

# Focuslight Corporate Overview

© Focuslight Technologies Inc.

2025-12

# Focuslight Overview

- 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

  
**2007**  
Founding of Focuslight



**2018**  
Dongguan delivery and high-volume manufacturing center officially in operation

**IPO**

**2021**  
Successful IPO at Shanghai Stock Market



**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

**FOCUSLIGHT**  
Never stop exploring

**2019**  
Global branding identity upgrade

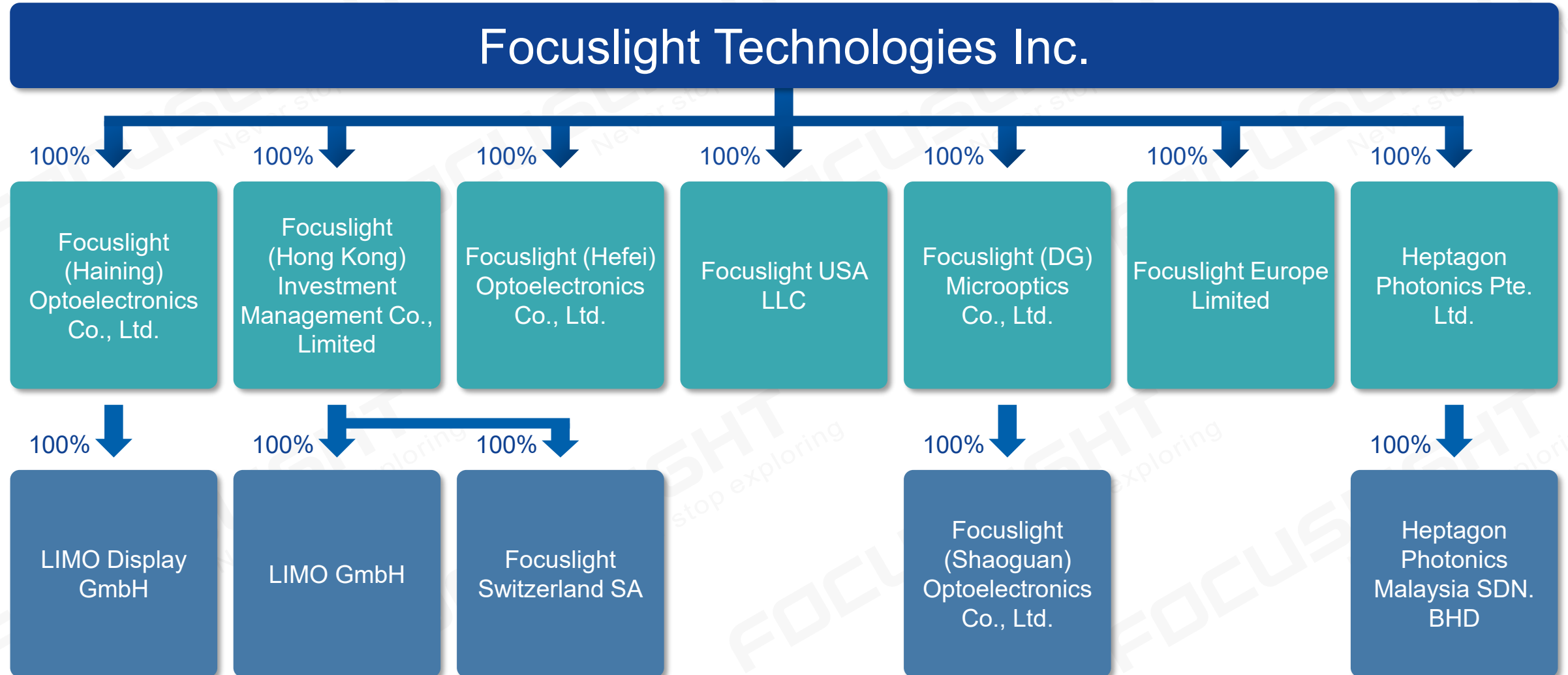
**SUSS** + MicroOptics

**2024**  
Acquisition of SUSS MicroOptics



**2024**  
Shaoguan Base officially in operation

# Focuslight Corporate and Subsidiaries



# Focuslight Global Operations System



**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



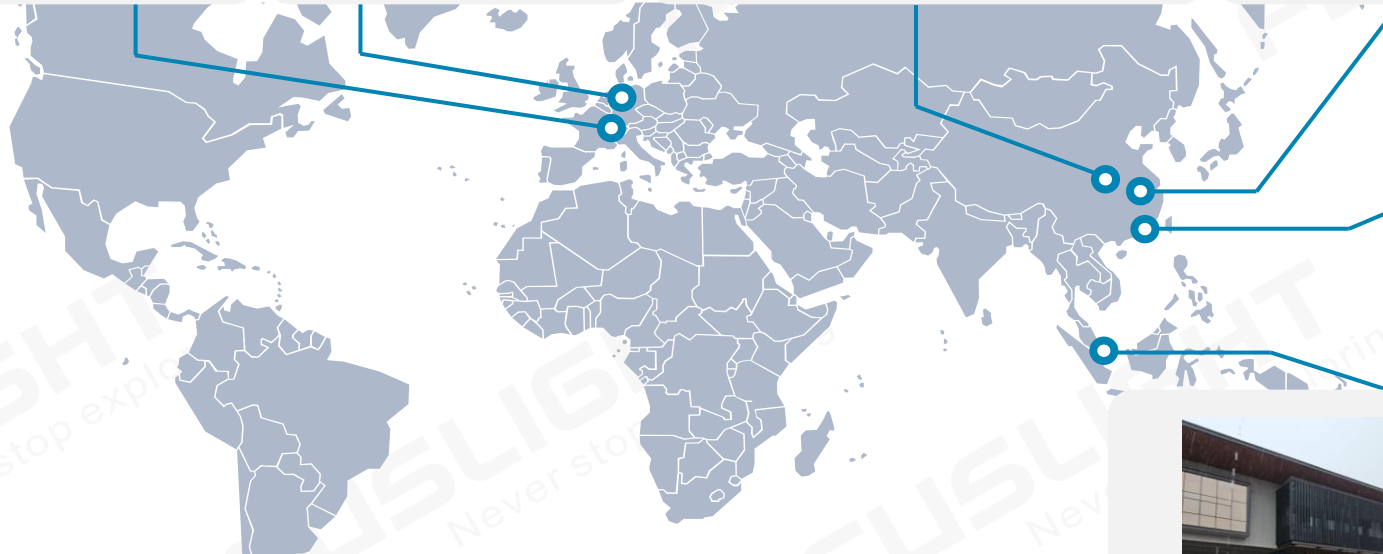
**Dongguan, China**  
Operations Center



**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



Employees

>900



Revenue Proportion  
Invested into R&D (2025H1)

~24%



Yearly Revenue  
(2024)

620M RMB



Patents Valid  
Worldwide

>560



Facility Worldwide

>49,000m<sup>2</sup>

Clean Room Worldwide























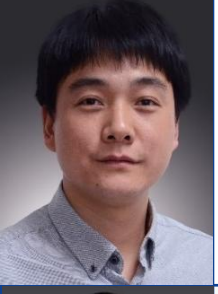


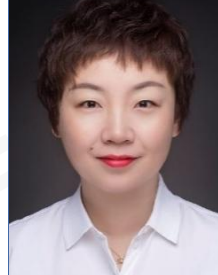







>17,000m<sup>2</sup>



ISO 9001  
ISO 14001  
ISO 45001  
IATF 16949  
Certified



# Corporate Management Team

	<p><b>Dr. Xingsheng Liu (Victor)</b> Chairman, CEO</p> <p>Research and management experience in the US, with 100+ publications, 300+ patents, 30+ invited papers internationally</p> <p>Committee Member of SPIE and IEEE</p> <p>  </p>		<p><b>Dr. Chung-En Zah</b> CTO</p> <p>30+ years of research experience in the US, with 300+ publications, 50+ patents in optoelectronics and telecommunication</p> <p>IEEE Fellow, OSA Fellow, 2x R&amp;D 100 award winner</p> <p>  </p>
	<p><b>Mr. Sinclair Vass</b> Corporate SVP of International Sales &amp; Business Development</p> <p>35+ years experience in international photonics markets, having held technical, commercial and general management leadership roles at major multinational companies</p> <p>   </p>		<p><b>Mr. Guowei Zhu (Gavin)</b> Corporate VP of Quality, President of Automotive BU</p> <p>20+ years in international automotive companies, rich experience in IATF QMS and plant operations management by World Class Manufacturing (WCM) &amp; Lean manufacturing</p> <p>  </p>
	<p><b>Mr. Tan Chee Huo (Michael)</b> Corporate SVP of Business Process and IT</p> <p>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</p> <p>   </p>		<p><b>Mr. Ye Dai (Robert)</b> Corporate VP of Global Sales</p> <p>Excellent track record in worldwide sales, product line and business unit management leadership roles</p> <p>20+ patents granted</p> <p> </p>
	<p><b>Ms. Yiping Ye (Alison)</b> Board Director, CFO</p> <p>Over 15 years management experience and multi-field business practices</p> <p>In-depth understanding in LTC, IPD, intercultural cooperation and rich operational experience in market development, project operation and business management</p> <p> </p>		<p><b>Mr. Qichuan Yu</b> Chief Product/Process Officer</p> <p>Over 25 years of experience in wafer-level optics, optical sensor and camera packaging, SAW/BAW filter R&amp;D, and NPD execution, with a strong focus on mastering, tooling, and wafer-level processes</p> <p>   </p>

# Corporate Management Team



**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



**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.



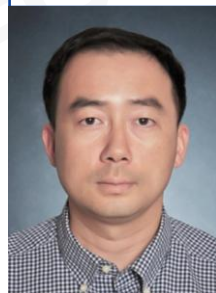
**Mr. Lucas Zhang**

Global Operations Vice President

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



HUAWEI



**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



**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



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



**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



Never stop exploring



**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



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



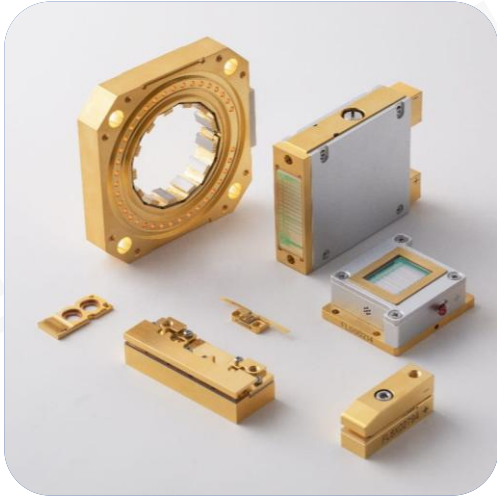
UNISTEEL





# Business and Branding

**FOCUSLIGHT**  
Never stop exploring



Photon  
Generation



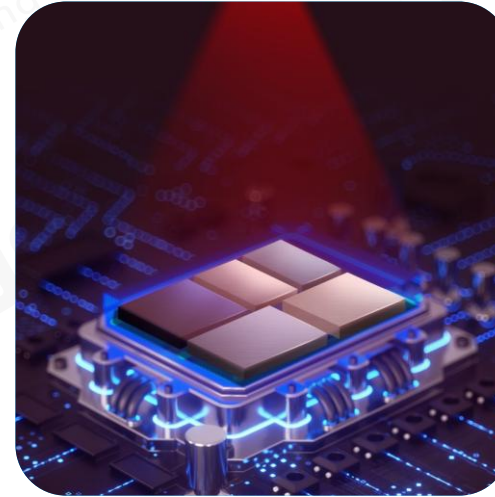
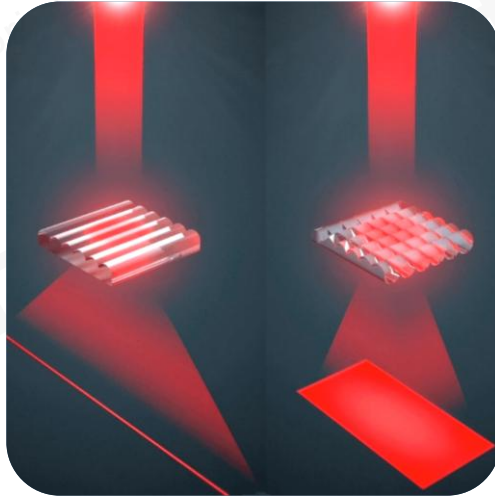
Photon  
Control



Photonics  
Application  
Solutions



Global  
Photonics  
Foundry

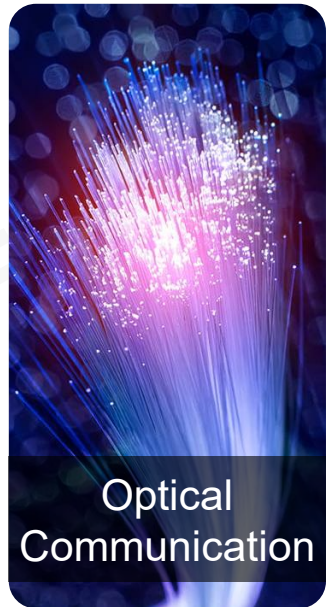


**FOCUSLIGHT**  
Never stop exploring

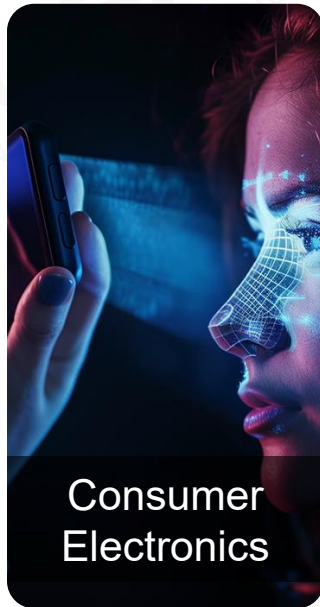


 **HEPTAGON**

# Markets



7%  
revenue



9%  
revenue



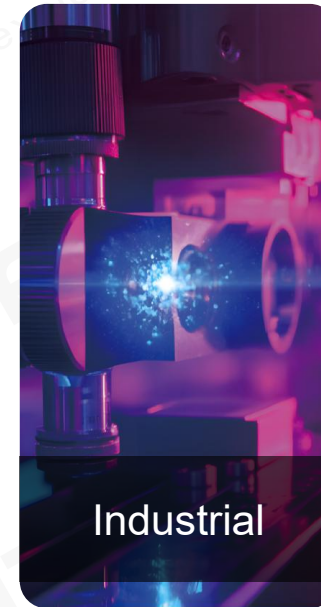
21%  
revenue



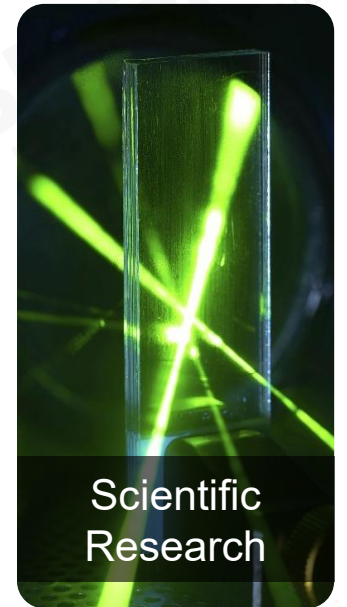
19%  
revenue



12%  
revenue



30%  
revenue



2%  
revenue

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

# Value Proposition

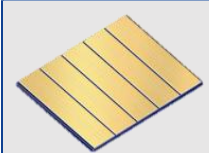
## Total Solution and Service in Full Value Chain

Raw  
Materials

Components,  
Devices

Modules,  
Subsystems,  
Application  
Systems

Solution,  
Support,  
Service



**Chips** (Strategic  
collaboration  
with Suppliers)



**Packaging  
Materials**



**Optics  
Substrate**



**Light Sources**



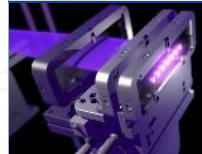
**Optical  
Components**



**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



## 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



## Vision

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

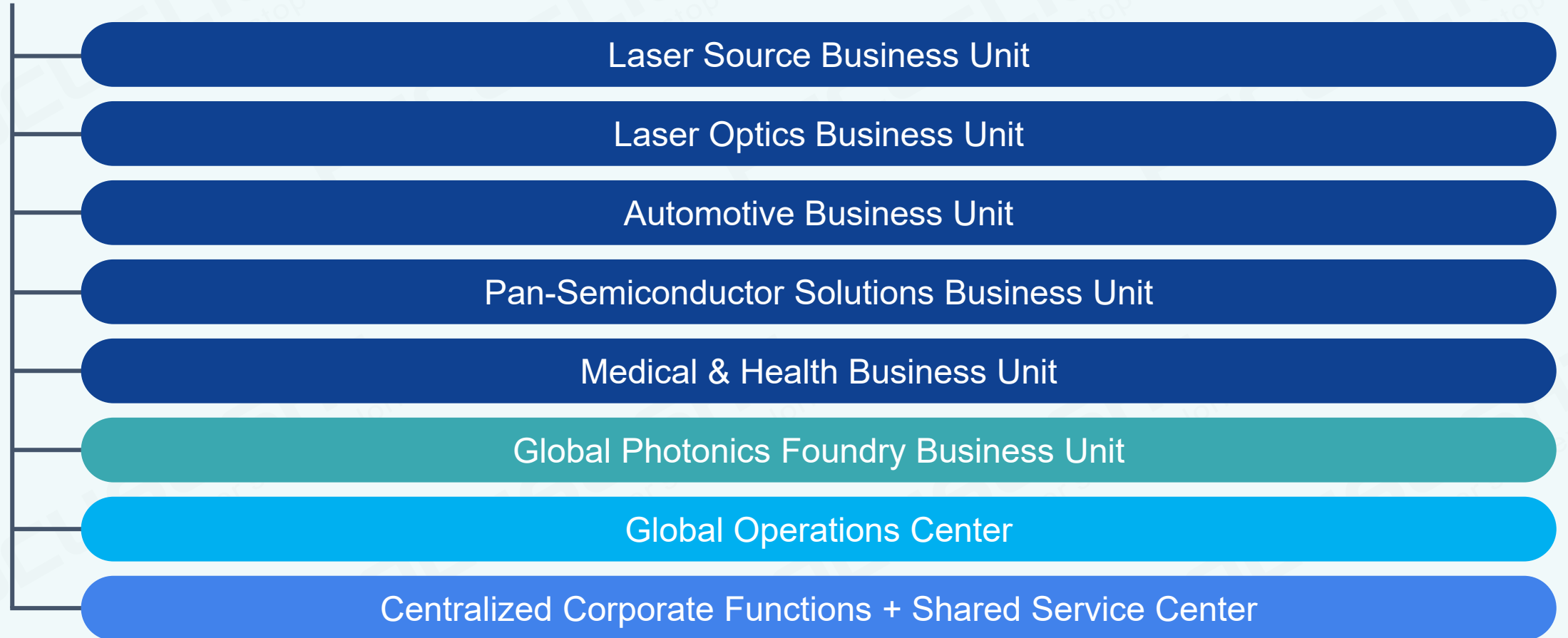


## Mission

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

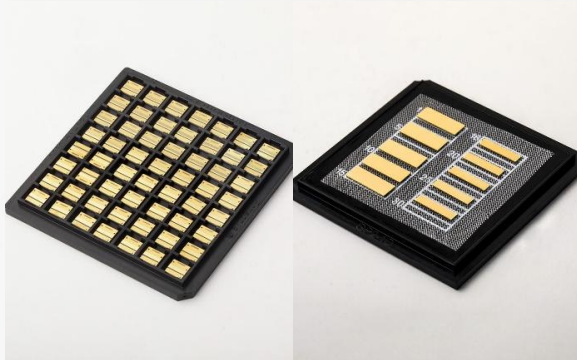
# Company Organization

## Focuslight Technologies



# Products – Laser Sources and Materials

Under Focuslight Brand



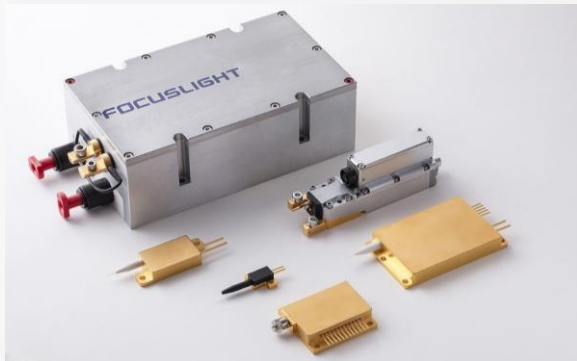
## Advanced Materials

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



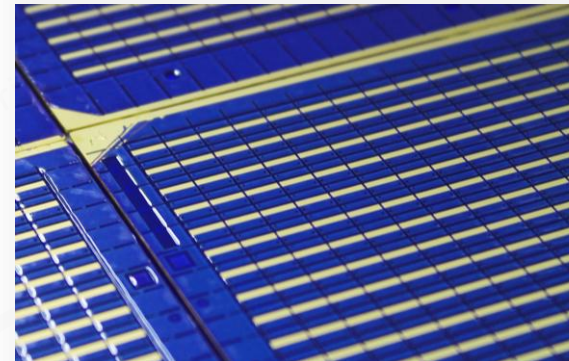
## Open-Package Diode Lasers

- 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

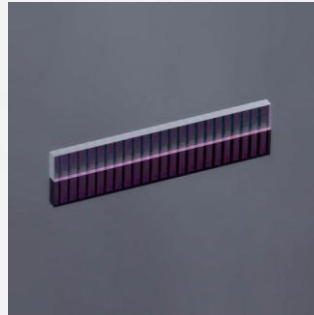
## Single Lenses and Linear Lens Arrays



FAC



SAC



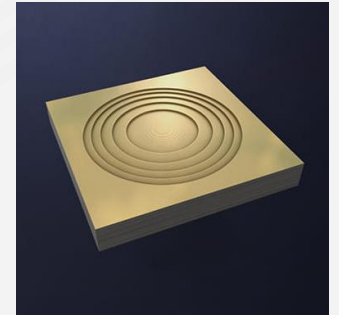
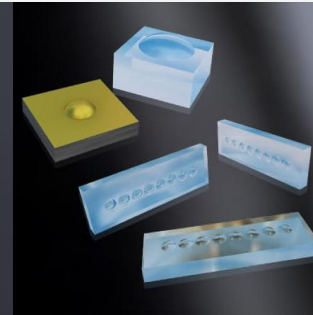
SAC array



BTS



Fiber coupler and collimator

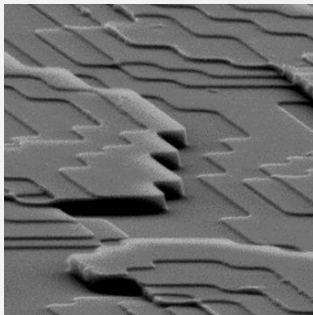


Collimating DOE

## Area Lens Arrays



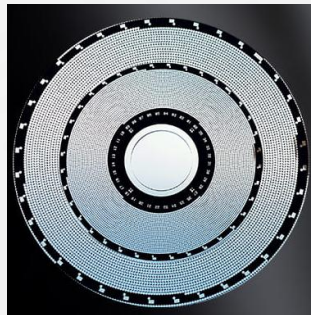
Homogenizer and  
diffuser



DOE beam splitter,  
dot or line generator

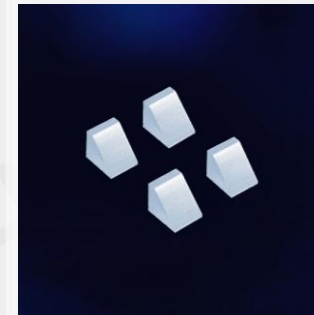


Shack-Hartmann  
array

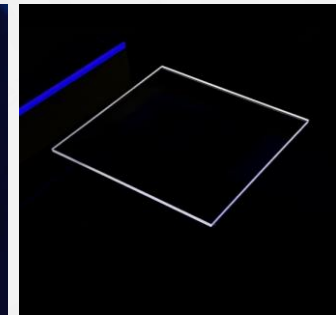


Pinhole array

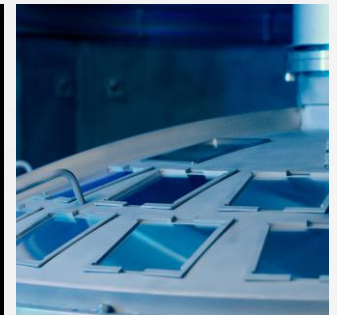
## Plano Optics and Coatings



Micro prism



Window



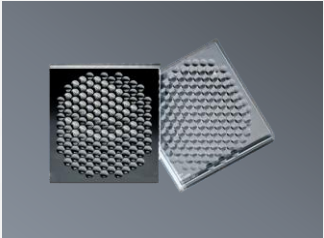
Optical Coating



# Products – Automotive Application Solutions

Under Focuslight Brand

## Projected Lighting

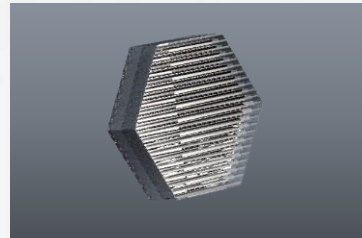


MicroLens Arrays for Projection



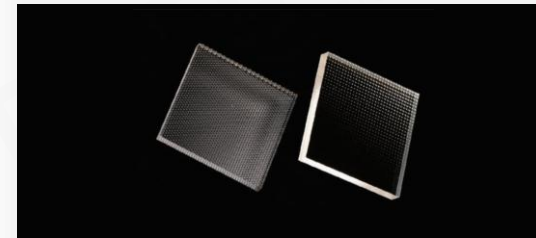
MLA-Based Dot Projectors

## Smart Headlights



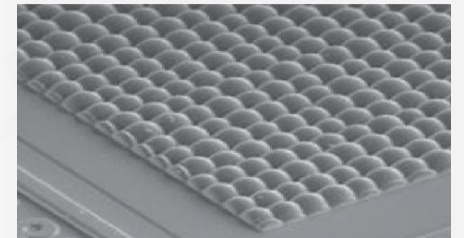
MicroLens Arrays

## Driver Monitoring System



Homogenizers / Diffusers for Illuminators

## AR HUD



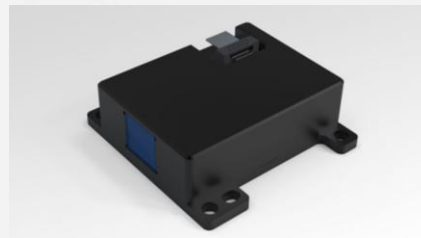
Homogenizers / Diffusers

## LiDAR

### EEL / VCSEL Based LiDAR Transmitter Modules



VCSEL Flash Transmitter 700W

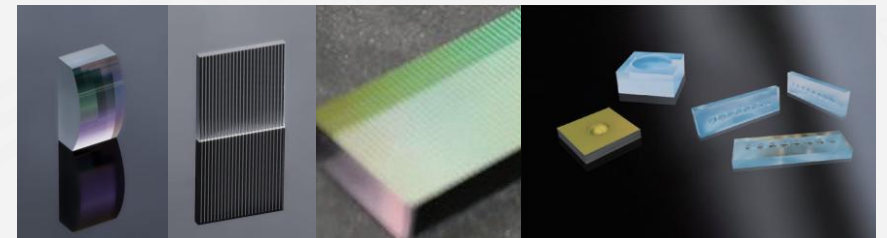


905nm 700W EEL Line Beam Transmitter



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 **FOCUSLIGHT**

Never stop exploring

Under Focuslight Brand

## Advanced Display Manufacturing



Solid-State Laser Lift-Off (LLO) System

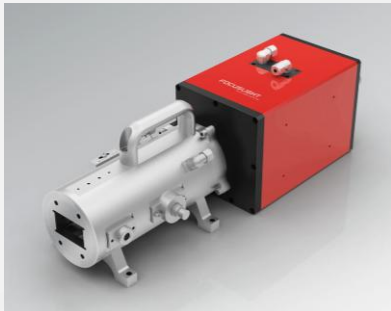


Solid-State Laser Annealing (SLA) System



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

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

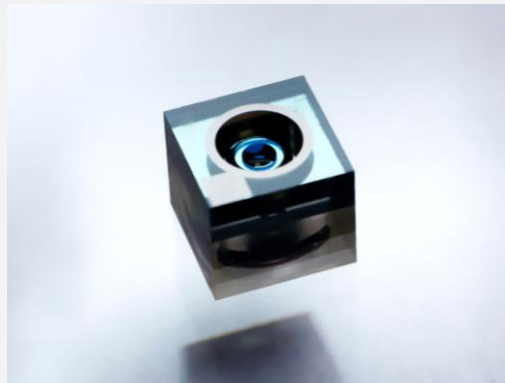
Under Heptagon Brand

## 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

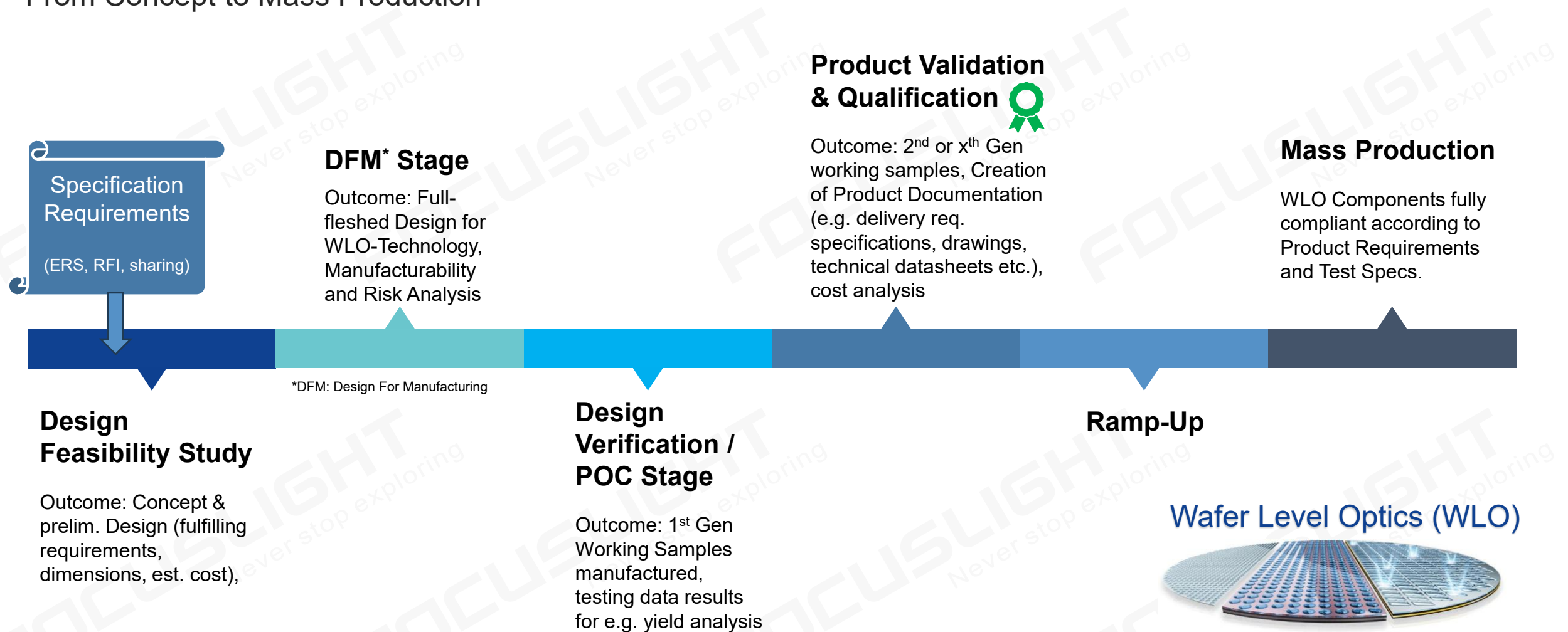


Imprinting of optical components or lens modules on silicon wafers (e.g., for sensors, VCSELs, MicroLEDs)



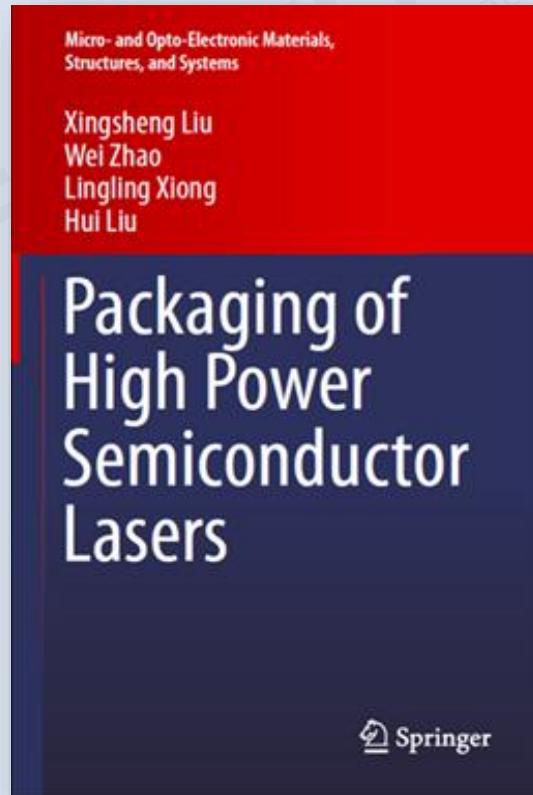
# Global Photonics Foundry Services

From Concept to Mass Production

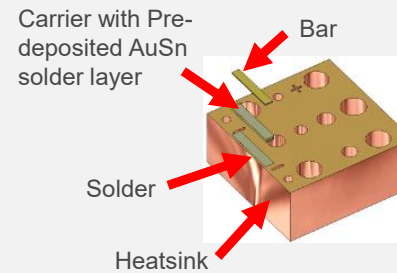


# Core Competence

## Diode Laser



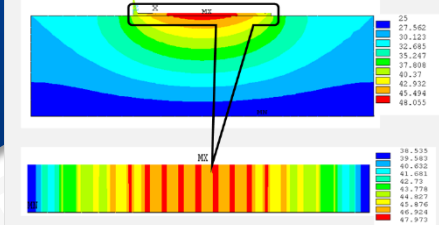
### Eutectic Bonding



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

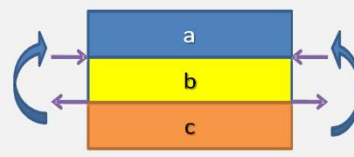
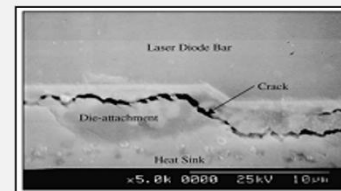
### Thermal Management

#### Finite Element Thermal Analysis and Design



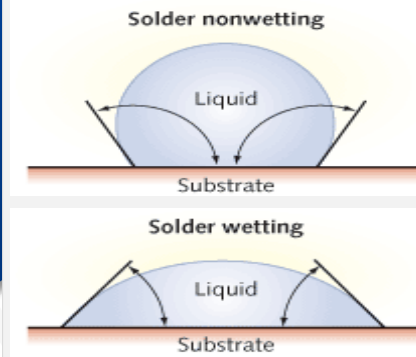
Effectively improves the ability of heat dissipation to ensure a higher output power

### Thermal Stress Control



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

### Interface Materials and Surface Engineering

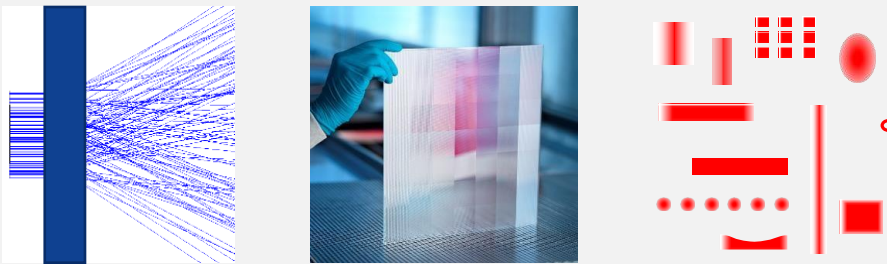


Greatly improves wettability and bonding strength of packaging materials, enhancing long-term reliability

# Core Competence

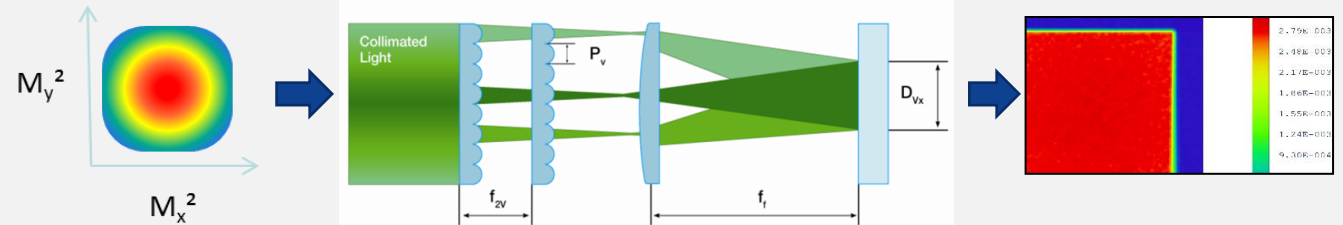
Beam Shaping – *The Right Photon at the Right Place and Time!*

## Micro Optics Design and Simulation



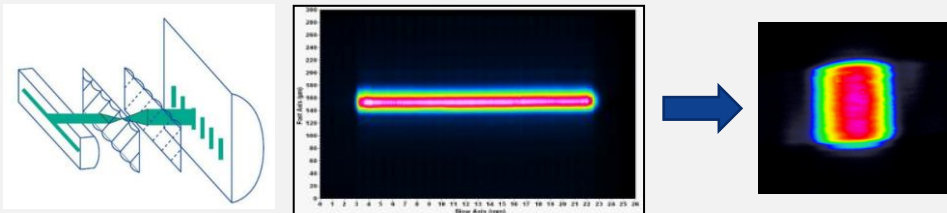
Acyindrical free-form micro-optics / arrays / diffusers /  
DOE splitters / beam shaping systems

## Homogenization

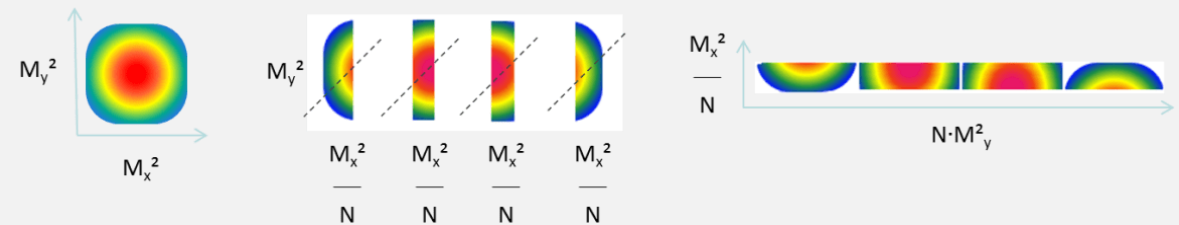


Uniform and homogeneous illumination in any desired shape

## Beam Transformation



Asymmetrical → Symmetrical beam



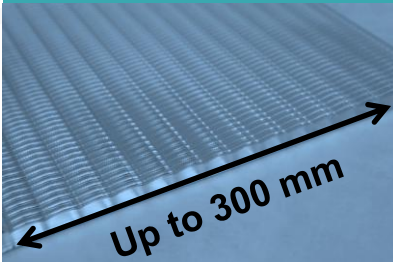

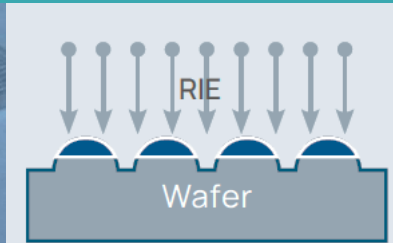

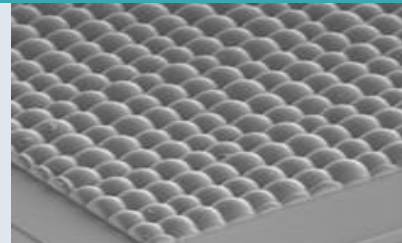
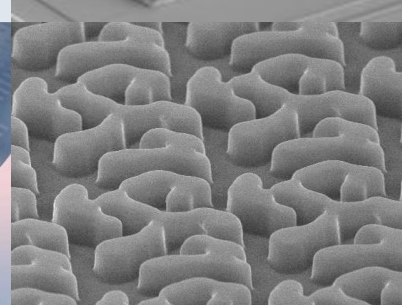
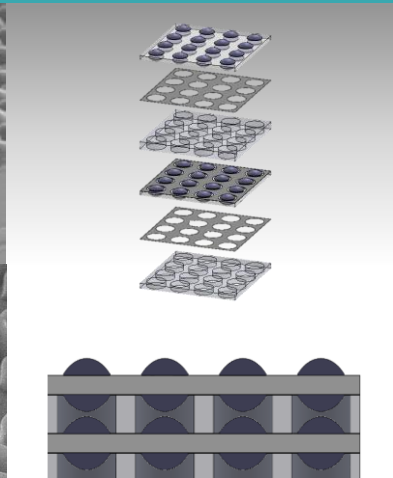

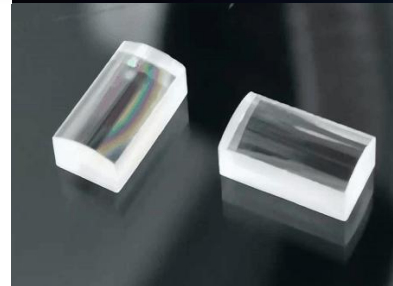

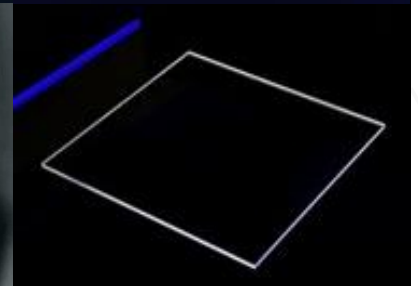
Symmetrical beam → High density line beam

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



# Core Competence

## 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 <sub>2</sub>		With polymer on glass		With inorganic materials: Glass, Fused Silica, Silicon, CaF <sub>2</sub>	
High LIDT Optical Coating: Anti-reflection, high-reflection, beam splitter, band filter, and various customization (UV, VIS, IR)					



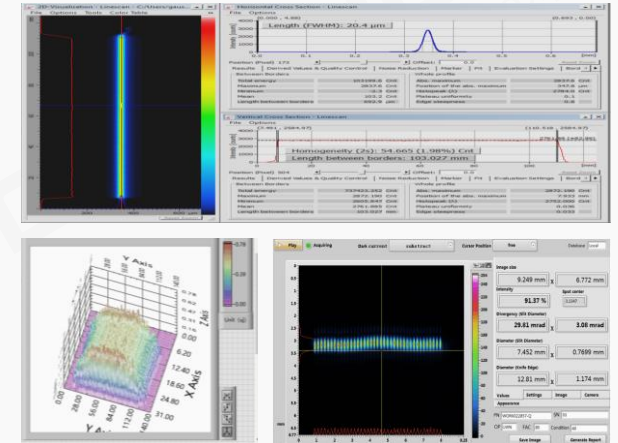
# Core Competence

## 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:

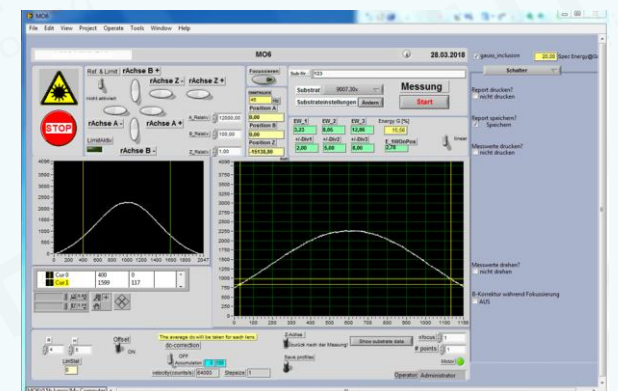
- LIV
- Spectrum
- Polarization
- Far-field / Near-field
- Spatial spectrum
- Spatial polarization
- Spatial beam profile
- Smile effect
- Lifetime



### Metrology and Analysis of Optical Components

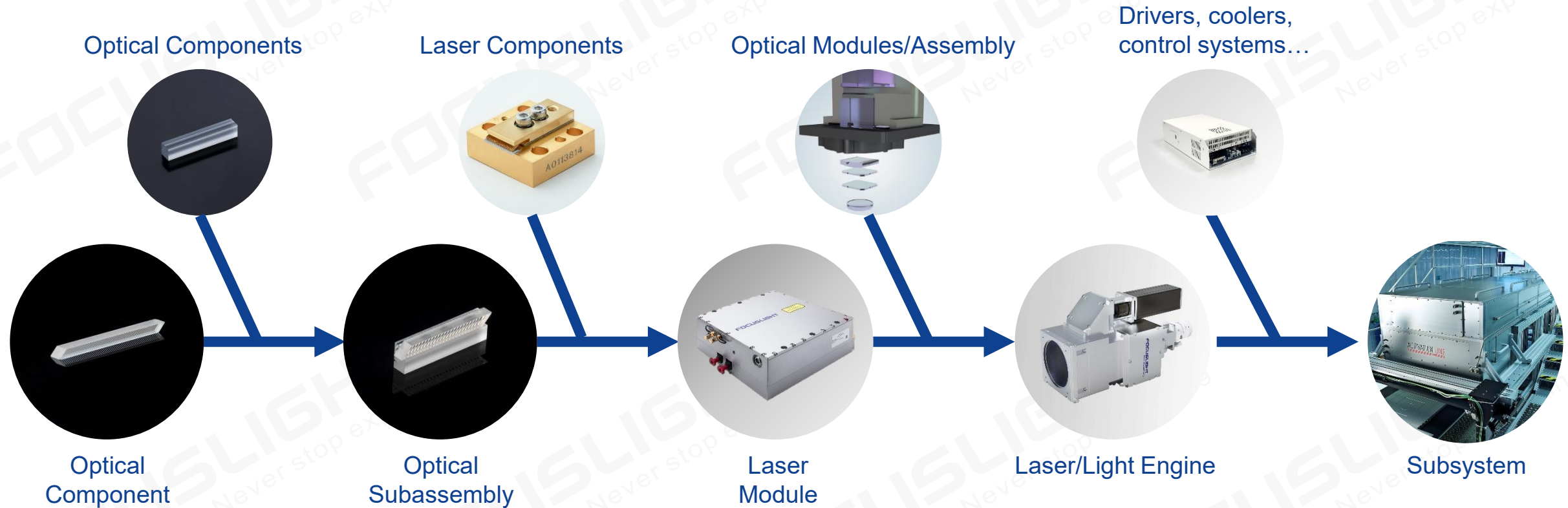
Wave optics models are used in conjunction with tactile surface measurements for precise analysis of optical functions such as:

- Focusing
- Collimation quality
- Beam uniformity



# Core Competence

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



# A Unified Quality Management System

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)

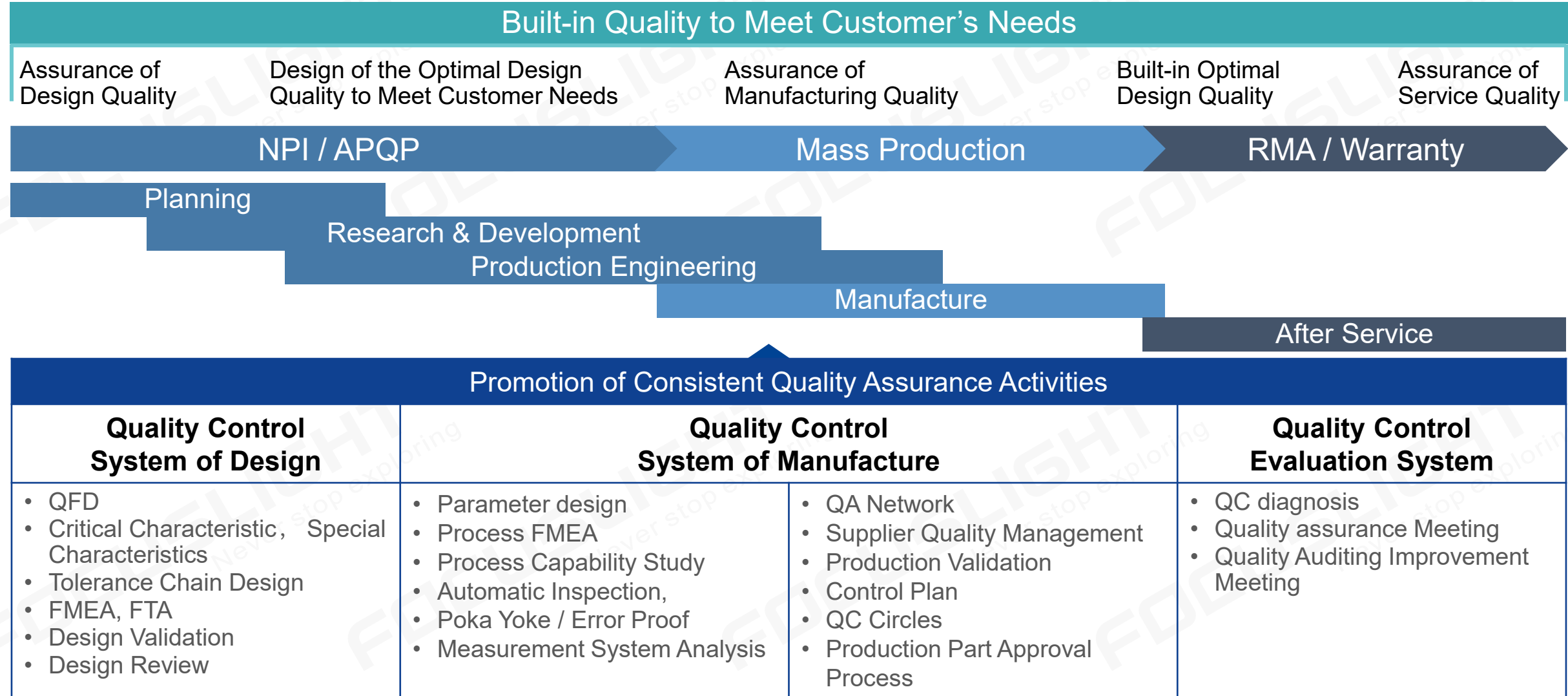
Production Traceability Database

Control Plan (CP)



# Quality Assurance System

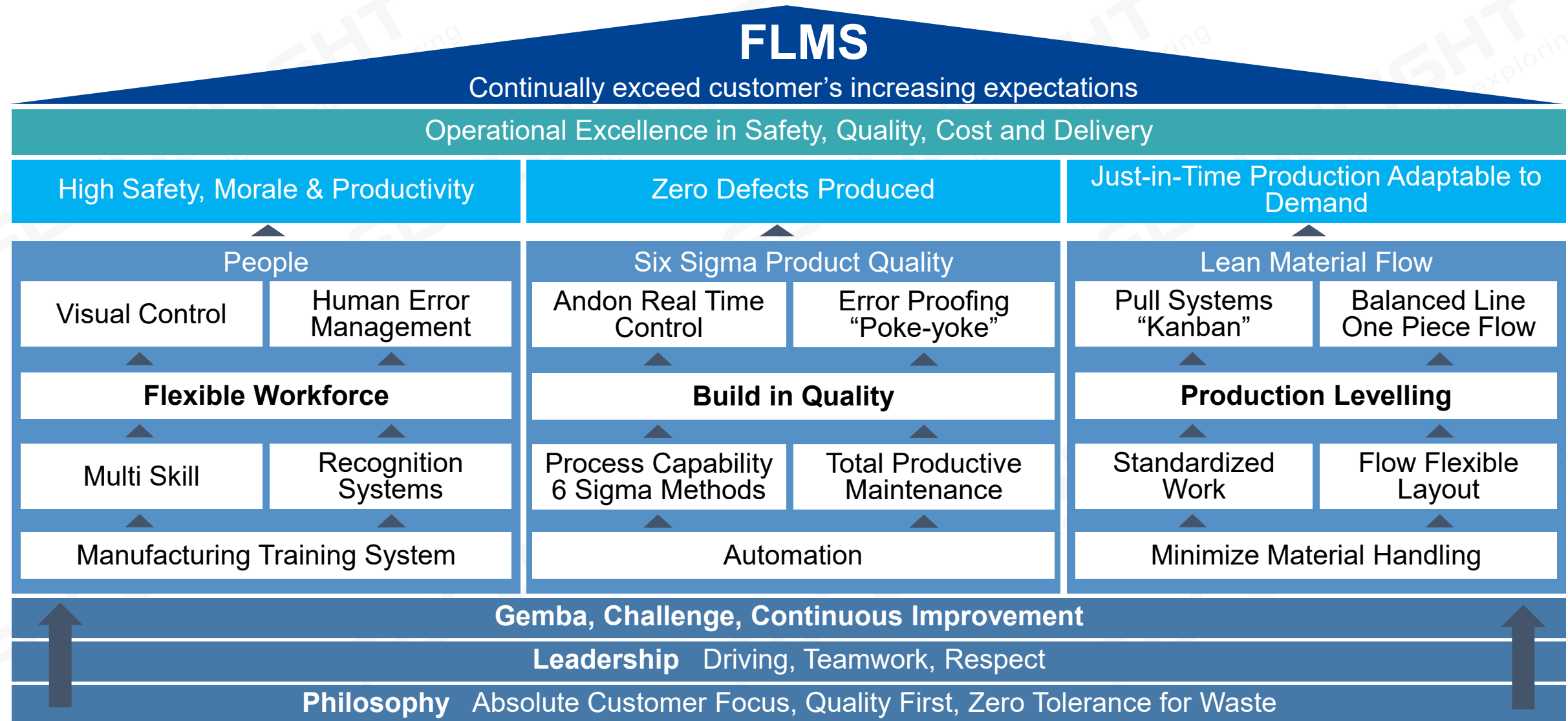
Ensuring Product Reliability Through Rigorous Controls and Verification

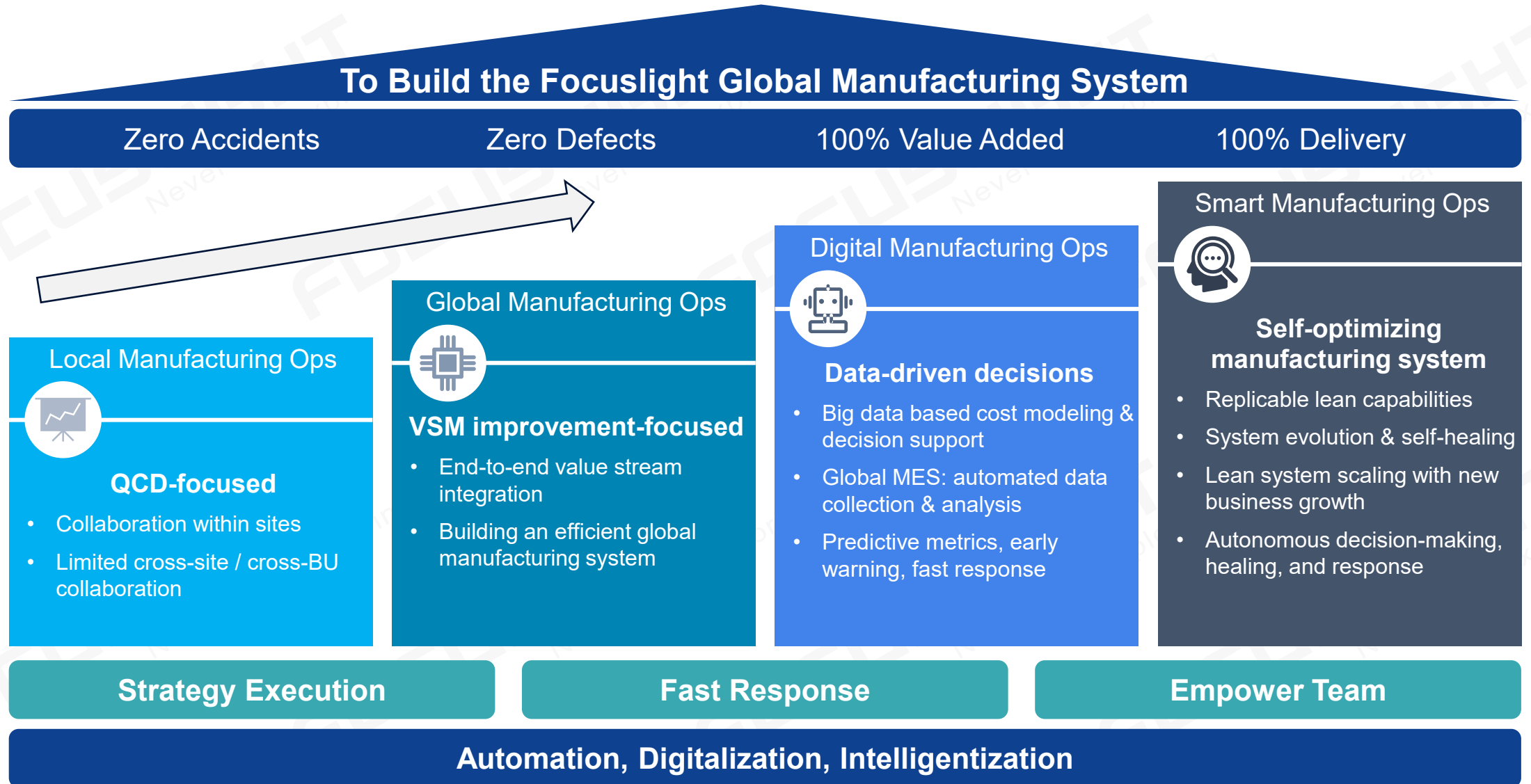


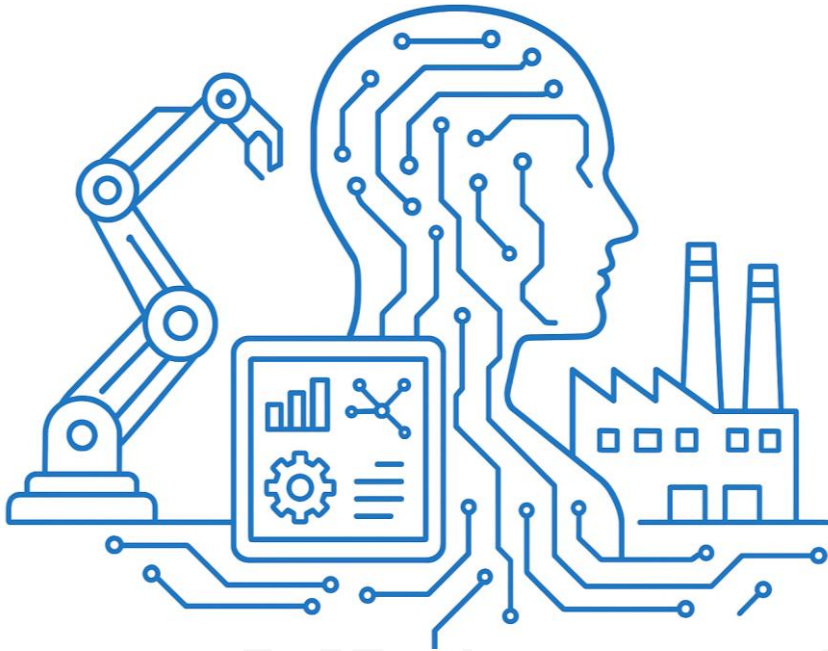


# Focuslight Manufacturing System (FLMS)

Building Stable, Efficient, and Scalable Production Capabilities







Equipment  
interconnection

## MES

- Improved efficiency
- Big data enhances quality through visibility

Big data boosts  
decision

## Testing

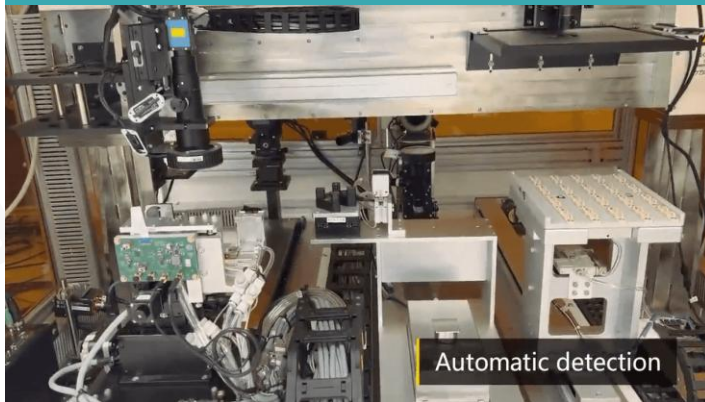
- AA (Active alignment)
- PA (Passive alignment)

## Automation

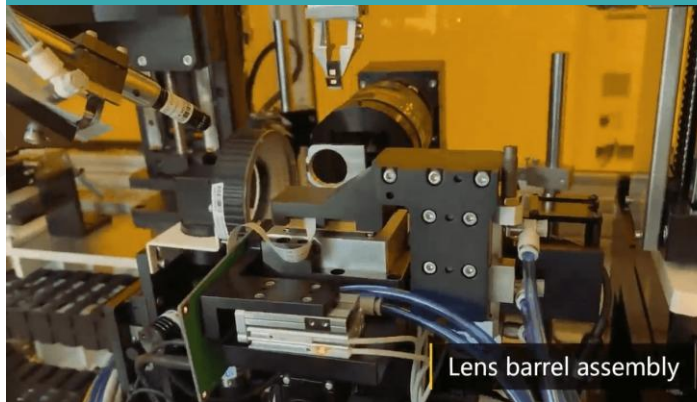
- AOI
- P&P (pick & place)
- CD (collaborative development)

# Automation Powered Operational Excellence

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-autonotation-powered-manufacturing-excellence/>



# Manufacturing Capacity

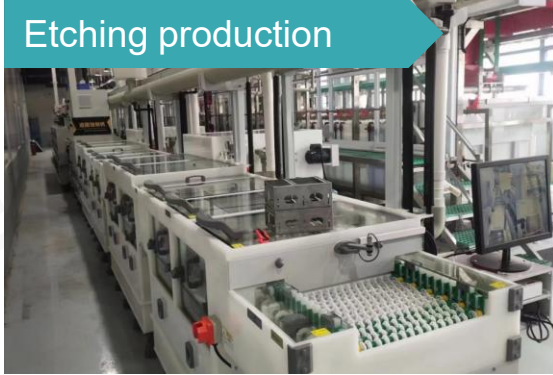
## Advanced Materials

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

## Laser Sources

Packaging & Assembling



Optical Assembling



Testing & Measurement



Quality Inspection



Burn-in & Lifetime Test

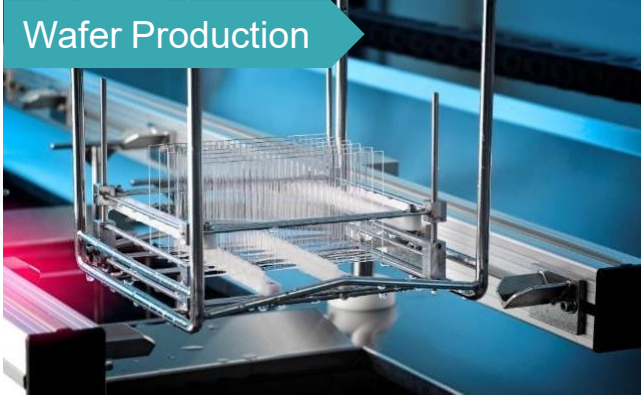


Diode Laser Manufacturing Capacity > 500K pcs / year  
Burn-in Capacity 600K pcs / year

# Manufacturing Capacity

## Micro-Optics: Wafer-Level Simultaneous Structuring Processing

Wafer Production



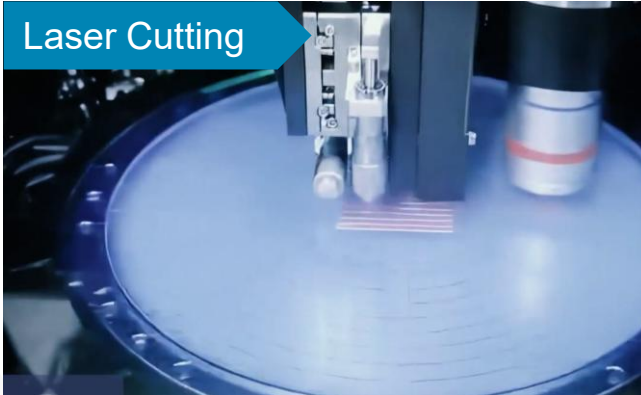
Quality Mapping



Coating



Laser Cutting



Auto Loading



Auto Packing



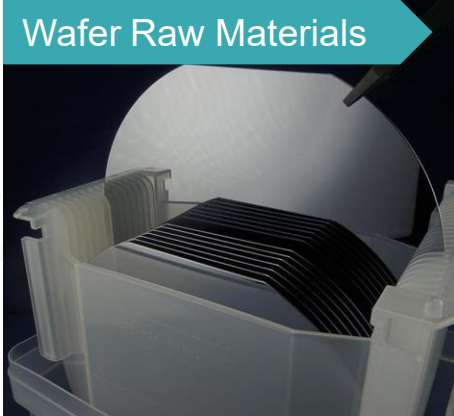
Wafer-Level Simultaneous Structuring Processing:  
Manufacturing Capacity > 2K wafers / month or > 5M pcs lenses / month



# Manufacturing Capacity

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

Wafer Raw Materials



Photolithography



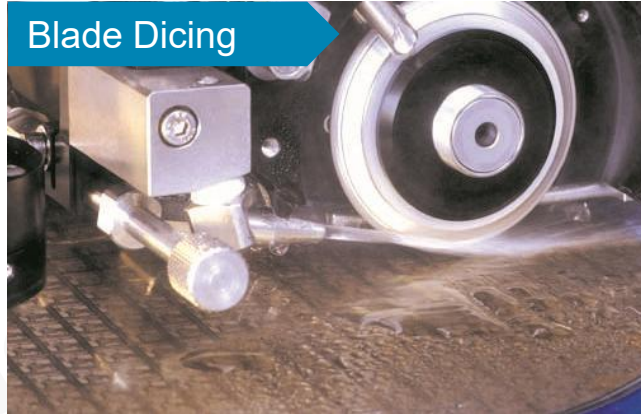
Dry Etching



Thin Film Deposition



Blade Dicing



Pick & Place



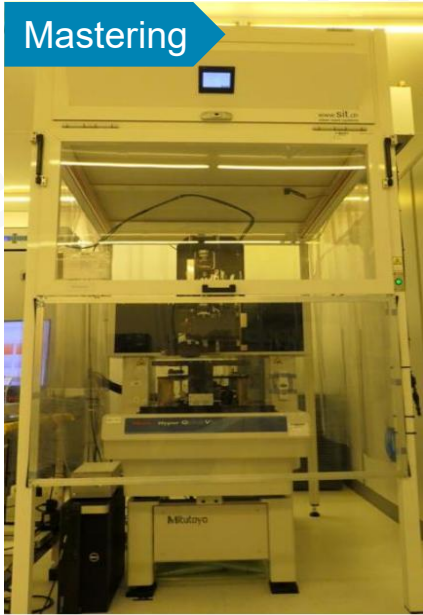
Photolithography-Reactive-Ion-Etching Processing:  
Manufacturing Capacity > 300 wafers / month



# Manufacturing Capacity

## Micro-Optics: Imprinting Processing

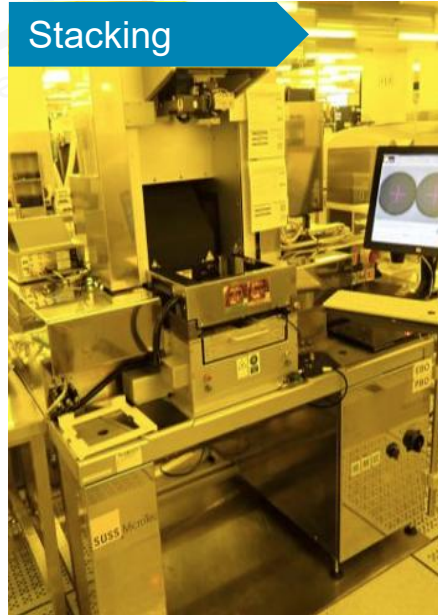
Mastering



Replication



Stacking



Testing



Singulation



Imprinting Processing:  
Manufacturing Capacity > 2K wafers / month or > 8M pcs lenses / month

# Manufacturing Capacity

## Micro-Optics: Precision Molding

Ultra-precision In-house Mold Making



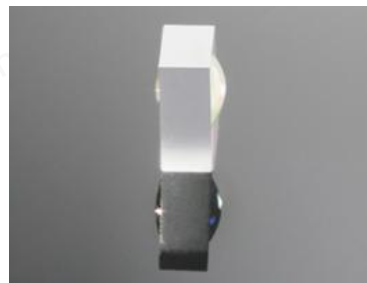
Pressing / Molding



Coating



End Products



Square-shape Lens



Barrel Lens



Bi-conic lens



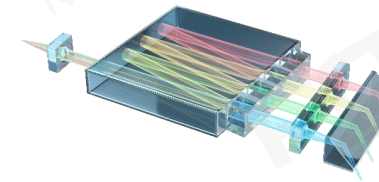
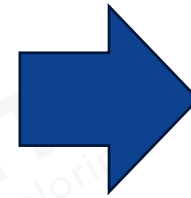
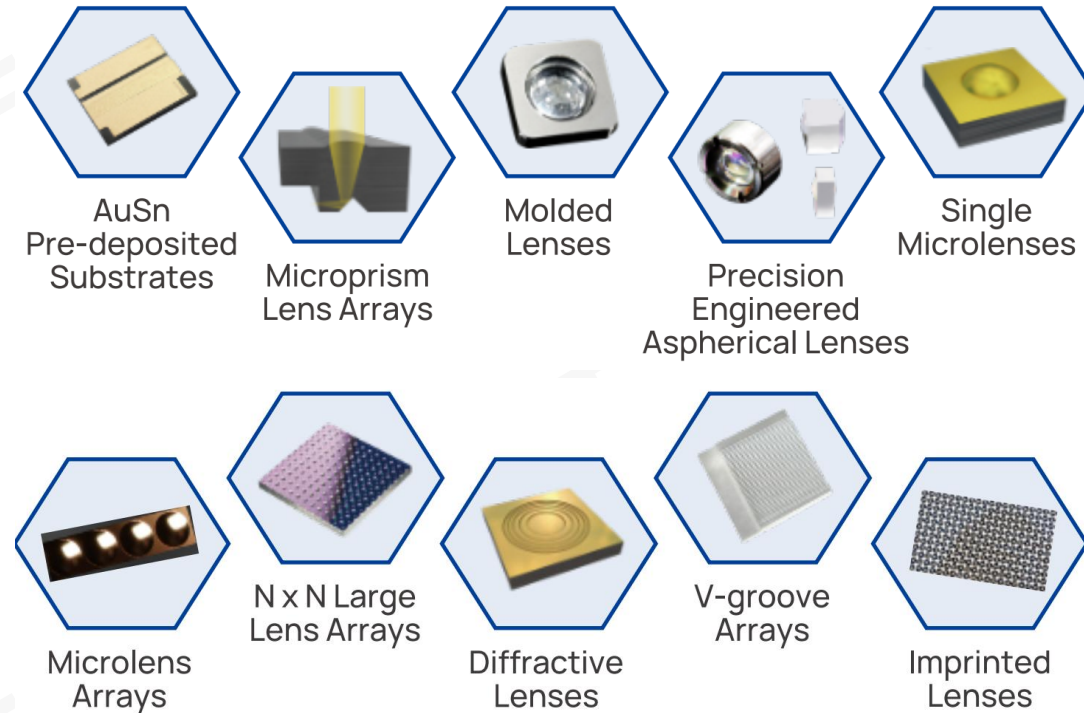
Round lens

Precision Molding: Manufacturing Capacity > 2M pcs lenses / month

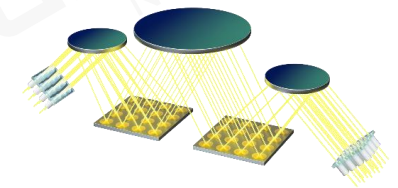
# Typical Applications

## Optical Communication

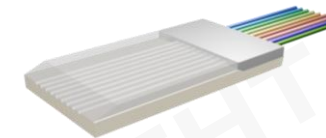
- High precision micro-optics are at the heart of optical communication systems.
- They support efficient data transfer between key optical components.



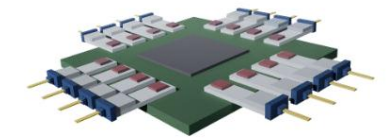
Optical Transceivers



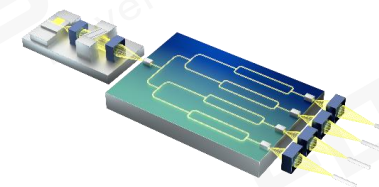
WSS / OCS



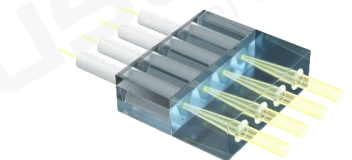
FAU



CPO



PIC

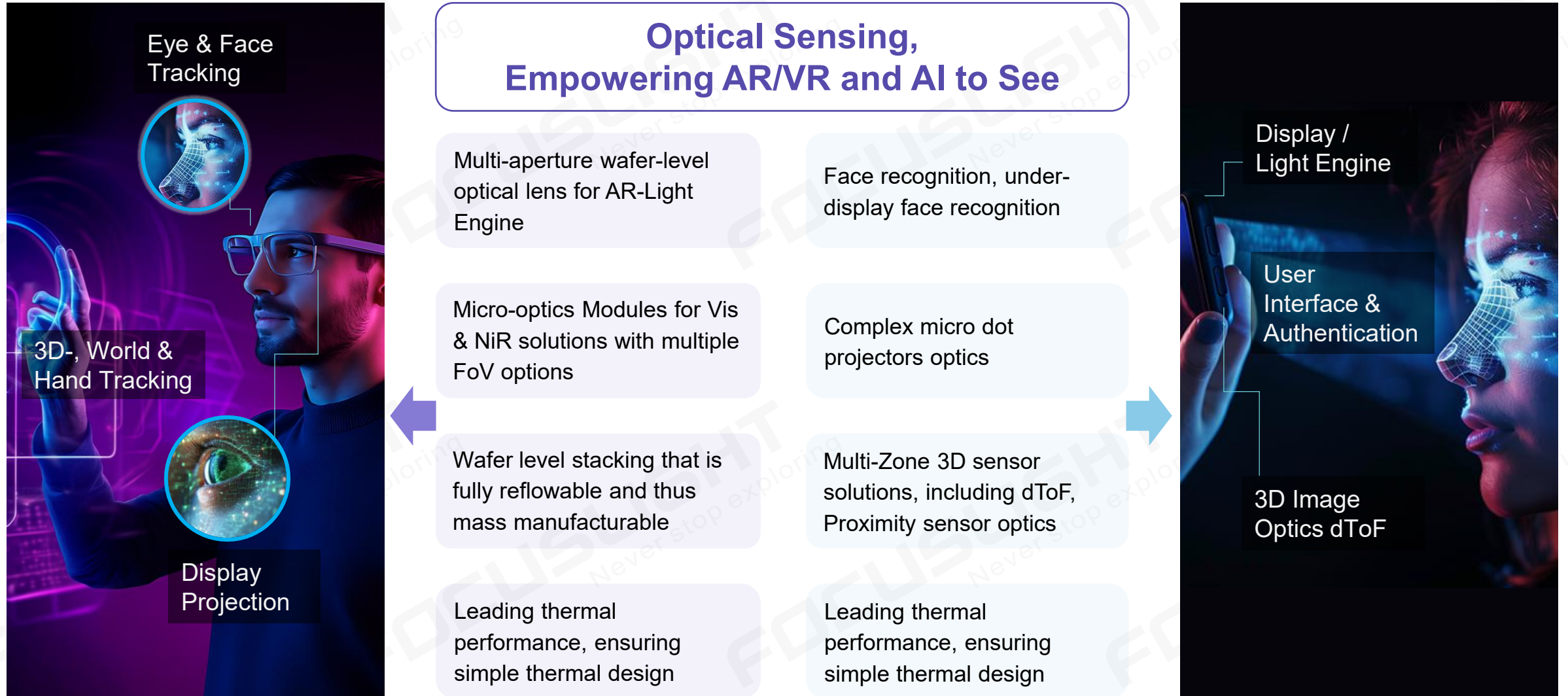


Fiber Connectors



# Typical Application

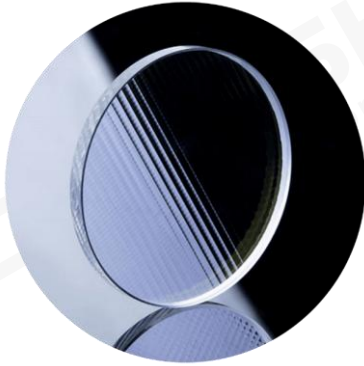
## Consumer Electronics



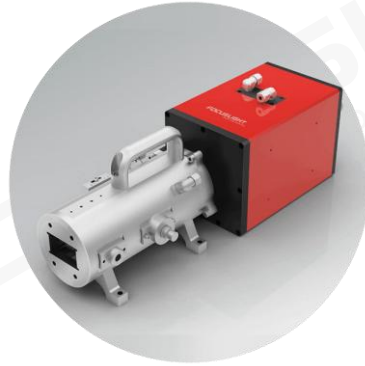


# Typical Applications

## Semiconductor



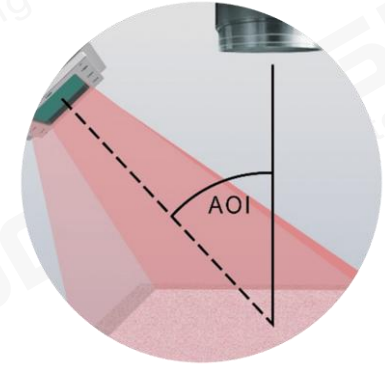
- Beam homogenization technology powers the illumination system – key optical component in **pan-semiconductor systems**
- > 15 years supply to the major manufacturer of semiconductor lithography tools



- 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**

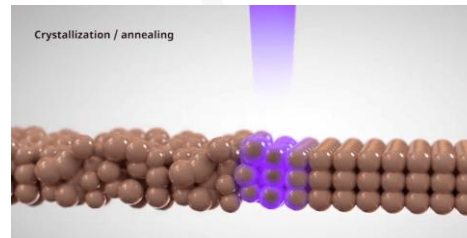
# Typical Applications

## Display

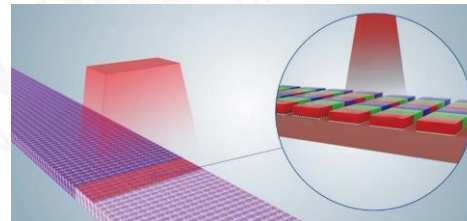


### Solid-State Laser Lift-Off (LLO) for Flexible Displays

- 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

## Automotive



**LiDAR**



**Smart Headlight**



**Projected Lighting**



**Driver Monitoring System**



**AR HUD**



Optical Components  
and Assemblies



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



Optical Components;  
Laser Components



Optical Solutions;  
Laser+Optics Assembly;  
Application Handpiece



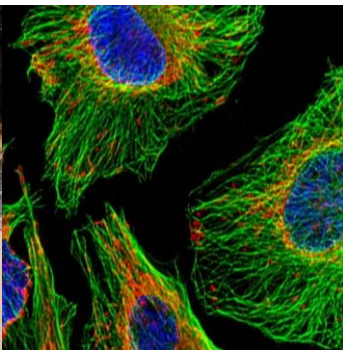
Contract Manufacturing  
Services



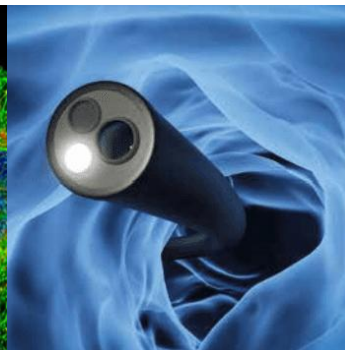
*Focuslight does not  
produce medical or  
health equipment*



Dermatology



Confocal  
Microscopy



Endoscopy



Sensing



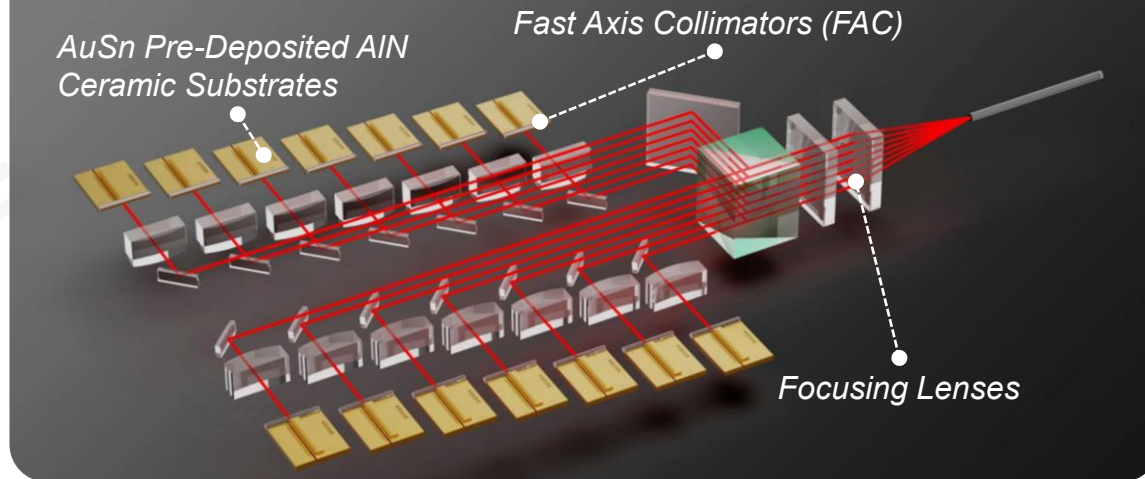
Laser Surgery



# Typical Applications

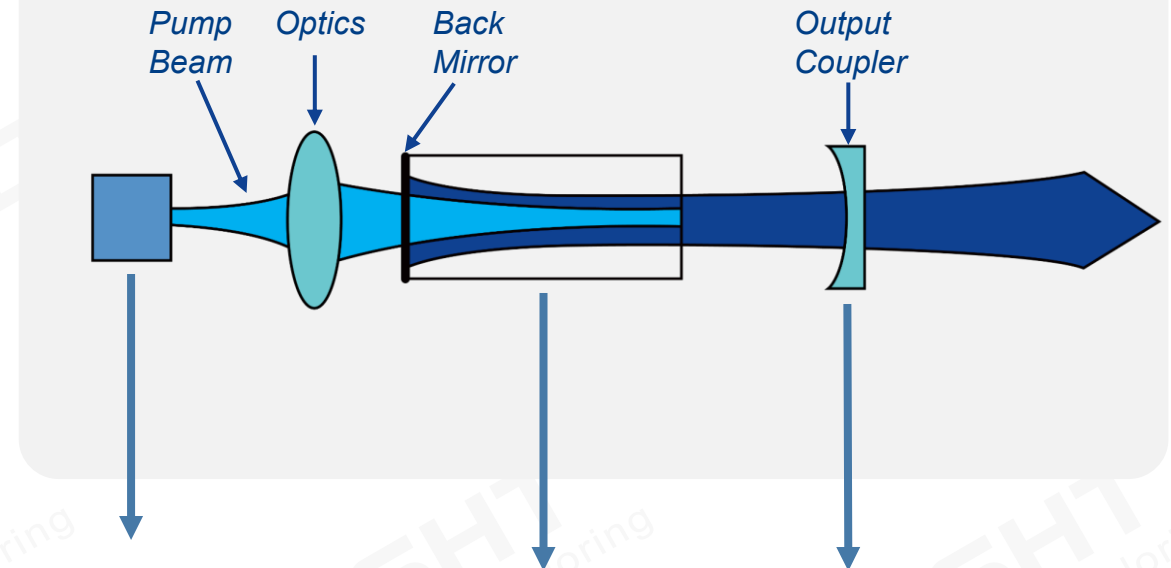
## Industrial

### Fiber Laser Pumping



- **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;

### Solid State Laser Pumping



Diode Laser  
as Pumping  
Source

+

Gain Medium

+

Optical System

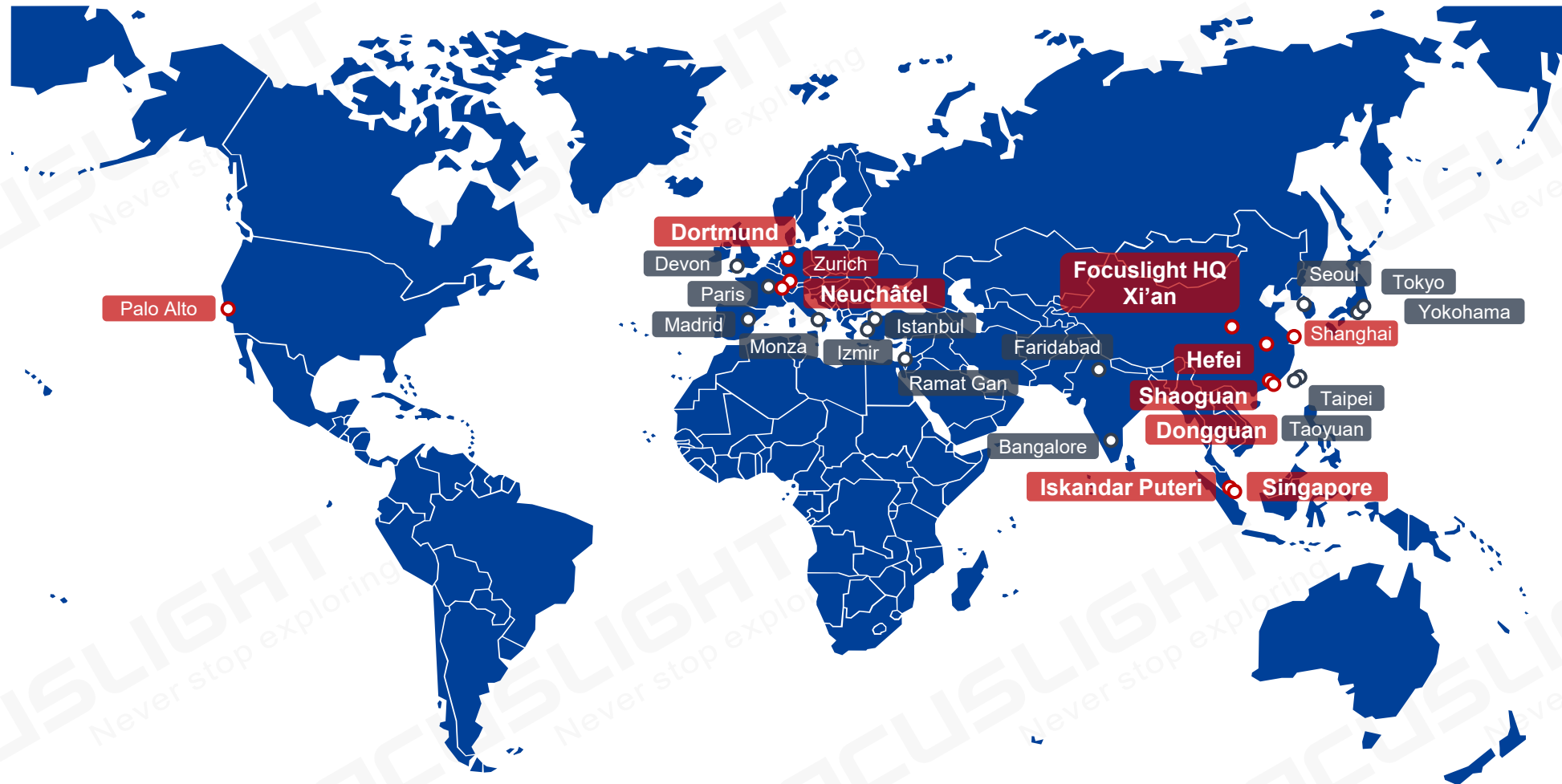
Footprint ↓

Reliability ↑

Efficiency ↑

Cost ↓

# Sales Network



- 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

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



Diode laser light source leader and beam shaping expert with strong IP position



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



[www.focuslight.com](http://www.focuslight.com)  
[www.hptg.com](http://www.hptg.com)

