

APPLICATION OF PHOTONICS TECHNOLOGY IN THE INTELLIGENT DRIVING INDUSTRY

Asia Photonics Expo (APE), a world's leading comprehensive photonics platform, will be held at the Sands Expo and Convention Centre in Singapore from 26 to 28 February 2025. It focuses on cutting-edge technologies and emerging markets in the fields of optical communication, optics, laser, infrared, sensing, and display, including **automotive perception, smart cockpit, vehicle optical communication and manufacturing/processing equipment**. It serves as a one-stop platform for professionals in the intelligent driving industry to seek upstream and downstream products, innovative technologies, engage in trade negotiations, and facilitate procurement.

Exhibit Profile

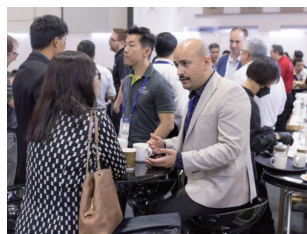
Automotive Perception: Lidar, In-Vehicle Infrared Night Vision, In-Vehicle Cameras, etc.

Smart Cockpit: Display Screens, HUD, Optical Components/Materials, 3D TOF Cameras, MEMS Sensors, etc.

Vehicle Optical Communication: Optical Fibers, Optical Modules, VCSEL, etc.

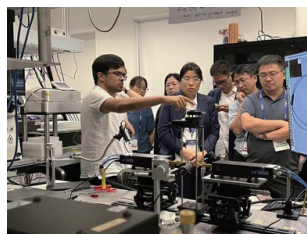
Production and Manufacturing: Laser Equipment/Lasers, Robots, Automation/Semiconductor Equipment, Inspection & Testing Measurement Systems, Vacuum Coating Equipment, Lens Assembly Equipment, etc.

CONCURRENT ACTIVITIES



Gala Dinner

Over 120 top-level executives of our exhibitors and partners attended the gala dinner and took the opportunity to engage in high-level discussions, exchange ideas, and explore potential collaborations.



Site Tour

APE co-organized with Singapore University of Technology and Design and LUX Photonics Consortium to curate a site tour which attracted over 40 companies to join, aiming to link between academia and industry.



Happy Hours

It will be held at VIP lounge to facilitate the networking and collaboration between exhibitors and VIP visitors.

CONCURRENT CONFERENCES

Application Forum

A series of application programmes will be dedicated to showcasing the application fields within manufacturing, medical, consumer electronics, etc.

Industry Forum

Explore the cutting-edge optoelectronic technology and gain in-depth insights into its latest developments across various photonics application fields, thereby driving innovation in upstream and downstream products.



BOOTH APPLICATION



APE AT A GLANCE

*Only part of exhibits, listed in no order.

Production & Manufacturing

Laser Equipment and Laser

- Laser Cutting Equipment
- Laser Solder Ball Jet Solder Machine
- Dual-Station Laser Solder Welding Machine
- Intelligent Laser Welding System
- All-Solid-State High-Power Femtosecond Laser
- Semiconductor Laser
- Infrared Picosecond Fixed Lasers
- Automotive Industry Detection Linear Laser

Robot

- Industrial Robot
- Intelligent Robot
- Polishing System
- Mobile Composite Robot
- Parallel Six-Degree-of-Freedom Robot
- Suction Screw Locking Robot
- Robot Grinding and Polishing Integrated Machine

Automation/Semiconductor Equipment

- Fully Automatic High Precision Eutectic Machine
- Semiconductor Cutting Equipment
- Fully Automatic Multi-Function Solder Paste Printing
- Automatic Glue Dispensing and Solder Paste Printing Machine
- Online Temperature Monitoring Semiconductor Heating System
- Grinding Machine
- Glue Dispenser
- Soldering Equipment

Inspection, Testing, and Measurement System

- DAS Camera Testing Solution
- Vehicle Module Assembly and Testing Production Line Equipment
- LiDAR Assembly and Testing Line
- Compact High Precision Optical Transfer Function Measurement Instrument
- 3D Optical Profiler
- Industrial Microscope
- Freeform Surface Measurement System
- 3D Optical Surface Shape Measurement System

Vacuum Coating Equipment

- Vacuum Coating Machines
- Evaporation Coating Equipment
- Flexible Electronics Roll-to-Roll Vacuum Coating Equipment
- IBS Ion Beam Sputtering Coating Equipment
- Large Magneton Sputtering Optical Coating Equipment

Lens Assembly Equipment

- Vehicle Ultra-Wide Dual-Station AA Equipment
- HD Wide-Angle Lens Automatic Assembly Equipment
- Fully Automatic Vehicle Lens Assembly Line Equipment
- Fully Automatic AA Equipment

Vehicle Perception

LiDAR

Core Component

- VCSEL
- Linear Array SPAD Detector
- Active Meta-surface Optical Control Chip
- LiDAR Light Source
- Optical Scanning Rotating Mirror Module

LiDAR

- Automotive-Grade LiDAR
- Solid-State Vehicle LiDAR
- Hybrid Solid-State LiDAR
- Unmanned LiDAR Sensor
- Image-Level Optical Fiber LiDAR
- Multi-Line Mechanical LiDAR

Infrared Night Vision

Infrared Lens

- Crystal-Level Infrared Lens
- Short-Wave Infrared Lens
- Continuous Zoom Infrared Lens

Infrared Night Vision Device

- Automotive Infrared Thermal Imaging Night Vision Device
- Automotive Infrared Night Vision System
- High-End Industrial Thermal Imaging Camera
- Infrared Thermal Imaging Meta surface Lens System

Automotive Camera and Module

Lens and Module

- Vehicle Lens Module
- Front-Mounted Vehicle Lens
- Smart Headlight Projection Lens
- Camera Module

Automotive Optical Solution

- Ground Projection Miniature Lamp Module
- Automotive-Grade Lens Module

CMOS

- CMOS Image Sensor
- CMOS Image Sensor Chip
- Global Shutter CMOS Module
- CMOS Image Sensor and Module

Optical Lens

- Colored Optical Glass Lens
- Glass Aspheric Optical Lens
- Water-Level Glass Lens
- Spherical Glass Lens

Filter

- LiDAR Filter
- Optical Filter
- Optical Coating Filter
- Camera Filter
- Colored Filter

Display Screen

Material and Module

- Mini LED Vehicle Backlight Source
- Driving Panel
- Organic Electro-luminescent Device
- Metal Oxide Semiconductor Target

Display Panel

- Mini LED Vehicle Display
- OLED Miniature Display
- AMOLED Vehicle Human-Machine Interaction
- Flexible Micro-LED Display

HUD

AR-HUD

- AR HUD Large Size Optical Waveguide
- Extended FOV-ARHUD
- Holographic Waveguide AR-HUD

AR Optical Module

- Optical Solution Module
- AR Diffractive Optical Waveguide
- Holographic Waveguide Module
- AR Optical Solution

Optical Component/Material

- Mini Display Optical Device
- Diffractive Optical Element
- Vehicle HUD Optical Component
- HUD Optical Component
- Optical Lens

3D ToF Camera

- 3D ToF
- 3D-dToF Sensor
- Array dToF Sensor
- ToF Ranging Sensor
- 3D ToF Imaging Array Product

ToF Sensor Chip

- dToF Sensor
- dToF Lens
- Single Point Ranging Sensor Module

Light Source

- Vehicle Backlight Source
- Multi-Channel High-Brightness LED Light Source
- Small Angle Emitting LED Light Source
- Transilluminator

Li-Type Multi-Spectral Light Source Device

- DNP Light Source
- OTP Burn-in Light Source
- UV Laser Light Source

MEMS Sensor

- Pressure Sensor
- Vibration Sensor
- Material Sensor
- Detection Sensor
- Temperature Sensor
- Gas Leak Detection Sensor
- Infrared Carbon Dioxide Sensor
- Capacitive Angle Sensor

Optical Fiber

- Multimode Fiber
- Fiber Optic Array
- Plastic Optical Fiber
- High-Temperature Fiber

Quartz Fiber Optics Solution

- Special Fiber Optics and Product
- Special Fiber Array

VCSEL

- 2.5G/10G DFB Laser
- 25Gbps Direct Modulated DFB Laser
- VCSEL Epitaxial Wafer
- VCSEL Optical Chip

Optical Module

- Optical Module



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APE 2024 POST SHOW REPORT