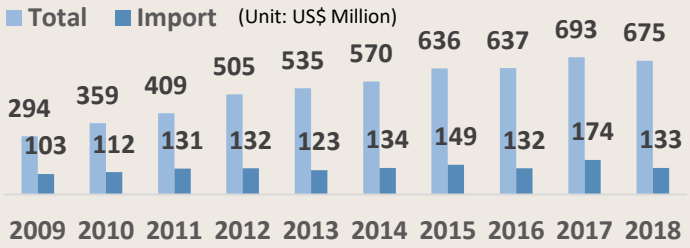
# Photonics & Optical Industry in South Korea

## Market Overview




South Korea's photonics & optical industry reached to **$675 million** in 2018, a 9.7% CAGR growth during the last 10 years.

**Optical Devices, Laser devices, Cameras, Optical lenses and films** are highly dependent on imports

## "Photonic Convergence Industry"

- Industry that combining photonic/optical technologies with the other industries' innovative technologies to enhance performance, to develops new products & services and/or to create new markets
- The Ministry of Trade, Industry and Energy released a comprehensive plan, "A Comprehensive Development Plan for Optical Convergence Technology"
- It is expected to be a key driving force for the creation of new industries, especially in the era of Industry 4.0 and this sector will dramatically increase the added value of products or services in the future.

## Promising Sectors to Collaborate

| Category | Description | Items |
|---|---|---|
| Optical ICT | Implement a high-speed, high-capacity information and communication society that connects anytime, anywhere | 5G transceiver, Distribution Network System, Optical Camera Communication |
| Lighting | Special functions for human-centered intelligence, saving, emotion, and animal/plant growth | Smart lighting, Consumer electronic lighting, Agriculture & Marine lighting |
| Medical & Bio | Smart healthcare such as eco-friendly / laser treatment using special wavelengths | Diagnostic, Treatment & Surgery, UV photoreaction equipment |
| Precision | Laser-based instrumentation/sensing industrial devices according to the application of precise systems | Sensors, leisure & display equipment, defense equipment, Industrial Lasers |
| Material & Component | Next-generation material element components that implement high efficiency, high quality, and special functions | LED device, Amorphous material, Optical Lens, Laser device, |
| Video & Information | Smart input/output functions such as AR/VR, large-capacity information storage, and touch information recognition | LCD (TV monitor, mobile) OLED (mobile wearable), AR/VR Displays, Cameras |
| Optical Equipment | Instruments that acquire, utilize, and apply image information (video and image) | CCTV, Wearable Devices (Action Cam), Driving Device (Lidar Systems) |
| Energy | Energy utilization with high efficiency, small and independent light energy | Solar Cell, Solar Module, Energy storage, Energy Generation System |

Source:
- 'A Comprehensive Development Plan for Optical Convergence Technology' by Ministry of Trade, Industry and Energy,
- Korea Association for Photonics Industry Development

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