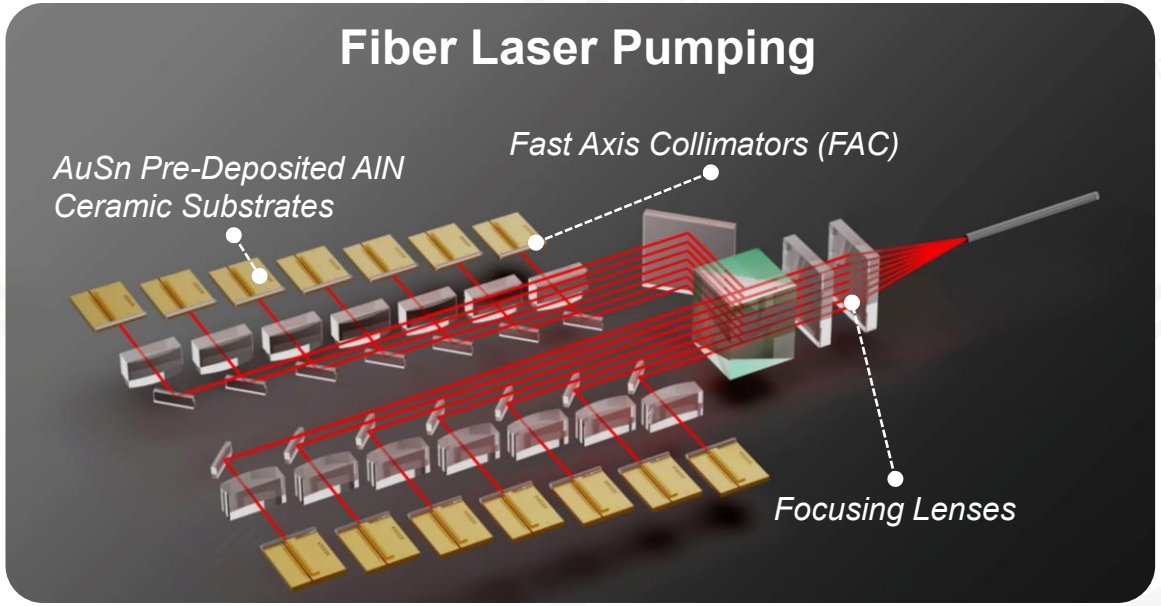
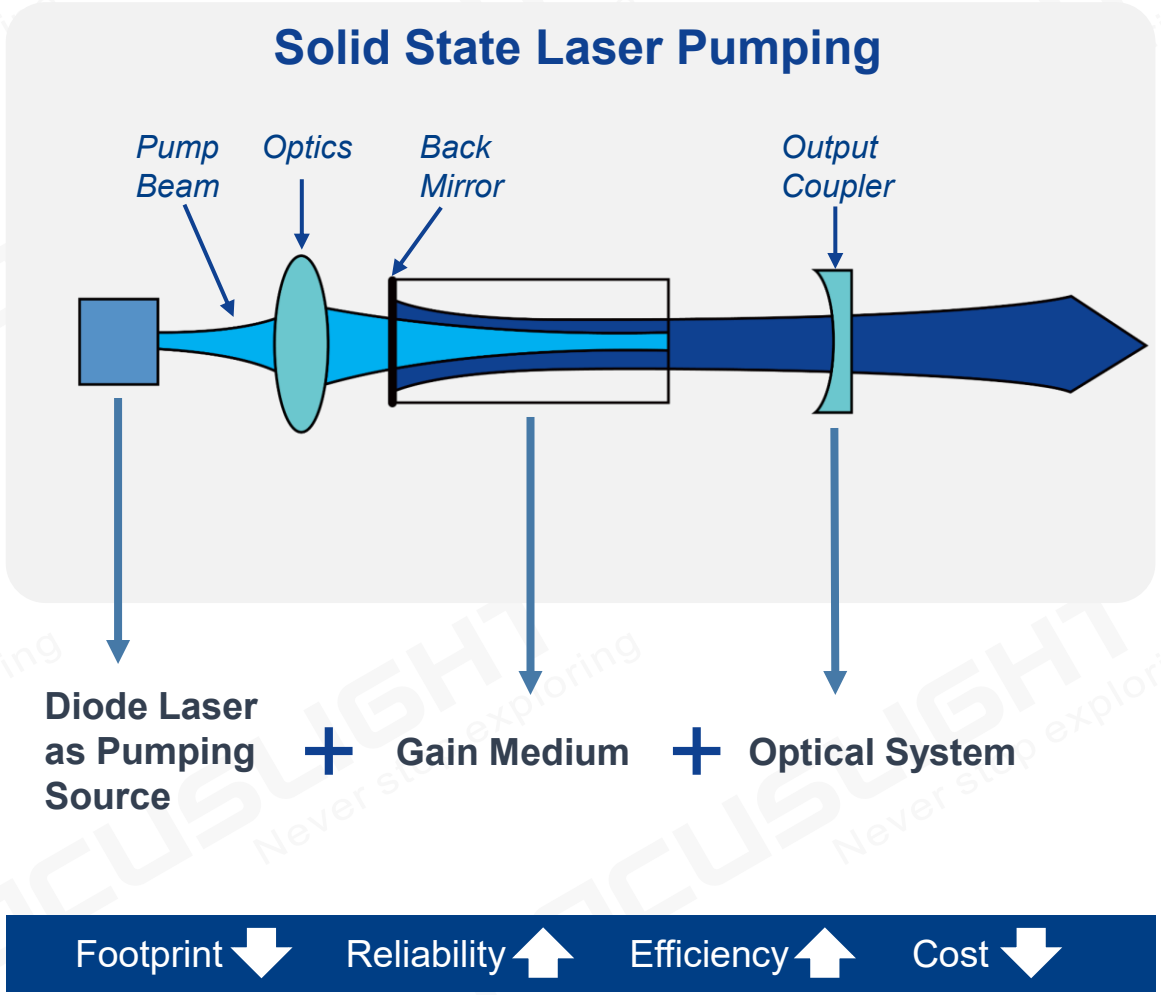
Industrial



- **AuSn pre-deposited ceramic substrates** – stable and reliable thanks to the high thermal conductivity and suitable thermal expansion coefficient;
- **Fast axis collimators (FAC)** – fundamental and efficient solutions for shaping the beam emitted by the pumping sources;
- **Focusing lenses** – coupling the collimated laser beam precisely into the output fiber;



Sales Network

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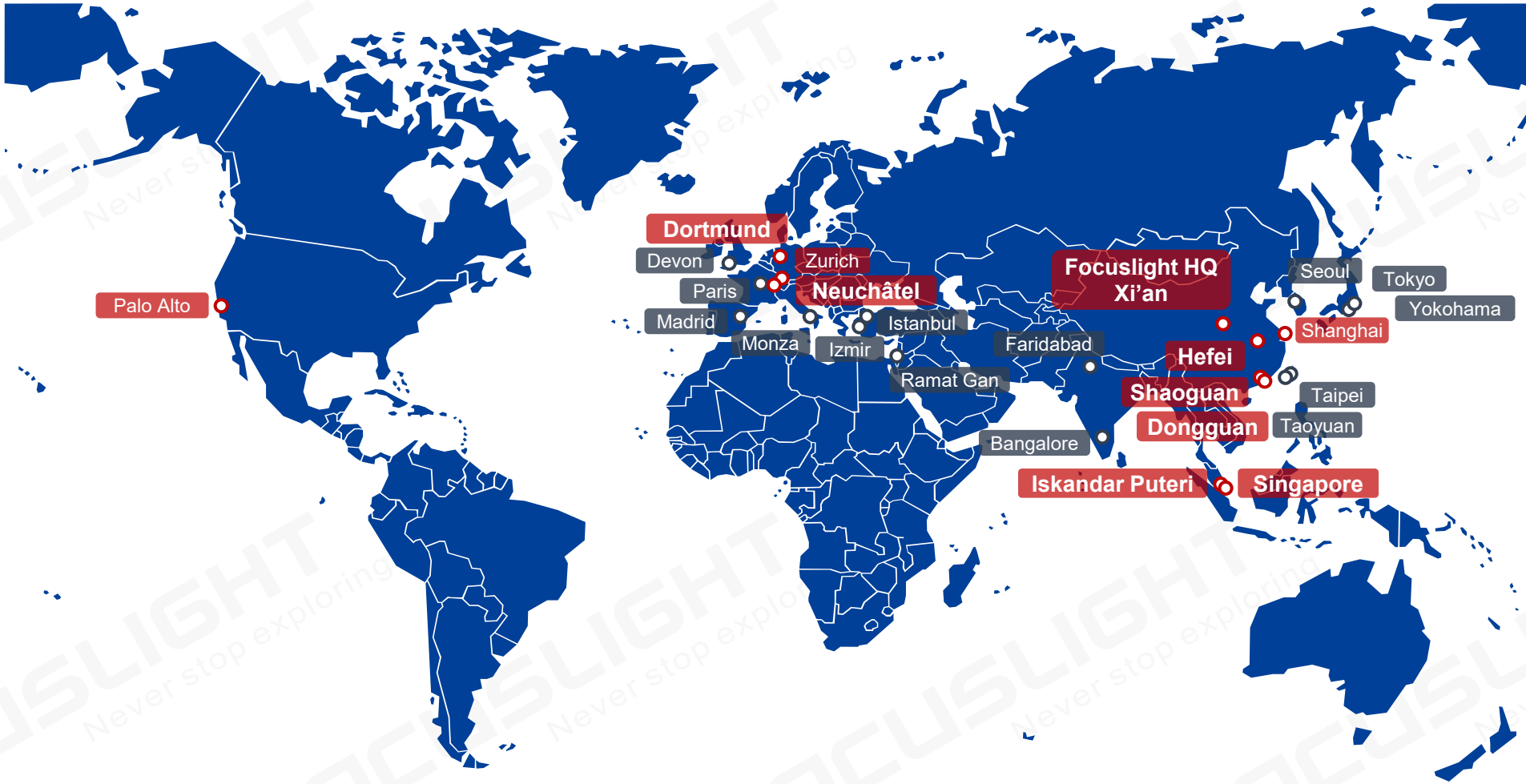
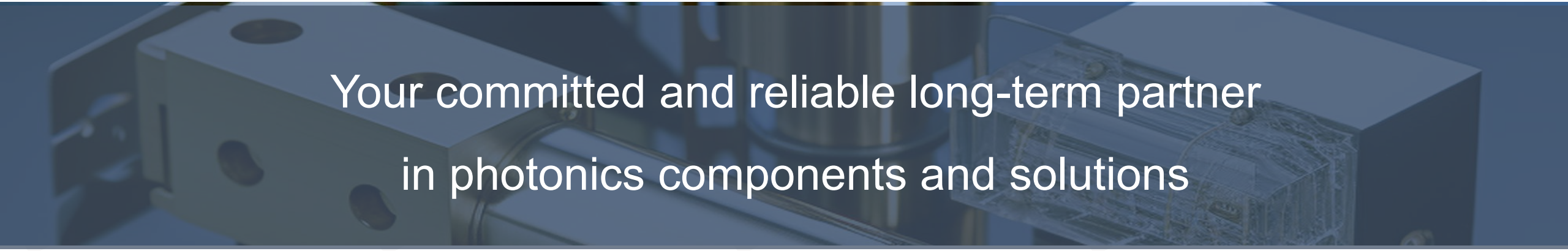


- Worldwide established distributors
- Direct sales offices in China, Switzerland and US
- R&D and operation centers in China, Germany, Switzerland, Singapore; Malaysia operation center being constructed

Summary

FOCUSLIGHT
Never stop exploring



Your committed and reliable long-term partner in photonics components and solutions

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- One-stop-shop provider of micro-optics choosing from five process technologies best matching customer needs
- Global photonics foundry that convert customers' ideas and designs into their own products and solutions
- Total solution, versatile customization service and field service provider
- Strong RDE capability, high volume production capacity and low-cost manufacturing
- Financially healthy and strong financial backing from investors for long term growth

THANK YOU

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