

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

## Optical Material & Component



### Optical Material

- Aluminum/Lanthanum/Yttrium Oxide
- Magnesium Fluoride
- Lithium Niobate/Lithium Tantalate
- Grinding & Polishing Material
- Polishing/Grinding Pad
- Target Material
- Ceramic/Aluminum Substrate

### Optical Material

- Quartz Material
- Display Material
- TOPM
- Curing Adhesive
- Resin
- Ink
- Insulating/Heat Dissipation Accessories

### Optical Component

- Flat Optical Component
- Quartz Glass Optical Component
- Spherical/Aspherical Lens
- Polishing Slice
- Prism
- High Reflection Mirror
- Beamsplitter

### Filter

- Optical Coated Filter
- Camera Filter
- Infrared Cut-off Filter
- Colored Filter
- Blue Glass Filter
- Narrow Band Filter
- ND Filter

### Optical Lens

- Fresnel Lens
- Camera Lens
- Glass/Plastics Lens
- Optical Waveguide Lens
- AR/VR Curved Lens
- Infrared Optical Lens
- High Definition Anti-reflection Lens

### Glass

- Blue Glass
- Glass Rod
- Colored Glass
- Screen Printed Glass
- Wafer-Level Glass
- Nano-Crystalline Glass
- Ultra-Hard Coated Optical Glass

### Sapphire

- Wafer
- Square Tile
- Crystal Rod
- Sapphire Wafer
- Crystal Material
- Optical Window
- Light Guide Block

### Coating Material

- Evaporation Coating Material
- Optical Coating
- Black Coating
- Absorptive Film
- Optical Grade Nano Anti-Fog Coating

## Core Component



### Camera Module

#### Lens

- Biometric Recognition Camera
- Laptop Camera
- Ultra-short Focal Optical Lens
- Video Conference Lens
- AR/VR Lens
- Machine Vision Lens
- Projector Lens
- TOF Lens
- Chalcogenide Lens

#### Module

- 3D Sensing Lens Module
- Birdbath Optical Solution Module
- Wide-angle Camera Lens Module
- USB Camera Module
- Hybrid Anti-Vibration Module
- High-pixel Periscope Module
- 6DOF Binocular Module
- Sensor Shift

### Light Sources/Spectrum Imaging

- Full-spectrum Light Source
- Integrating Sphere Light Source
- Transmissive Light Source
- Vision Surface Light Source
- UVLED Surface Light Source
- Multispectral Imaging Module
- Light Source for Image Testing

### AR/VR

#### All-in-One Solution

- See-through All-in-One Solution
- Binocular Split-Type AR Solution
- High-definition head-mounted 3D display
- Lightweight Smart Glasses
- Industrial AR Smart Glasses
- AR Holographic Smart Goggles

#### Core Component

- AR/VR Optical Module
- Arrayed Waveguide Grating Module
- Waveguide Near-eye Display Module
- Monocular Near-eye Display Optical Module
- VR Pancake Optical Module
- AR Diffractive Waveguide
- 1D/2D Gratings Arrayed Waveguide Module

### Sensor

#### 3D Vision

- 3D dToF Sensor
- 3D Structured Light Vision Module
- 3D Binocular Stereo Vision Module
- 3D Imaging Core Component
- IoT Solution
- TOF Ranging Sensor

#### LiDAR

- Robot Vacuum LiDAR Module
- Mechanical LiDAR
- Meta-surface LiDAR Module
- Consumer LiDAR
- DTOF LiDAR
- UAV Integrated LiDAR
- Solid-state LiDAR

#### MEMS Sensor

- RGB Color Sensor
- Material Sensor
- NDIR CO2 Sensor
- 2D Electro-dynamic MEMS Mirror
- Digital Bone Conduction Microphone

#### Image Sensor

- Time-of-Flight (ToF) CMOS Image Sensor
- Image sensor for smartphone main camera (CIS) and Module
- Contact Image Sensors

### Infrared Technology

- Thermal Imaging Solution
- Pyroelectric Infrared Sensor
- Infrared Temperature Measurement Module

### Display Technology

#### Display Screen

- VR Pancake
- Optical Waveguide AR Glasses
- AR Optical Module Folding Screen
- OLED/Mini LED/Micro LED Display
- Laser TV/Projector
- Glasses-free 3D Screen

#### Display Panel/Module

- OLED
- Micro LED Display Chip
- Mini Display Module
- Glass Back Cover
- LCOS Module
- Display Optical Component

### VCSEL

- Multi-junction VCSEL Array
- Regular/Non-regular Array VCSEL Chip and Module
- VCSEL Semiconductor Laser Chip
- VCSEL Array for LiDAR
- Stacked built-in Driver VCSEL Packaging
- Next-generation Spectral Oxygen Sensing VCSEL
- Integrated Photoelectric Diode VCSEL
- VCSEL Projection Light Module

### Optical Component / Optical Assembly

- Capacitor
- Ceramic Ferrule
- Fast Connector
- Ceramic Substrate/Housing
- Package Housing

## Production & Manufacturing



### Industrial/Flexible Robot

- Online Vision Adhesive Screw Locking Robot
- Robot Polishing System
- XR Evaluation Bionic Robot
- KK Module and Linear Module

### Optical Processing Equipment

- Mirror Surface Processing of VR Eyeglass Molds
- Fully Automatic Camera Filter Film Attachment Machine
- Optical Waveguide Glue Dispenser
- Nanoimprint Machine
- Precision Arc Swing High-Speed Grinding/Polishing Machine

### Lens Assembly Equipment

- Lens Assembly Line
- High-definition Wide-angle Lens Automatic Assembly Equipment
- AR/VR AA Precision Assembly Machine
- Fully Automatic AA Equipment
- Fully Automatic Assembly Line Equipment

### Laser Processing Equipment/Lasers

- Laser Cutting Equipment
- Laser Solder Ball Welding Machine
- 3D Laser Marking Machine
- All-solid-state High-power Femtosecond Laser
- Red/Green/Blue Laser

### Automation Equipment

- EFEM Wafer Detection Platform
- Fully Automatic High-speed Online Dispensing Machine
- High-speed Vertical Forming Back-Sealing Machine
- Pad Bending
- Unmanned Intelligent Packaging Production Line

### Vacuum Coating Equipment

- Flexible Electronics Roll-to-roll Vacuum Coating Equipment
- Magnetron Sputtering Optical Coating Equipment
- Vacuum Coating Machine

### Measuring & Test Instrument

- Zeiss Industrial Microscope Series
- 3D Optical Profiler
- Compact High Precision Optical Transfer Function Measurement Instrument
- Surface Topography Measurement Instrument Testing Chamber

### Inspection Equipment

- Lens Parameter Detector
- Non-contact Detector
- Industrial Lens MTF Detector
- Lens Thickness Measurement Equipment

## Part of APE Visiting Companies from Consumer Electronics Industry

### Consumer Electronics

- |         |        |           |           |
|---------|--------|-----------|-----------|
| Apple   | TCL    | OPPO      | TINNO     |
| Sony    | HUAWEI | iFLYTEK   | BBK       |
| Samsung | Xiaomi | Transsion | Panasonic |
| Lenovo  | ZTE    | KONKA     |           |

### AR/VR

- |           |         |             |
|-----------|---------|-------------|
| VIVO      | LAWAKEN | Meta-Bounds |
| Tencent   | Xreal   | RAYNEO      |
| Pico      | DPVR    | Guangli     |
| ByteDance | Pimax   |             |

### Smart Home

- |          |         |
|----------|---------|
| SKYWORTH | GREE    |
| Gotech   | Midea   |
| NARWAL   | FONTILE |
| DAIKIN   | Hitachi |



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