

# 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.

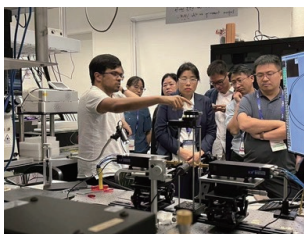
**Production and Manufacturing:** Laser Equipment/Lasers, Robots, Automation/Semiconductor Equipment, Inspection & Testing Measurement Systems, Vacuum Coating Equipment, Lens Assembly Equipment, etc.

## 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



REGISTER AS A VISITOR

\*Only part of exhibits, listed in no order.

## 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
- Intra-level Optical Fiber LIDAR
- Optical Scanning Rotating Mirror Module

### 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

**CMOS**

- CMOS Image Sensor
- CMOS Image Sensor Chip
- Global Shutter CMOS 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

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

**AR Optical Module**

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

**Optical Component/Material**

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

## Smart Cockpit

### 3D ToF Camera

**3D ToF Sensor**

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

**ToF Sensor Chip**

- ToF Sensor
- Single Point Ranging Sensor Module

### Light Source

**Vehicle Backlight Source**

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

**L-Type Multi-Spectral Light Source Device**

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

### Optical Fiber

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

**Quartz Fiber Optics Solution**

- Special Fiber Optics and Solution
- Special Fiber Array Product

### VCSEL

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

**Optical Module**

## 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 Extractic 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

**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



**REGISTER AS A VISITOR**