

**APE** | Asia  
Photonics  
Expo

Held in:



Brought to you by:



Supported by:



## Semiconductor Brochure

Source: APE Digital Showroom  
(Updated by 30 December 2024)

# APE 2025

26 - 28 February 2025

Sands Expo and Convention Centre, Singapore



**GET FREE PASS**

## Contents

Product Category	Page
<b>Optoelectronics</b>	
Chips	<a href="#">3</a>
TEC/Capacitor/Design and Simulation Software	<a href="#">4</a>
<b>Semiconductor Material</b>	
Materials	<a href="#">5</a>
Substrates/Plates/Ceramic Packages	<a href="#">6</a>
<b>Semiconductor Equipment</b>	
Lithography Equipment/Aligner/Die Bonder	<a href="#">7-9</a>
PVD/Coating Equipment	<a href="#">10-11</a>
Laser Cutting Machine	<a href="#">12</a>
Vacuum Reflow Oven/Welding Machine	<a href="#">13</a>
Curing System	<a href="#">14</a>
Measuring & Test Instrument	<a href="#">15-17</a>
Cleaning Equipment	<a href="#">18</a>
Dicing/Cutting Saw/Polishing Machine	<a href="#">19</a>
Others	<a href="#">20</a>

[>>> Explore more APE products<<<](#)

## Optoelectronics

[>>> Explore more products](#)

### PHOGRAIN Technology (ShenZhen)

A202, A203

#### 4X200GBaud PIN PD CHIP

1. Application speed cover: 1.6T 2. Low capacitance and max. bandwidth to over 40GHz 3. Supporting 850nm~910nm and 1100nm~1650nm wavelength application 4. Bigger illuminated window for easy coupling 5. Flip-chip and backside illuminated with lens for single channel 112G PD for excellent sensitivity performance 6. Batch applied in 400G to 800G datacenter



### SpinQ Technology (Hongkong)

A111

#### SPINQ QPU

SPINQ QPU is the Superconducting QPU (known as the quantum chip). It's the commercially available high-performance QPUs with decoherence time (T1) of up to 100  $\mu$ s or more.



### Raytron Microelectronics

B536

#### RTDS123C

RTDS123C is a ceramic-packaged LWIR sensor (1280 $\times$ 1024, 12 $\mu$ m) based on vanadium oxide (VOx) microbolometer with an 8-14  $\mu$ m wavelength range, high-quality images with high performance and high sensitivity. RTDS123C applies to multiple scenarios, e.g. industrial temperature measurement, outdoor night vision, etc.



### CamOptics (SuZhou)

D233

#### Liquid Crystal on Silicon Spatial Light Modulator LCoS-SLM

The Liquid Crystal on Silicon Spatial Light Modulator (LCoS-SLM) is a cutting-edge reflective photonic modulation device. By leveraging advanced SLM wavefront control technology, lasers achieve unparalleled precision and versatility in material processing. CamOptics LCoS-SLM stands out with its high diffraction efficiency, exceptional damage threshold, and superior light utilisation rate.



## Optoelectronics

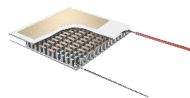
[>>> Explore more products](#)

### Hangzhou Dahe Thermo-Magnetics

B132

TEC

The product has the characteristics of high reliability, good stability, strong consistency, long life, fast refrigeration speed, good time response, deep refrigeration temperature and high efficiency

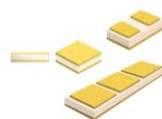


### Guangzhou Chuangtian Electronic Technology Co., Ltd

A102

### Microwave Single-layer Chip Capacitor

1. High strength, high-temperature resistance (-55°C~+125°C). 2. Stable and reliable performance. 3. Suitable for micro-assembly processes (e.g. gold wire/tape bonding). 4. Suitable for Au/Sn, Au/Si, Au/Ge eutectic welding, and Sn/Pb, eutectic bonding. 5. Low-temperature change rate, low loss, high Q value.

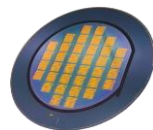


### Wuhan ANPI Optoelectronics Co., Ltd

A008

### Thin film lithium niobate modulator chips

Thin-film lithium niobate 4/8-channel array modulator chip, ultra-high bandwidth, small size, low driving pressure, based on 8-inch tape-out process, large production capacity, high yield, suitable for 200G/Lane and 400G/Lane high-speed optical transceivers.

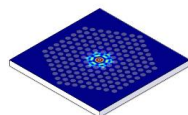


### Cybernet Systems Malaysia

B131

### Ansys Lumerical

Ansys Lumerical is a powerful photonics design and simulation software platform specialized in simulating the behavior of light in photonic devices and materials for development of cutting-edge products. With advanced solvers for modeling complex optical phenomena, Lumerical optimizes performance, cuts time and expense from the design cycle and fuels innovation for advanced applications in industries ranging from communications and consumer electronics to aerospace and defense. Some of the popular applications are Co-Packaged Optics, Photonic Integrated Circuits, Data Centers, Augmented Reality, and Cell Phone Cameras.



[>>> Get Your FREE PASS to APE 2025<<<](#)

## Semiconductor Material

[>>> Explore more products](#)

### Shandong Humon Smelting

C002

### High-purity Arsenic

High-purity arsenic is a raw material that is used to prepare III-V compound semiconductor materials, such as GaAs and InAs, and dopants for singlecrystal silicon and germanium. Mainly used for the preparation of III-V compound semiconductor materials such as GaAs and InAs, as well as silicon and germanium single crystal dopants, and for the preparation of infrared transmission glass, laser printing machines, etc., it is a raw material for diodes and light-emitting diodes; Used for the production of pharmaceuticals, such as pesticides, preservatives, dyes, etc



### Tellur Materials Limited

C516

### High Purity Antimony And Ingot

In house produced Antimony  $\geq 99.9995\%$  is processed by physical vacuum distillation and further zone refining when the certain impurity specially required. Outsourced  $99.9999\%+$  is processed by low-temperature chlorinated rectification + vacuum distillation. 7N and above is about single crystal growth. They fit for high tech markets eg. semiconductor, infrared, super alloy, photoelectron applications. We have the highest quality standard (ICP, GDMS report available) and already regularly shipped to worldwide customers for years.



### JuBo Guneng (Suzhou) Thin Film Materials Co., Ltd

C106

### HfO2

Laser coating, purity: 99.99%

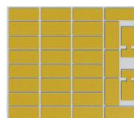


### Bomin Electronics Co., Ltd.

C232

### DPC(Direct Plating Copper)

DPC (Direct Plating Copper) is a process that uses PVD to sputter Titanium and copper on the ceramic substrate to metallize the surface. Copper-covered ceramic substrates with high thermal conductivity, excellent dimensional stability and reliable electrical properties can be prepared by DPC process. This substrate is often used in high-power electronic devices, radio frequency (RF) circuits, microwave devices, LED lighting and other fields to meet the requirements of high-performance electronic devices for thermal conductivity and signal transmission.



## Semiconductor Material

[>>> Explore more products](#)

### Jiangsu Ferrotec Semiconductor Technology B135 Copper Bonded Ceramic Substrates

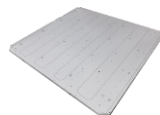
DCB (Direct Copper Bonding) is a kind of electronic basic material which bond copper foil directly on ceramic surface. It has good thermal cycling, high mechanical strength, high thermal conductivity, high insulation and high current carrying capacity. Active Metal Brazing is a further development of DCB technology. It is a method of bonding ceramic and metal by using a reaction layer generated by the reaction between a small amount of active elements contained in brazing filler metal and ceramic, which can be wetted by liquid brazing filler Metal.



### Aiku (Suzhou) Semiconductor Technology C007

#### Top and Bottom Plates of the Reaction Chamber

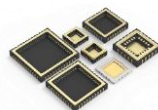
In the semiconductor industry, chamber top and bottom covers ensure superior sealing, preventing contamination and maintaining a stable vacuum environment. Made from corrosion-resistant materials like stainless steel or aluminum, they withstand high temperatures and pressures. Their precise design and machining guarantee tight fits, enhancing reliability and minimizing leakage, while facilitating easy assembly and maintenance for optimal performance in semiconductor manufacturing processes.



### Tcpack Electronic Technology A006

#### High Temperature Ceramic Packages

A few of companies are capable to address high temperature ceramics in the world. It is more reliable comparing to glass-metal packages



### XINHUILONG D507

#### Heat Spreader For A Group Of Led's

The main product types are: Heat spreaders for a single LED Heat spreaders for a group of LED's



[>>> Explore more products](#)

## Lithography Equipment/Aligner/Die Bonder

Heidelberg Instruments Mikrotechnik GmbH C203

**MLA 300 | Maskless Aligner For Volume Production**

The Heidelberg Instruments MLA 300 is a maskless lithography system that is optimized for industrial production applications with a resolution down to 1.5 µm minimum feature size. The flexibility of maskless lithography allows rapid design customizations for custom production series, even up to unique designs on each substrate. This is of particular use e.g. for advanced packaging applications to compensate for die shift. Serialization is also possible with dynamic additions and automated code generation (e.g. data matrix codes). Areas of application are advanced semiconductor packaging, IR sensors, MEMS, electronic probes, high-precision electronic components, and many more.



Heidelberg Instruments Mikrotechnik GmbH C203

**DWL 4000 GS | The Industrial-level Grayscale Tool**

The DWL 4000 GS lithography tool provides advanced grayscale technology that satisfies the highest industrial standards and produces 2.5D or freeform topographies such as micro-lenses or sloping features like blazed gratings. The professional grayscale lithography mode enables fast and flexible high-resolution patterns of complex 2.5D structures in thick photoresist over large areas. With a minimum feature size of 500 nm, a write area of 400 mm x 400 mm and optional automatic loading system. The system is designed for high-throughput patterning of masks and wafers for integrated circuits, MEMS, wafer-level micro-optics for telecommunications, illumination, industrial display manufacturing, sensors, holograms



Germanlitho

C101

**GL P2 CLIV**

GL P2 CLIV is High-resolution UV Nanoimprint Lithography Equipment. Equipped with GermanLitho's CLIV (Contact Litho into Vacuum) imprinting technology as standard. It is capable of achieving high-precision (better than 10 nm\*) and high-depth-to-aspect-ratio (better than 10:1\*) nano-structural replication on G2 panels (370x470 mm). The device supports automatic replication of flexible composite working moulds with high precision and long life, which can significantly reduce the cost of moulds used in large-area nanoimprinting processes.



Germanlitho

C101

**GL4 HE & GL8 HE & GL12 HE**

GL HE series nanoimprint lithography equipment combines UV-NIL and thermal-NIL (Hot Embossing - HE) functions, UV-NIL and thermal-NIL processes can be carried out separately or in-situ simultaneously. It enables semi-automatic imprinting of high resolution (better than 10nm \*) and high aspect ratio (better than 10 : 1 \*) nanostructures on up to 100mm/200mm/300mm wafers. The equipment supports using rigid or flexible molds. Working stamps, which have high resolution and long service life, with a wide range of material selection can be replicated inside the machine. Using working stamps can significantly reduce the cost of large-area molds in nanoimprint processes.



[>>> Get Your FREE PASS to APE 2025<<<](#)

[>>> Explore more products](#)

## Lithography Equipment/Aligner/Die Bonder

### Suzhou Bozhon Semiconductor

A326

### MicroStar Series EF8621-Plus Eutectic Die Bonding Machine

The EF8621-Plus is an in-line, fully automatic, high-precision eutectic die bonder. While adhering to the high precision and high reliability, it maximizes the multifunctional compatibility of the equipment and supports various placement processes such as COC/COS/GOLD BOX/Flip Chip. In addition, the mechanical structure of the machine retains the original model's double-station while adding a streamlined design that seamlessly connects with the automatic loading and unloading of AGVs, which further enhances the production efficiency.



### SuZhou Guangduo Micro, Nano Devices

C135

### Fully automatic roll-to-plate Nanoimprint machine

The equipment adopts a modular design, which integrates EFEM, spin coater, HP, CP, NIL, Frame loading Unit, Pre-aligner, RF-reader and other functional modules. This device is available for both 8-inch and 12-inch substrates. The minimum line width of nanoimprint printing can reach 10nm, and the aspect ratio can reach 10:1. The alignment accuracy reaches  $\pm 1\mu\text{m}$ .



### MRSI Automation (Shenzhen)

B111

### MRSI-A-L Active Aligner

MRSI A-L is a modular-design machine, with integrated pick and place, dispense, vision, alignment functions, as well as intelligent software that offers users flexible processes. It is a powerful tool for optical components assembly, such as transceivers, silicon photonics, AWGs, LiDAR, integrated optics etc. Active aligner applications tend to be highly customized and MRSI is equipped to meet design requirements for customized applications. Configuration highlights:  $360^\circ$  rotatable laser angle collimator for high precision surface angular control  $\cdot$  Laser beam profile measurement and processing  $\cdot$  Powerful machine vision  $\cdot$   $1\mu\text{m}$  accuracy laser height detection  $\cdot$  Auto dispense & UV cure



### MRSI Automation (Shenzhen)

B111

### MRSI-H1 FAMILY 1-Micron Flip-chip Die Bonders

Product Features: Proven exceptional flexibility and reliability for true high-mix, high-volume production of multiple chips, processes, and products. High precision design with a patented zero-time tool change turret design, identical to the best-selling MRSI-HVM. Optional loading/unloading conveyors available. This series enhances efficiency by increasing parallel material handling without sacrificing flexibility, accuracy, or reliability. Configured according to the process characteristics of different application fields, classifying the H series products accordingly. Application Fields: Optical transceivers and other photonic devices, RF and microwave devices, high-power laser applications, and TO header packaging applications.



[>>> Get Your FREE PASS to APE 2025<<<](#)



[>>> Explore more products](#)

## Lithography Equipment/Aligner/Die Bonder

**Nanosystec**

A123

**NanoSeries: Active Alignment and Assembly Stations**

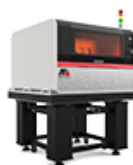
The NanoGlue, NanoWelder and NanoSolder series are partly or fully automated production stations for demanding alignment and low-shift assembly procedures in the opto-electronics industry. Nanosystec offers standard and custom configurations. The linear axes work with 5 nm resolution, angular rotation resolution is below 0.001°. Long travel ranges facilitate the loading and unloading procedures while the modular architecture allows for fast and reliable customization. A powerful process software with automated machine vision algorithms allows for unattended operation with high yield.

**MOJI-NANO Technology**

D203

**Maskless Direct Writing Lithography—UV-Smart**

Desktop level maskless UV lithography equipment UV-Smart is specifically designed for laboratory research needs and small-scale production. Its compact design is well-suited for laboratory environments, featuring high writing speed, high resolution, and high alignment accuracy. With integrated design and fully automatic control, it offers easy operation, suitable for rapid prototyping or small-batch production. Widely used in fields such as microfluidics, semiconductor, biotechnology, and microelectronics.

**Microview Intelligent Packing Technology (Shenzhen) Co., Ltd.**

A224

**MV-15TPro High-accuracy Die Bonder (High Speed, Epoxy process)**

- ① High precision collaboration;
- ② Multi chip application;
- ③ High speed mounting;
- ④ Efficient material transfer: fully automatic loading and unloading system, assembly line material transfer system;
- ⑤ Multilingual software interface;

**SENTECH Instruments GmbH**

A121

**SI 500 D**

The SI 500 D features exceptional plasma properties like high density, low-ion energy, and low-pressure plasma deposition of dielectric films. The SENTECH proprietary Planar Triple Spiral Antenna (PTSA) ICP plasma source allows for highly efficient low-power coupling.

[>>> Get Your FREE PASS to APE 2025<<<](#)

## PVD/Coating Equipment

[>>> Explore more products](#)

### I-Photonics UAB

C208

LIDIZ vacuum systems family is the result and embodiment of 50 years' experience in Ion Beam Sputtering (IBS) technology. IBS technology is well known for its extremely low-loss optical coatings. LIDIZ IBS system is an effective tool for deposition of optical coatings for a wide range of applications. LIDIZ is equipped with RF grid ion beam sputtering source, RF grid ion beam source for substrates pre-cleaning, surface activation, sputtering assisting and RF neutralizers.



### LIDIZ Ion Beam Sputtering (IBS) System For Ultra-high Precision Optics

### Kurt Lesker (Shanghai) Trading

D311

The Kurt J. Lesker Company® PRO Line PVD 75 is the next generation thin film deposition system based on the workhorse PVD 75 platform. The PRO Line PVD 75 builds on the successes of the original design with improved system base pressures and pump down times. A technically superior chamber design, an industry best software control system with advanced programming capability, automatic substrate loading, and numerous features for optimized thin film performance are a few of the key advantages offered in this innovative, best of class design.

### PRO Line PVD 75



### HUICHENG

C301

This equipment adopts metal mode sputtering technology combined with RF-ICP/CCP ion sources. It is equipped with robotic systems for automated substrate transfer between the loading and unloading chambers, ensuring uniformity of <1% in mass production for high-quality results. It can produce various coatings, including cutoff filters, bandpass filters, RGB filters, AR films, hard AR films, HR films, AS/AF films, AR+DLC+AS/AF films, ITO films, infrared AR films, and cold light films. These coatings are widely used in optical lenses, displays, automotive central control screens, LiDAR, and HUD (head-up displays).

### Magnetron Sputtering Optical Coating Equipment



### HUICHENG

C301

High-Throughput Plasma-Enhanced Atomic Layer Deposition System (PEALD) features an automated wafer transfer system and specialized ALD control software, enabling one-click fully automated operation. It ensures low precursor consumption, atomic-level thickness control, excellent film uniformity, and conformal coverage. The system is capable of achieving highly uniform coatings on components with complex shapes. It can deposit metal films, oxides, nitrides, and sulfides, and is widely used in optical lenses, Micro/Mini LEDs, power devices, OLEDs

### Atomic Layer Deposition (ALD) Equipment



[>>> Get Your FREE PASS to APE 2025<<<](#)

## PVD/Coating Equipment

[>>> Explore more products](#)

### EVATEC AG

B304

SOLARIS

SOLARIS® sputter platforms combine the know-how from delivering over 5000 high speed optical disk systems with experience gained from over 3000 semiconductor PVD tools to deliver a new approach in thin film mass production. With their "inline" architecture, SOLARIS® platforms are designed for "fully automated fabs" increasing throughput and eliminating manual handling. From Touch Panels to EMI Shielding, Thermolectric Generators, Power Devices and Photovoltaics, the S151 and S380 platforms offer flexible high speed manufacturing solutions for rigid and flexible substrates.



### EVATEC AG

B304

CLUSTERLINE® Family

CLUSTERLINE® are a family of platforms named according to their substrate size capability. All platforms share cluster architecture with cassette-to-cassette processing and fully automated handling. Production solutions on CLUSTERLINE® cross all 6 Evatec core markets. Whatever your application, our specialists can help you configure an ideal CLUSTERLINE® platform for you. We deliver complete process solutions including highly aligned magnetic films, high performance piezoelectrics like AlScN for broadband RF filters and highly efficient energy harvesting devices, high aspect ratio TSV metallization in Advanced Packaging or precise deposition of TCOs and multilayer dielectrics for the latest micro LED and 3D filter technologies.



### YOULUN

A526

ASP8-PVD 200

Sputtering machine is an advanced sputtering equipment that is mainly used in thin film deposition processes. Its working principle is in the vacuum chamber, through the high-energy ions hit the surface of the target, so that the target atoms hit the solid surface and radiate to the surface of the plated object, and then deposited on the surface of the plated object to form a coating.



### Cutting Edge Coatings GmbH

A122

Navigator 2500

The IBS coating system for large-area substrates and even greater productivity.



## Laser Cutting Machine/Lasers

[>>> Explore more products](#)

SHOULEI

C005

### Fully Automatic IC Plastic Package Laser Cutting Machine

Used for precise laser cutting of plastic packages for integrated circuits such as SIP, LGA, and IC carriers, as well as for irregular shapes



SHOULEI

C005

### Precision Ceramic Laser Cutting And Drilling Equipment

The fully automatic precision ceramic laser cutting and drilling machine is mainly used for marking, drilling, and cutting processing operations on ceramic materials such as alumina aluminum nitride.



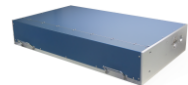
### Han's Laser Technology Industry Group Co., Ltd.

C226, C227

### 30W Femtosecond Laser HL-FS-1030-30

Features: 1. All-fiber modular design. 2. The spot pattern is good. 3. High stability and reliability. 4. Burst pulses: 1-16. 5. The repetition rate can be adjusted from 200kHz-1MHz.

Applications: 1. Cutting and drilling of brittle materials such as glass, sapphire, ceramics, etc. 2. Film material cutting and drilling. 3. Sensor marking and etching. 4. Metal surface treatment, such as removing the black layer of copper, fine marking on the metal surface. 5. Ultra-fine processing of human implant materials, such as cardiovascular stent cutting. 6. Two-photon microfabrication. 7. Dental restoration.



STRONG LASER

A235

### 30W UV Femtosecond Laser

1. Applicable materials: High brittle material (sapphire, glass, ceramic, silicon); Metal oxides (Fe<sub>2</sub>O<sub>3</sub>, Na<sub>2</sub>O); Semiconductor materials 2.

Application: Engraved grating ruler; Oled cutting, repair, stripping; PI membrane cutting; Polarizer cutting 3. Product Advantages: 1) UV femtosecond high power (more than 30 W) output; 2) Narrow pulse width (less than 500 fs); 3) Support POD and Burst mode.



[>>> Get Your FREE PASS to APE 2025<<<](#)

[>>> Explore more products](#)

## Vacuum Reflow Oven/Welding Machine

### Yantai Huachuang Intelligent Equipment

B531

### Vacuum Reflow Oven

Vacuum reflow oven is the specialized equipment which provides a good process environment for alloy soldering of electronic devices by using the principle of vacuum heating, auxiliary formic acid, positive pressure and other technological means. The equipment is widely used in packaging of advanced devices, including high-power semiconductor laser, Lidar device, TR component, hybrid circuit, discrete and MEMS devices, IGBT, high-power LED, infrared device. It can realize the perfect soldering of high reliability, high vacuum and low cavity of this kind of device.



### Opto-Intel Technologies Co., Ltd.

A532

### Vacuum Solder Reflow Oven

Mainly used to achieve void-free and perfect solder joints between high-power chip/device and its substrate. Process capability includes vacuum, inert or reducing atmosphere and our unique plasma enhanced technology to optimize soldering quality. Specific models: 1. VSR-8/VSR-20/VSR-20MPA Classic Design Vacuum Solder Reflow Oven (Single Chamber) : Mainly used in semiconductor lasers, optical communication modules, power chip packaging. 2. VSR-304 Automatic Vacuum Solder Reflow oven with Vertical Four Chambers for Mass Production: Mainly used in reflow soldering of IGBT, SiC, etc. It supports formic acid process and flux process.



### Laiku (Suzhou) Semiconductor Technology

C007

### Stainless Steel Vacuum Welding Chamber

Stainless steel vacuum welded chambers offer superior strength, durability, and corrosion resistance, making them ideal for semiconductor equipment. Their ability to withstand high vacuum levels and harsh environments ensures consistent performance. The seamless, welded design eliminates leakage risks, enhancing reliability and maintaining the integrity of sensitive semiconductor processes.



### ViLaser Equipment Co., LTD

C525

### Laser Solder Ball Welding Machine

The solder balls have a diameter of 70~2000um, which meets the trend of miniaturization; they are suitable for mass production on assembly lines with an image positioning system; the heating and droplet formation process is quick, and can be completed in 0.25; no flux is needed, and there is no pollution, thus maximizing the lifespan of electronic components; the solder balls are melted within the nozzle, without any spatter; the spray ball welding monitoring and post-weld inspection functions can be expanded. Different types of solder joints can be achieved by selecting the appropriate size of solder balls.



[>>> Get Your FREE PASS to APE 2025<<<](#)

## Curing System

[>>> Explore more products](#)

### UV Technology Shenzhen

D226

### UV LED Spot Curing System

Spot Curing System-4CH Available single controller for standard 4 heads / 8 heads / 12 heads or customized. Main features ·Multi-channel controller to make operation efficiency ·Multiple LED heads can be controlled individually or simultaneously ·Manual、Automatic、Advanced modes to be chosen ·Variety of lenses are available, with different intensities ·Variety of head sizes to meet different environments ·Signal control terminal is made in japan, safer and more stable ·MCU,PLC,PC and other external can access the setting and output ·LED head alarm function if any abnormality happens ·Special heat dissipation structure and temperature sensor makes irradiation accuracy



### UV Technology Shenzhen

D226

### UVLED Linear Light Source

The LED-UV linear light source curing lamp device independently developed by Awellcure, uses ultraviolet curing technology to cure UV glue, UV ink, UV paint, adhesives and other ultraviolet light-sensitive materials through polymerization method, which is low power consumption, environmental protection and Efficient new generation LED light source. Features Wavelength 365nm/385nm/395nm/405nm for optional. Brand LEDs, Uniform Irradiation, Fast Curing, Customized Curing Size, Intelligent Control, Easy Operation. Multichannel circuit control



### Wuhan Ibrntech

D317

### Industrial Curing

IBRN Industrial Curing Products include UVLED spot/line/area curing light, intelligent UVLED curing oven, UVLED curing tunnel, UVLED curing hand-held machine, UVLED inkjet curing machine and UVLED system for optical fiber drawing/coloring coating curing. Our products have the characteristics of strong irradiation, better and more stable curing quality, less heat generated, cost saving, network up time and long life. All products are equipped with multi-language human-computer interaction industrial color screen, and with adjustable power accuracy from 1% to 100% as well as fault detection function. The products are widely used in 3C electronics, optical communications, optical fiber & cable, inkjet printing.



## Measuring & Test Instrument

[>>> Explore more products](#)

### OPTOSIGMA SOUTHEAST ASIA PTE LTD

B206

### Quantum

OptoSigma supplies Superconducting Nanowire Single Photon Detector (SNSPD) systems capable of achieving high detection efficiency (up to 98% at 1550 nm), wide range for detection (400 nm - 3000 nm) as well as low timing jitter (<50 ps) with up to 32 detection channels. OptoSigma also provides educational platforms based on NV diamond technology that enables basic concepts of quantum physics and engineering to be demonstrated. Additionally, OptoSigma supplies ultra-narrow linewidth and single frequency lasers from UV to IR wavelengths. Target applications include quantum key distribution, quantum random number generation, quantum computing and quantum communication.

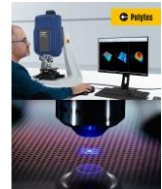


### Polytec South-East Asia Pte Ltd

A221

### TopMap Micro.View® | Optical Surface Profiler

TopMap Micro.View is an easy to use and compact optical profiler. Combine exceptional performance and affordability with this powerful metrology solution. - High-end white-light interferometer with nm resolution - 100 mm z measurement range with CST Continuous Scanning Technology - With Focus Finder and Focus Tracker ready for automation - Motorized X, Y, Z, tip/tilt and turret save repositioning - Color information mode for extended analysis and documentation of defects - Modular, application-specific configurations

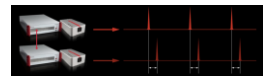


### ACEXON TECHNOLOGIES PTE LTD

B224

### FemtoFiber Laser Solutions

Innovative laser systems tailored by our experts to advance your research! With more than 20 years of experience in femtosecond fiber laser technology and fiber laser design, TOPTICA offers innovative and custom-tailored laser systems that enable cutting-edge research in the field of quantum technology, biophotonics and solid-state physics. The range of laser systems extends from synchronized multi-arm configurations for pump-probe spectroscopy to two-color laser solutions for FLIM (fluorescence lifetime imaging) to highly advanced laser systems that emit UV and visible ultrafast pulses.



### QuantumCTek (Shanghai)

A116

### ez-Q Engine 2.0

ez-Q Engine 2.0 is the next-generation control and measurement system developed by QuantumCTek, targeting quantum computing at the scale of a thousand qubits. This control and measurement solution consists of both hardware and software system. The hardware system comprises three main parts: the chassis platform, readout system, and control system. Each chassis can support a maximum of 128 XY channels, 320 Z channels, 8 ROO channels, 8 ROI channels, and 8 Pump channels. It is designed to support quantum computing with up to a thousand qubits using min 10 chassis. The software system is inherited and updated from the "Zuchongzhi 3" control and measurement software platform. It support to configure several thousand qubits, while also offering the capability for managing multiple quantum computers in an engineered fashion.



## Measuring & Test Instrument

[>>> Explore more products](#)

**YOKOGAWA ENGINEERING ASIA PTE LTD**

B305

**AQ6380 Highest Performance  
Optical Spectrum Analyzer**

The AQ6380 OSA features excellent optical wavelength resolution, accuracy, and close-in dynamic range specifications, enabling precise measurement and clear separation of optical signals in close proximity. It incorporates smart technology and functionality including an intuitive touchscreen, automated wavelength calibration, and optimized sweep speed, allowing users to operate more efficiently. Additionally, it includes gas purging mechanisms, fully-automated wavelength calibration, compatibility with high-resolution and high sample counts, and single-mode fiber input.



**Optical Gaging (S) Pte Ltd**

B311

**OGP SmartScope M series**

SmartScope M-Series from OGP represents a line of advanced 3D multisensor dimensional measuring systems with features tailored for precision metrology. The M-Series includes models like the M20 and M45, each equipped with the IntelliCentric-M optical system, which boasts a 20-megapixel metrology camera and VIRTUAL ZOOM technology for superior image quality and resolution. These systems offer LED illumination, multisensor versatility with options for touch probes, scanning probes, and laser sensors, and a robust design for accuracy. They cater to diverse applications, from rapid edge detection to intricate 3D measurements, making them ideal for high-precision environments.



**Tzttek Technology Co., Ltd.**

A321, A322

**VMG Gantry Video  
Measuring Machine**

VMG is designed especially for large dimensions measurement. VMG adopts mobile bridge structure, the most advanced design concept and the strictest production control, which ensure the accuracy and stability of the machines. It's equipped with stable moving platform, rich optical system and abundant accessory options, which can help to meet the requirement of measurement for large workpiece effectively.



**ChengDu TYGGO photoelectricity Co., LTD**

C526

**Laser Interferometer INF600-LP**

Dual port detection, wide application area Measurement of large aperture planar element surface Uniformity measurement of optical materials Surface analysis, Optical data processing





## Measuring & Test Instrument

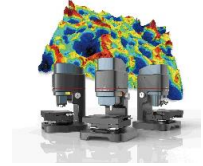
[>>> Explore more products](#)

### Boardstone Intelligent (Dongguan)

C104

### White Light Interferometry Optical 3D Profiler

Mainly used to measure roughness, stage height, micron & nanometer level structure, 3D surface with nanometer or sub-nanometer level accuracy. WLI 3D profiler widely used in many industries such as the production of semiconductor, optics, electronics, OLED screen, medical instruments and so on.



### Shanghai Xingqing Optical Instrument Co., Ltd.

D321

### XQ15-G3 Applied Laser Plane Interferometer

1. It is more practical while retaining the use and characteristics of XQ15-G1 laser plane interferometer. 2. It can be more widely used in the production workshop of mass production units. 3. Test the flatness and small wedge Angle measurement of the workshop, which is more suitable for the application of rapid screening of large plate production lines.



### Optosky (Xiamen) Photonics Inc.

C532

### ATR3810 Super Fast Line Scan Raman Spectrometer

Using linear laser shaping, area array imaging, and an efficient electric scanning platform, a single scan captures 2048 pixels \* 2048 wavenumbers for rapid imaging of large samples, hundreds to thousands of times faster than traditional point mapping. High-sensitivity detection: The sCMOS detector, cooled to -30°C, achieves an SNR >8000:1 for low noise and high precision. Wide wavelength range and high resolution: Supports excitation wavelengths from 325nm to 1064nm, with spectral resolution up to 2.0  $\text{cm}^{-1}$ , meeting diverse field requirements. Excellent environmental adaptability: Offers temperature stability (spectral shift  $\leq$  2  $\text{cm}^{-1}$ ) and spectral intensity consistency (variation  $< \pm 2\%$ ).



### Haituo Instrument (Jiangsu) Co., Ltd

A525

### Thermal Shock

It is widely used in 5G, semi-conductor, core, sensor, micro-electronic and other industries. It will detect the chemical changes and physical damage in the shortest time caused by high and low temperature thermal shock, and reduce the test and verification time. The temperature range is -80°C-220°C, and temperature changing rate: -40°C-80°C, 10s.



## Cleaning Equipment

[>>> Explore more products](#)

### Opto-Intel Technologies

A532

### Microwave Plasma Cleaning System

The systems are perfectly used for cleaning and surface activation prior to semiconductor packaging process such as die bonding, wire bonding, underfill, molding, capable to effectively remove the surface contaminants of organics and oxides from the packaging materials, enhancing surface adhesion and significantly improving the process yield. Specific models: Efficient Desktop Microwave Plasma Cleaning System (MWD-12) Full-Function Cabinet Microwave Plasma Cleaning System (MWD-80) High-Density Direct Plasma Cleaning System (AMP-205A) High-Performance Microwave Plasma Cleaning System (AMP-20MA)



### Suzhou Metlaser Intelligent Technology

D224

### Inner Diameter Laser Cleaning System

It can efficiently remove substances such as rust, stains, oil stains and coatings on the inner walls of pipes and components. This equipment is applicable to industries such as mechanical processing, rail transit, bullet train and high-speed rail vehicle maintenance. With the feature of adjustable focal length, it can meet the processing requirements of different inner diameters and thus achieve highly efficient cleaning results.



### Suzhou Metlaser Intelligent Technology

D224

### Pulsed Laser Cleaning Equipment

The equipment features an integrated trolley case design, which is simple and portable, with good mobility, a small and lightweight laser head. It is equipped with an air knife to effectively remove dust and improve the cleaning efficiency. There is also an auxiliary focusing module that can display the processing distance in real time. It supports multiple master control methods such as industrial serial port screens, wireless tablets, and mobile phones.



## Dicing/Cutting Saw/Polishing Machine

[>>> Explore more products](#)

**Shenyang Kejing Auto-instrument**

C113

**STX-202A Compact Diamond Wire Saw**

The materials that can be cut by automatic diamond wire saw include ceramics, crystals, glass, metals, rocks, thermoelectric materials, infrared optical materials, composite materials, and biomedical materials. This machine is an automatic diamond wire saw that can perform continuous cutting. After setting the cutting program of diamond wire saw stone cutting, the sample is fed continuously without manual adjustment. The size of the cut sample is highly accurate. When using portable diamond wire saw for ultra-thin precision cutting, the thickness of the cut slice (within about 1 inch) can reach 0.08mm.

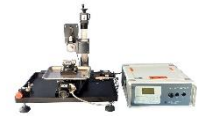


**Shenyang Kejing Auto-instrument**

C113

**SYJ-400 CNC Dicing / Cutting Saw**

SYJ-400 CNC laboratory precision micro cutting machine is mainly suitable for dicing, grooving and cutting of various materials such as crystals, ceramics, glass, ore, metal, etc. Laboratory precision micro cutting machine adopts a stepper motor, and can be computerized with a position accuracy of 0.01 mm. Laboratory precision micro cutting machine can be rotated at 360°, Laboratory cutting machine with a cross mount vise (with 90° positioning die to ensure the accuracy of cutting) and a vacuum chuck (Optional).



**Satisloh Asia**

C223

**SPM-10/SPS-10 Grinding & Polishing**

The SPM-10 micro optics grinding machine extends grinding production capabilities to include complex, small lenses, non-linear shapes, and micro optics aspheres with maximum precision and best surface finishing. It allows for the production of micro optics spheres and aspheres from the submillimeter range up to 10 mm. The SPS-10 is designed for micro-optics with the highest demands on precision and diameters from below 1 mm up to 10 mm. Its processing possibilities include the dressing of tools with integrated dressing spindle, crosscut adjustment, & optional asphere and stemp polishing.



**Changsha AFiSy Technologies**

D313

**CCOS Polishing Machine For Precision Optics**

Six axis linkage Double rotor polishing head Intelligent positioning of workpieces Deterministic polishing to achieve high-efficient and high-quality precision optical processing Machinable Surfaces: Plane, spherical, aspheric, off-axis aspheric, cylindrical, free form surfaces, etc. Machinable Materials: Quartz, zerodur, ULE, K9, sapphire, single crystal silicon, silicon carbide, ZnS, etc. Machining Features: Deterministic CNC polishing



## Semiconductor Equipment

[>>> Explore more products](#)

### Shenzhen iN-Cube Automation Co., Ltd

A101

### LD Bar Stacking Machine

Main Applications: The machine can pick up LD bars and spacers from wafer frame and one by one stacking them into coating fixture. Designed for arranging Bar strips in the optical communication and high-power laser chip industries onto coating jigs for auxiliary processes.

Key Features: 1.Higher speed and higher accuracy: Equipped with linear motor, production efficiency 125/set. 2.Visual positioning: Use full visual alignment to accurately identify each product position and accurately identify NG product. 3. Real-time demonstration: The visual system can be switched to real-time mode. 4.Efficiency: Use High-precision fixtures,dual-station and dual-suction nozzles for pickup and placement, dual-coating rack fixtures work .



### Dexin Digital Technology Corp. Ltd

C314

### RF Power Supply

RF Power Supply+Matcher in one case, compact structure, easy ship and install Low power loss and long service life with high-efficiency and high stability amplifier technology Output power adjustable from 1% to the maximum rate Support CW (continuous wave)/Pulsing output mode Support manual/automatic matching Full digital process, matching with high precision and in short time Support keeping and pre-set settings High reliability and long lifespan with vacuum capacitors LCD with keyboard control, easy operation Ultra wide matching range, customizable to fit any load



### SpinQ Technology (Hongkong)

A111

### SPINQ Superconducting Quantum Computer

SPINQ superconducting quantum computers support various chips, including 20 high-fidelity qubits, which are ideal for complex tasks in quantum chemistry, materials science, and quantum finance, enabling advanced research and commercial applications.



### Kurt Lesker (Shanghai) Trading

D311

### TORUS® Mag Keeper™

KJLC's Mag Keeper is designed to enable higher operating powers due to a mechanically enhanced cooling well. It is ideal for use in high throughput requirements and also enables quick target change with its magnetic keeper design, which secures the target to the source. The design has NO o-rings and utilizes ceramic insulators, making it both UHV and high temp compatible.



## Conferences and Events At A Glance

Date	Venue	Conference
26 February 13:00-17:30	Conference Room	<a href="#">Quantum Singapore 2025</a>
26 February 13:00-16:00	Technical Theatre	Yole Group Forum
26 February 16:15-17:45	Technical Theatre	<a href="#">EPIC Tech Watch</a>
27 February 9:00-17:00	Conference Room	<a href="#">Photonics@SG 2025 Conference</a>
27 February 10:00-12:00	Technical Theatre	<a href="#">2025 Photonics Empowering Electric Vehicle Technology Forum</a>
27 February 14:00-17:00	Technical Theatre	<a href="#">2025 EUROPE meets ASIA - Innovation in Photonics by W3+, IVAM &amp; EPIC</a>
28 February 10:00-12:00	Technical Theatre	<a href="#">Photonics Technology Empowering Semiconductor Manufacturing Forum</a>
28 February 14:00-17:00	Technical Theatre	<a href="#">Machine Vision and Robotics Enabling Industrial Intelligent Manufacturing Forum</a>
28 February 9:00-12:00	Conference Room	<a href="#">Forum on Advanced Photonics and Flat Optics</a>
28 February 14:00-17:00	Conference Room	Asia Semiconductor Conference

Date	Venue	Event
26 February 10:00-11:00	Conference Room	2025 Asia Photonics Expo Opening Ceremony
27 February 16:30-18:00	VIP Lounge	<a href="#">Happy Hour</a>
26-28 February	- The Photonics Institute (TPI), NTU Singapore - Wavelength Opto-Electronic (S) Pte Ltd	<a href="#">Site Tour</a>

[>>> Click to view all details up to date<<<](#)

\*This is a partial list of exhibits, presented in no particular order.

**Semiconductor Material**

<b>Silicon Wafer</b>	-8-inch Back-illuminated Hybrid Bonding Wafer -W/CSL/Backside Epitaxial -Infrared Temperature Sensor Wafer	<b>Material</b>	-11-inch Pressible / Gallium Nitride/Gallium Arsenide Epitaxial Layer -Carbon Wafer Single Crystal Thin Wafer	<b>Ceramics</b>	-CSP Ceramic Packaging Shell -HiTCC (High-Temperature Ceramic) Wafer Carrier -Ceramic Spoke Reflector / Diffuser
<b>Polishing Slurry / Pad</b>	-SiC Polishing Slurry -Silicon Borate Polishing Slurry -Polyethylene Series -Slippery Polishing Pad	<b>Grinding Material</b>	-Diamond Grinding Fluid -Grinding Pad -Fiber Optic Grinding Discs -Diamond Wheel	<b>Photoresist</b>	-Photoresist Verification -Heat-Assisted UV Imprint Photoresist -Full Range of Photoresist Material
<b>Target / UV Anti-reflective Coating</b>	-Structuring Target -Metallic Oxide Semiconductor Target -UV Debonding Film	<b>Substrate</b>	-Silicon Carbide Thermal Management Substrate -Ceramic Substrate -Silicon Nitride Ceramic Substrate	<b>Grinding Wheel / Solder Ball</b>	-Thinning Grinding Wheel -Heat-Resistant Grinding Wheel -Grinding Wheel -Gold Solder Ball

**Manufacturing Equipment**

<b>Lithography / Etching Equipment</b>	-SiC Etching Slurry -SiC Etching Slurry -Silicon Oxide Etching Slurry -Etching Series -Polishing Pad -Slippery Polishing Pad	<b>Annealing Furnace / Oxidation Furnace</b>	-Vacuum Bridging Furnace -De-gas Furnace -Vacuum Reflow Furnace -Wet Oxidation Furnace	<b>Thin Film Deposition Equipment</b>	-CVD Equipment -Magnetron Sputtering -Atomic Layer Deposition System -Thin Film Deposition System
<b>Polishing Machines / PVD Equipment</b>	-CMP Polishing Machine -CVD Coating Equipment -Wet-Clean PVD Equipment -Etching Slurry	<b>CVD Equipment / Electroplating Equipment</b>	-CVD Equipment -Plasma Enhance CVD -Water Electroplating Equipment	<b>Cleaning Machine</b>	-Water Cleaning -Plasma Cleaner -Single Water Cleaner -Ultrasonic Cleaner

**Measuring & Test Instrument**

<b>Testing / Measurement</b>	-Temperature Cycling Test Chamber (Hot and Cold Shock Tester) -Semiconductor User COS Testing Equipment	<b>Interferometer</b>	-Multi-wavelength Laser Interferometer -Vertical Laser Interferometer -Interferometer	<b>Profiler</b>	-3D Optical Profiler -Line Laser Profiler -Probe-based Surface Profiler
<b>Probe Station</b>	-W/CSL Water Probe Station -Silicon Photonics Probe Station -Probe Testing Equipment	<b>Measuring Instrument</b>	-Wetler Warp and Stress Measuring Instrument -High-Precision Vision Measuring Instrument -3D Topography Measuring Instrument	<b>Spectrometer</b>	-Coding Spectrometer -Near-Infrared Spectrometer -Automatic Dicing Machine Spectrometer



**Packaging & Testing Equipment**

<b>Thinning / Lamination machine</b>	-Fully Automatic Thinning Machine -Wetler Thinning Machine -Automatic Lamination Machine	<b>Coupling Machine</b>	-Automatic Optical Path System -Wavelength Combiner System -Coupling Alignment System	<b>Bonding Machine</b>	-High-Precision Chip Bonding Machine -Wavelength Combining Machine -Multi-Function Bonding Machine
<b>Mounting Machine / Oven</b>	-High-Precision Mounting Machine -High-Precision Epoxy Mounting Oven -Vacuum Pressure Oven	<b>Sorter</b>	-Fully Automatic High-Speed Sorter -Wetler Laser Sorter	<b>Dicing Machine</b>	-LD/DP Chip Dicing Machine -High-Precision Dicing Machine -Bi-ch Single-Axis Semi-Automatic Dicing Machine
<b>Die Bonder</b>	-High-Speed Die Bonder -Fully Automatic Die Bonder -Dual-Head Die Bonder	<b>Cleaning / Welding / Laser Cutting Equipment</b>	-Laser Cleaning Machine -Fully Automatic Die Bonder -Marking Machine -Semiconductor Cutting Equipment	<b>Microscope</b>	-3D Imaging Microscope -Stereo Microscope -Ultra-Deep Focus Video Microscope

**Measuring & Test Instrument**

<b>Measuring Instrument</b>	-Wetler Warp and Stress Measuring Instrument -High-Precision Vision Measuring Instrument -3D Topography Measuring Instrument	<b>Spectrometer</b>	-Coding Spectrometer -Near-Infrared Spectrometer -Automatic Dicing Machine Spectrometer	<b>Infrared Thermal Imaging</b>	-Infrared Thermal Imager -Infrared Detection Imager -45°C-classed Thermal Imaging core solution
<b>Microscope</b>	-3D Imaging Microscope -Stereo Microscope -Ultra-Deep Focus Video Microscope	<b>Optical Inspection Equipment</b>	-Mask AOI Equipment -40D Intelligent Appearance Inspection Equipment -Semiconductor Wafer AOI	<b>Industrial Sensor</b>	-Gas Leakage Detection -Infrared Carbon Dioxide Sensor -Capacitive Angle Sensor

**Optoelectronics**

<b>Optoelectronic Chip</b>	-Optical Chip -40PZ Chip -45PZ Silicon Optical Chip -Detector Chip -High-Speed Optical Detector Chip -Transmitting Chip	<b>Electronic Chip</b>	-LD Driver Chip -45PZ Chip -DLT Chip	<b>Optical Display Component</b>	-LED -Whisker -MicroLED
<b>Sensor Chip</b>	-40PZ Chip -45PZ Silicon Optical Chip -Detector Chip -High-Speed Optical Detector Chip -Transmitting Chip	<b>VCSEL / Laser Chip</b>	-50G PAWA VCSEL -50G PAWA VCSEL -Diamond VCSEL -Nucleon VCSEL Chip -940nm TOR VCSEL Chip	<b>Photodiode</b>	-Avalanche Photodiode -Whisker Tube PPI Photodiode
<b>Industrial Sensor</b>	-Gas Leakage Detection -Infrared Carbon Dioxide Sensor -Capacitive Angle Sensor	<b>Other Sensors</b>	-Infrared Module -Micro Electrostatic Infrared -High-Precision Multi-channel Signal Processing ASIC Chip -50G Megapixel Infrared Temperature Sensing Chip		

**Intelligent Sensor**

<b>LiDAR</b>	-Multi-line Mechanical LiDAR -Ultra-Wide Angle Blind Spot Laser Radar LiDAR -LiDAR	<b>3D Vision</b>	-CMOS Image Sensor (Pixel) -Vision Sensor -TOF Ranging Sensor -Image Sensor and Module	<b>Industrial Sensor</b>	-Gas Leakage Detection -Infrared Carbon Dioxide Sensor -Capacitive Angle Sensor
<b>MEMS Sensor</b>	-Inertial Sensor -Direction Sensor -Temperature Sensor	<b>Optical Inspection Equipment</b>	-Mask AOI Equipment -40D Intelligent Appearance Inspection Equipment -Semiconductor Wafer AOI	<b>Other Sensors</b>	-Infrared Module -Micro Electrostatic Infrared -High-Precision Multi-channel Signal Processing ASIC Chip -50G Megapixel Infrared Temperature Sensing Chip

**Measuring & Test Instrument**

<b>Microscope</b>	-3D Imaging Microscope -Stereo Microscope -Ultra-Deep Focus Video Microscope	<b>Optical Inspection Equipment</b>	-Mask AOI Equipment -40D Intelligent Appearance Inspection Equipment -Semiconductor Wafer AOI	<b>Industrial Sensor</b>	-Gas Leakage Detection -Infrared Carbon Dioxide Sensor -Capacitive Angle Sensor
-------------------	--	-------------------------------------	---	--------------------------	---



**APE** Asia  
Photonics  
Expo

Held in:



Brought to you by:



Supported by:



# APE 2025

26 - 28 February 2025

Sands Expo and Convention Centre, Singapore



**GET FREE PASS**



**EXPLORE MORE PRODUCTS**

**Follow us:**

**#APE2025**

[www.asiaphotonicsexpo.com](http://www.asiaphotonicsexpo.com)

