光環科技股份有限公司
TrueLight Corporation

TrueLight Corporation (3234)

2025/12/22

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Outline

1. Company Profile
2. 2025 Q1~Q3 Operating Results
3. Market Trends and Operational Outlook
4. Q&A

Company Profile

Company Profile

Date of establishment	1997/9/1
Capital	NT$ 1,114,746,920
Location	21, Prosperity Rd. 1, Hsinchu Science Park, Hsin-chu, Taiwan (R.O.C.)
Number of employees	326 people
Products and Services	VCSEL, LD, PD, APD TO-can, OSA, COB, AOC, OEM & ODM (SiPh), Wafer Process Foundry service

Products Portfolios

- TrueLight is a supplier of optical active components with a complete production line and vertical integration capabilities.
- The product line includes Chip-TO-OSA(M)-COB-AOC active components, with more than 25 years of mass production experience
- Providing more diversified services to enhance competitiveness.

Optical Communication

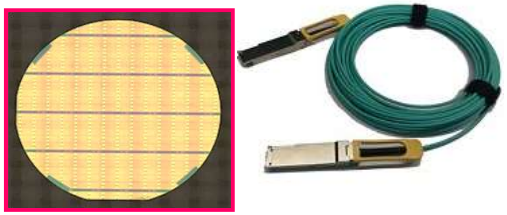
- SiPh
- Datacenter
- 4G/5G Mobile BS interconnection
- PON

	Products	Wavelength (nm)	Speed (Gbps)
Tx	VCSEL (Fiber Optics)	850	1-112
	FP-LD	1310-1550	1-25
	DFB-LD	1270-1550, 6λ-CWDM	2.5-25
Rx	PINTIA	850	1-112
	PINTIA	1270-1550	1-25
	APD	1270-1550	2.5-100

Smart Sensing

- Smart Phone Sensing
- Mobile Devices Sensing
- Smart image light source
- biosensing

Classification	Wavelength	Applications
3mW-10mW	660nm (VCSEL)	Health Sensing
3mW-10mW	850nm (VCSEL)	Proximity Sensor
0.5-4W		Flood/Dot Projector/TOF
3mW-10mW	940nm (VCSEL)	Proximity Sensor
0.5-4W		Flood/Dot Projector/TOF
3mW-10mW	1130nm (VCSEL)	3D Sensing



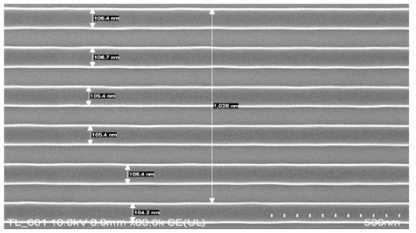
Wafer Process Foundry and ODM

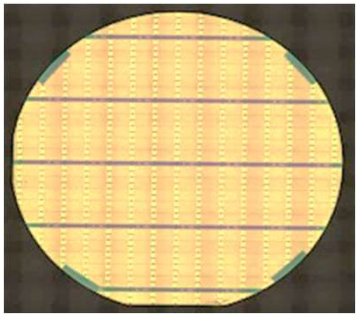
- SiPh
- Lidar
- Datacenter

Classification	Applications
InP	SiPh
	Lidar
GaAs	Datacenter
OEM/ODM	100G/400G AOC

Wafer Process

- **Wafer Size :** 2”, 3” and 4”
- **Product type :**
  - 2”, 3”, 4” FP/DFB/EML/SOA and CW laser for SiPh
  - 2”, 3”, 4” GaAs/InGaAs PD & InGaAs APD
  - 4” VCSEL
- **Verification and Testing:**
  - TO-can package, burn-in and aging test
  - Reliability test





Wafer Fab

- E-beam
- Photolithography
- Thin film (PECVD)
- Dry etching (RIE, ICP)
- Oxidation Furnace
- Metal deposition and alloy
- lapping/polishing
- SEM/EDX

Die Fab

- Cleaving and dicing
- Laser saw
- High quality optical facet coating (IAD-E beam)
- Testing and sorting
- AOI visual inspection

Package

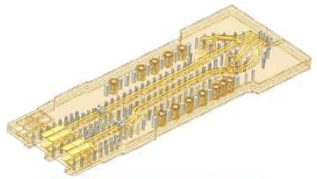
- TO-CAN package
- Chip-on-Carrier package
- Chip-on-Board package
- Optical assembly

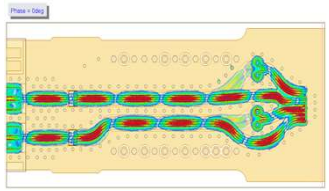
Testing

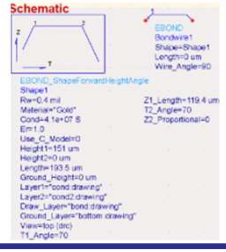
- Mechanical/Electrical integration
- 3T O/E Characterization
- Burn-in/aging test
- Reliability test

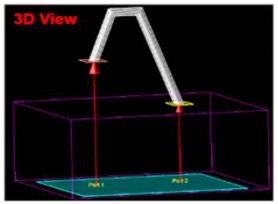
Module Optomechanical and Software-Firmware Integration

High frequency circuit design and simulation

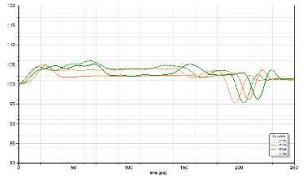


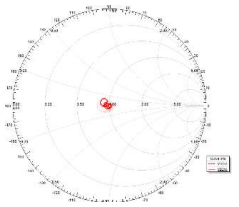


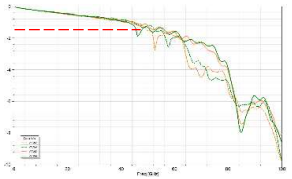


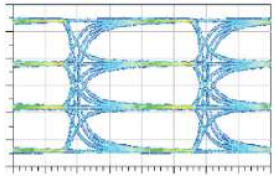


High frequency characteristics simulation

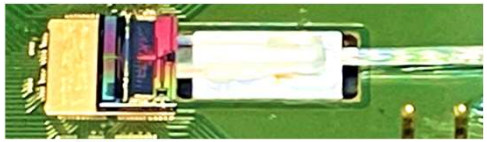


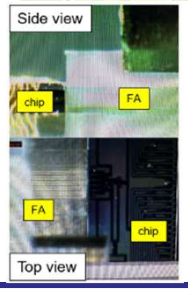






High-precision optomechanical assembly





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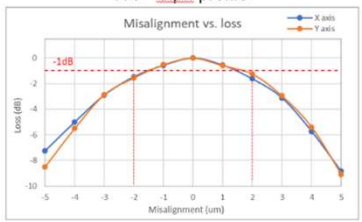
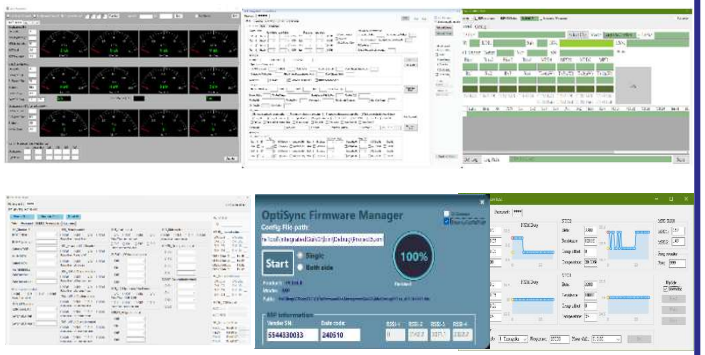
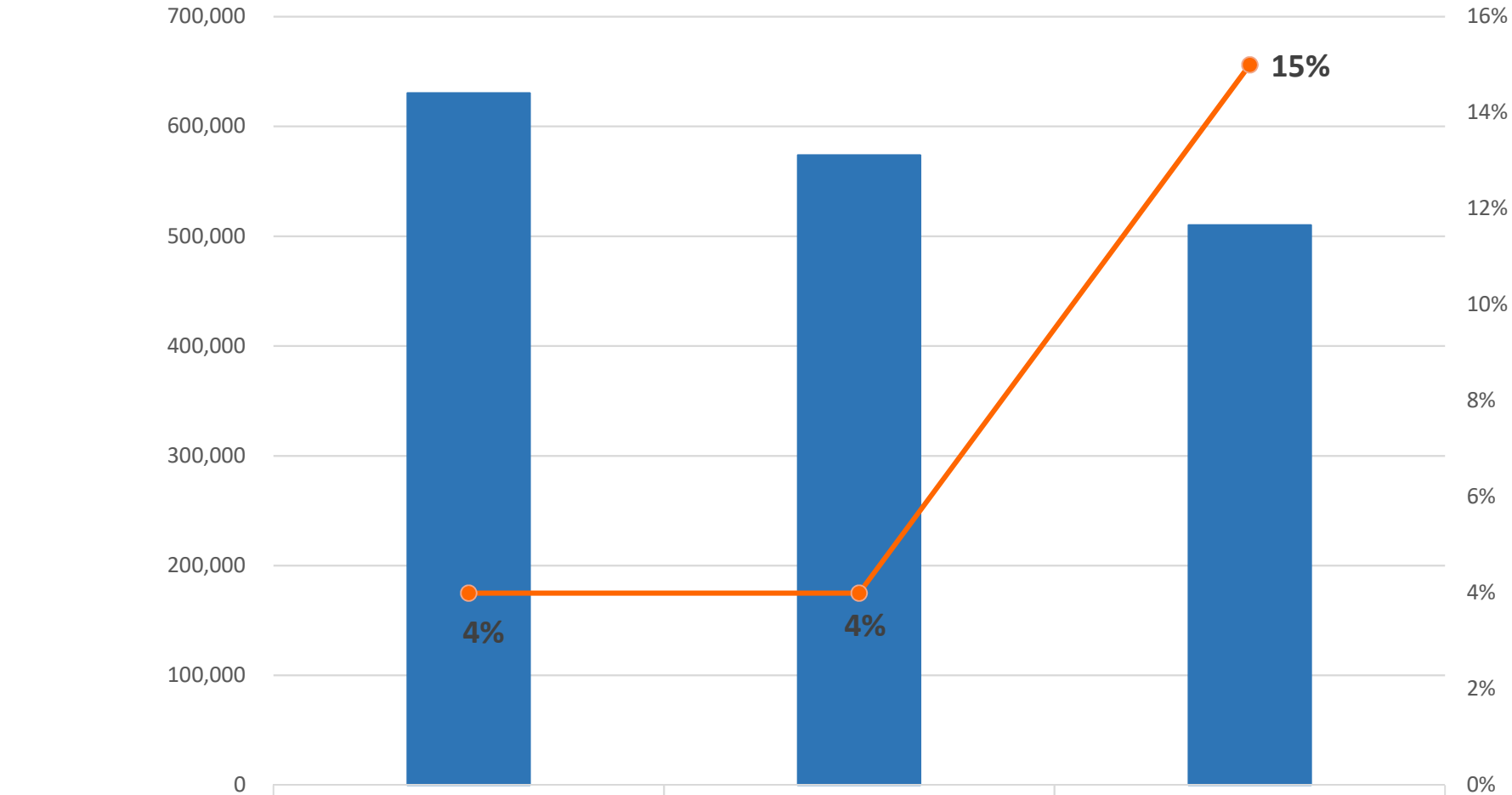


Firmware&GUI software integration



2025 Q1~Q3 Operating Results

Consolidated Revenue and Gross Profit Margin Trends



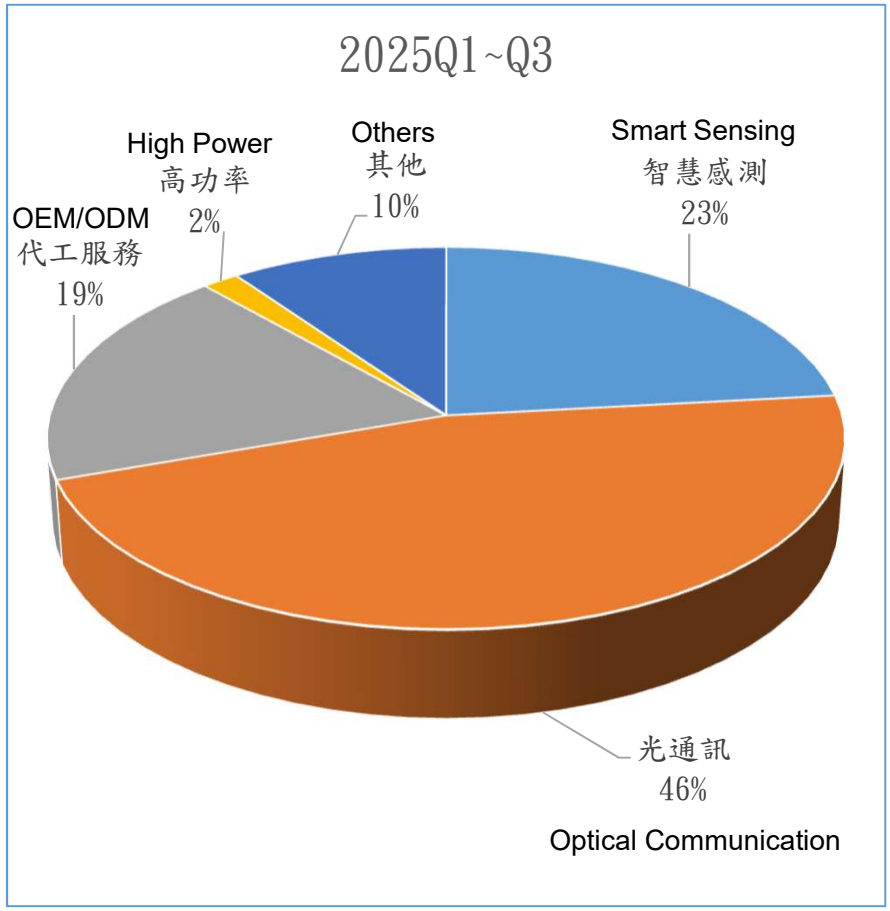
	2023	2024	2025Q1~Q3
Operating revenue	630,266	573,752	510,218
Gross margin	4%	4%	15%

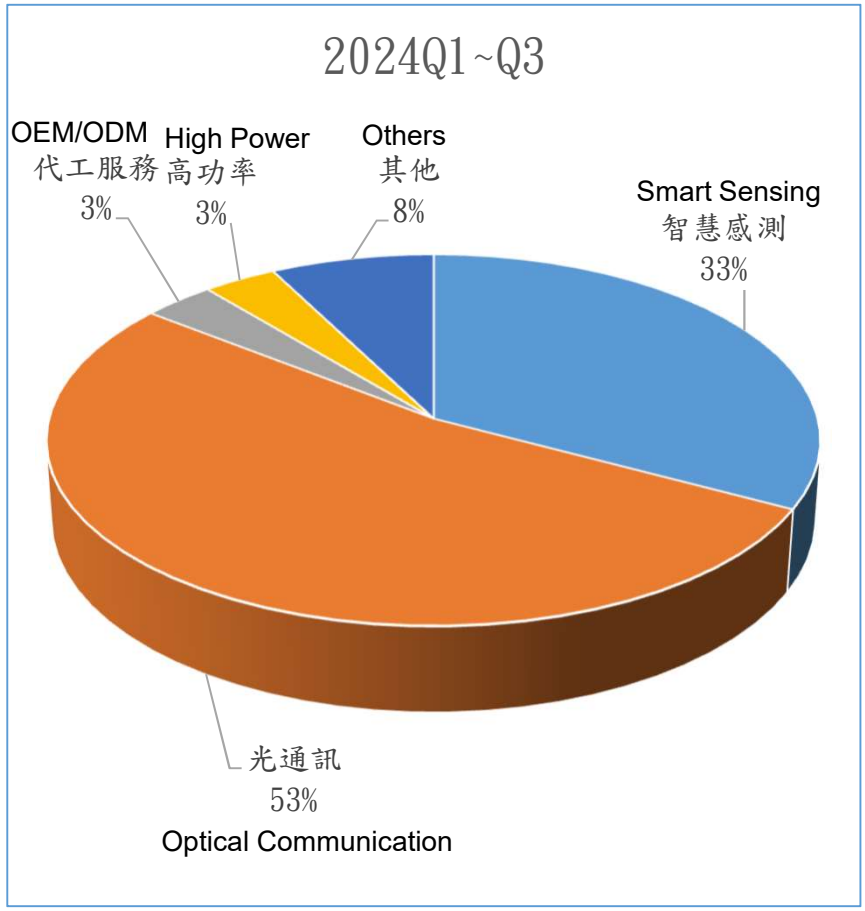
Consolidated Statements of Comprehensive Income

Currency: K NTD

項目/Item	2025Q1~Q3	2024Q1~Q3	YOY	Change ratio%
營業收入/Operating revenue	510,218	426,461	83,757	20%
營業毛利/Gross profit (loss) from operations	77,774	11,993	65,781	548%
毛利率/Gross margin	15%	3%	12%	400%
營業費用/Total operating expenses	174,611	220,540	(45,929)	(21%)
營業淨利(損)/Net operating income (loss)	(96,837)	(208,547)	111,710	(54%)
營業外收入及支出/Total non-operating income and expenses	(11,743)	5,184	(16,927)	(327%)
稅前損益/Profit (loss) before tax	(108,580)	(203,363)	94,783	(47%)
稅後淨利 (損) /Profit (loss)	(108,580)	(203,363)	94,783	(47%)
每股盈餘(虧損)/Earnings(Loss) per share	(0.94)	(1.78)	0.84	(47%)

Sales Analysis: Application Market



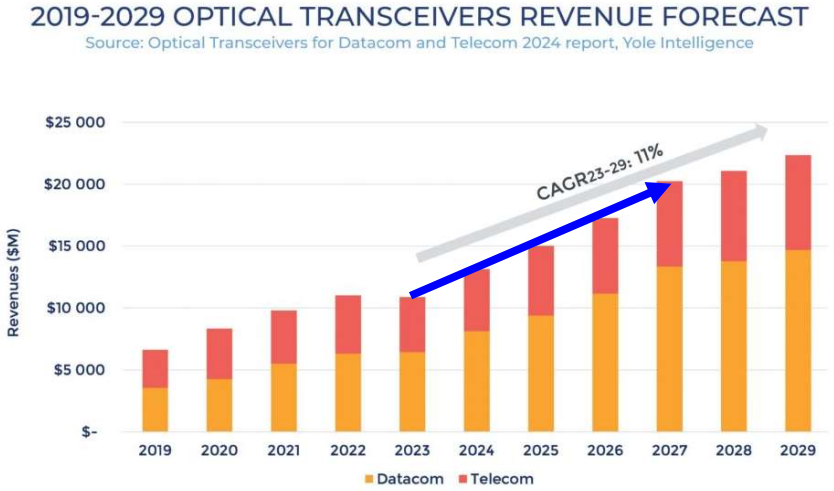


Market Trends and Operational Outlook

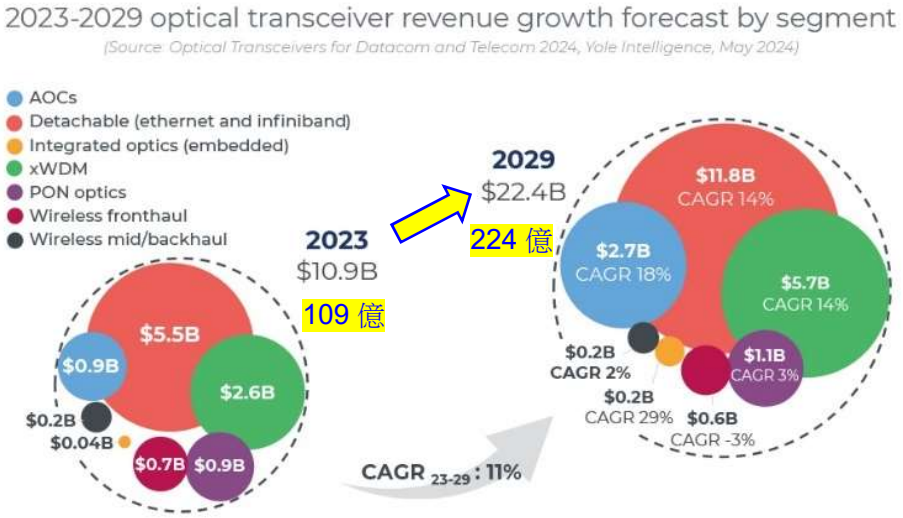
Market Trends-AI Computing Power Drives the Explosion of Optical Communications

Yole Group《Optical Transceivers for Datacom and Telecom 2024》report states

- Market size doubled: AI-driven optical transceiver module market is expected to exceed US$22.4 billion in 2029 from US$10.9 billion in 2023
- The growth in Datacenter is the most significant, with a compound annual growth rate of 14%. The main driver is demand from Google, Amazon, nVIDIA, Microsoft and Meta
- Strategic entry: TrueLight has successfully entered the AI high-speed transmission supply chain with its CW Laser foundry technology.



Source: Yole Report

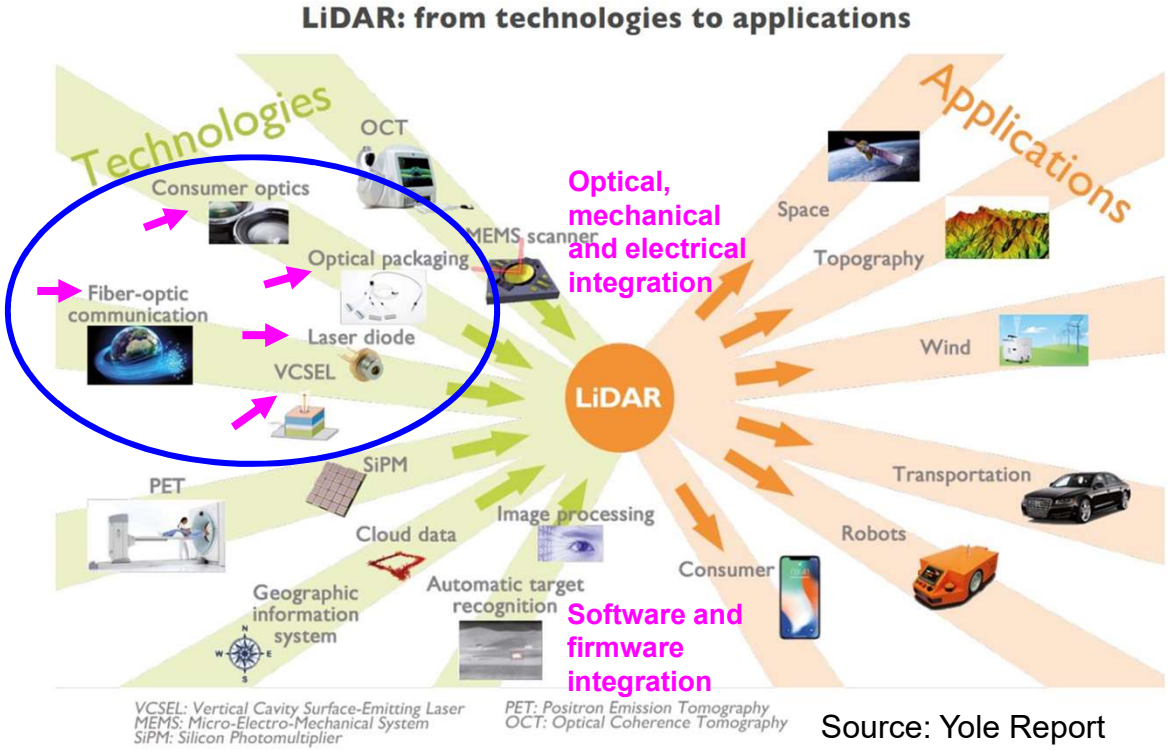


Source: Yole Report

Market Trends-Intelligent Applications Trigger Demand for High-end Sensing

TRENDFORCE report states

- Dual-engine high growth: Automotive LiDAR has an annual growth rate of 35%, and industrial LiDAR has an annual growth rate of 36%.
- Diversified Market Deployment: Leveraging its core laser light source technology, TrueLight is aggressively expanding into smart sensing opportunities across robotics, automotive LiDAR, and non-invasive medical applications.



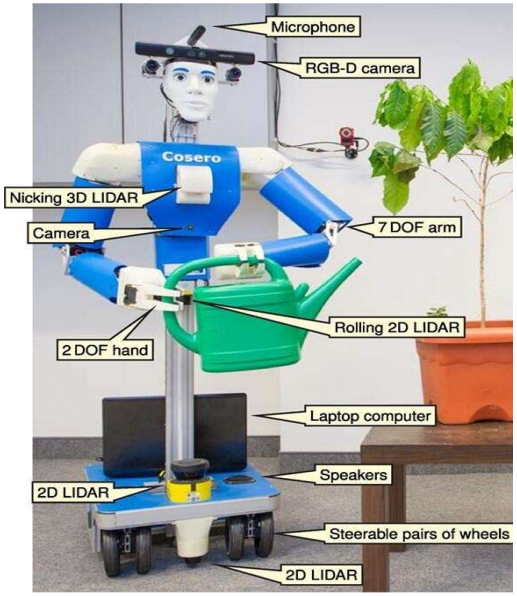
Source: Yole Report

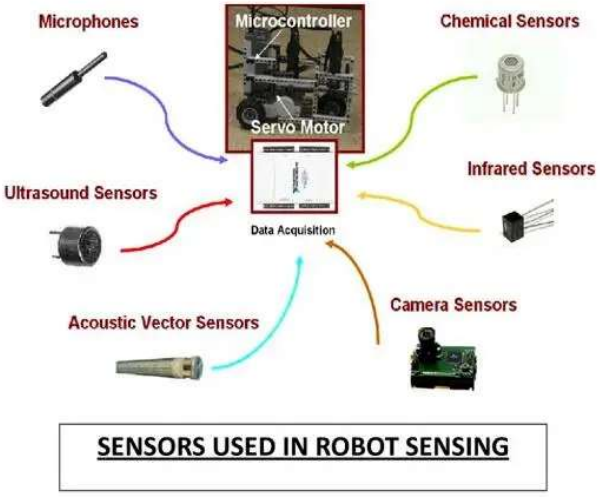
Source: TRENDFORCE Report

Market Trends-Intelligence Robot

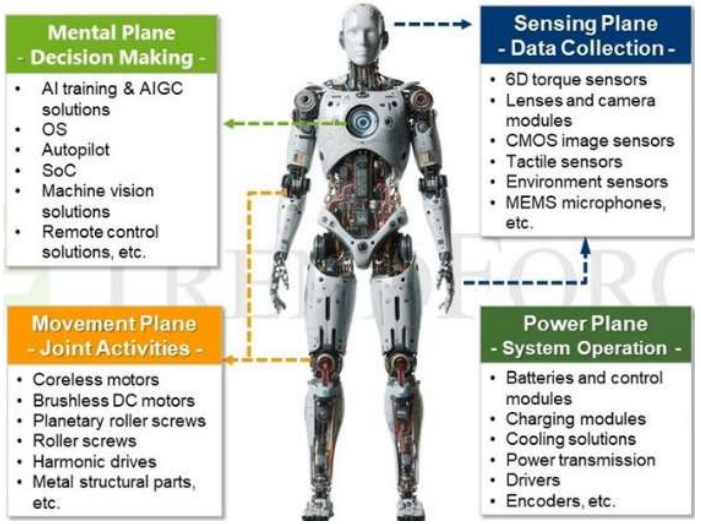
Intelligence-Driven Hardware Upgrades: Dual Benefits from High-End Sensing and High-Speed Data Transmission

- Evolution of sensing technology: from basic photoelectric switches to multi-modal high-end sensing systems such as vision, hearing, and touch.
- Explosion in Transmission Demand: Servers and control systems urgently require high-bandwidth, low-latency high-speed data transmission solutions.





Source: https://www.edntaiwan.com/20190627nt71-industrial-robot-sensing/



Source: TRENDFORCE Report

Operational Outlook

Own Products

Optical Communication

- Strategic deployment of CPO (Co-Packaged Optics) and Silicon Photonics. Developing chip-level packaging and high-speed optical components.
- Promote 100G VCSEL/PD Array.
- For Automotive Data Transmission: Developing special-wavelength components capable of wide-temperature operation.

Smart Sensing

- Deeply cultivated in various wavelength light sensors (VCSEL/PD), used in consumer electronics, precision industrial detection and photodynamic therapy.
- Actively promoting next-generation mobile sensing light sources.
- Targeting sensing and transmission opportunities in robotics and industrial automation.

OEM/ODM Service

- Providing GaAs and InP foundry service, including testing and reliability verification.
- Providing optical electromechanical integration services for high-speed communication and LiDAR modules (integration of software and firmware)

Summary

Robot

Smart sensing

TrueLight Corp.

Optical communication

OEM/ODM

Thank you

Q&A 時間