



Raytron Unveils World's First SWLP-Based 8 $\frac{1}{4}$ µm Infrared Detector at LASER World of PHOTONICS CHINA 2026

Descrizione

COMUNICATO STAMPA - CONTENUTO PROMOZIONALE

SHANGHAI, May 6, 2026 /PRNewswire/ - At LASER World of PHOTONICS CHINA 2026, Raytron introduced the OHLE6081, the world's first second-generation uncooled infrared detector built on SWLP (wafer-level packaging) technology. The OHLE6081 represents a significant step forward in infrared imaging, making high-performance infrared detectors more compact, manufacturable, and cost-efficient. Combining an 8 $\frac{1}{4}$ µm pixel pitch, 640 $\times$ 512 resolution and an ultra-compact 11.2 $\times$ 11.2 mm design, the infrared detector is designed for seamless integration and applications such as commercial drones, industrial thermography, outdoor night vision, and ADAS, driving the next wave of compact, low-power, and scalable infrared cores.

Three Major Trends Reshaping the Infrared Industry

First, there is a clear shift toward miniaturized terminals. Applications, such as handheld thermal imagers, portable devices, and commercial drones increasingly require tighter constraints on size, weight, and power (SWaP). Second, cost-effective manufacturing is becoming essential, as traditional detectors rely on Class 100 cleanroom environments and complex integration processes, limiting scalability. Third, performance expectations continue to rise, with 640 $\times$ 512 resolution becoming the mainstream standard, alongside higher requirements for temperature measurement range and image quality.

Four Key Advantages of the OHLE 6081 for OEM integration

The next-generation 8 $\frac{1}{4}$ µm pixel design delivers higher resolution and improved detail recognition within the same size, while optimizing SWaP and cost for easier system integration.

SWLP dual-layer packaging enables assembly in standard environments without dependency on cleanroom facilities. Compatible with SMT processes, it supports high-volume production and reduces module size by approximately 74% compared with conventional 640 $\times$ 512 ceramic-packaged thermal

detectors, significantly lowering cost and shortening delivery cycles.

Based on a VOx sensor, the OHLE 6081 achieves NETD < 50 mK, delivering high-quality, low-noise imaging for precise target detection.

Covering -40Â°C to 800Â°C, the detector features an ultra-compact 11.2 Ã 11.2 mm size, <1 g weight, and <120 mW power consumption, enabling integration into commercial drones, handheld devices, automotive, and industrial systems.

About Raytron

Raytron is a leading provider of infrared thermal imaging solutions and the developer of the world's first 8¼m and 6¼m infrared detector chips. The company continues to drive innovation across infrared detectors, modules, cameras, and industrial solutions, providing incremental values for customers through technological advancement.

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