



## Press Release

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### Ultra-flat chip-scale package photodiodes for scanner systems

First Sensor presents the new X7 PIN photodiodes for the detection of ionizing radiation in container and baggage scanner OEM applications. The photodiodes are optimized for scintillator luminescence detection in the visible wavelength range.

The X7 photodiodes feature an ultra-flat chip-scale package (CSP) with a footprint nearly the same size as the actual semiconductor die. The chip is mounted on the carrier with its active area and electrical contacts facing down, using the latest flip-chip technology. Therefore, the chip is illuminated from the backside. This enables an ultra-flat photodiode surface without fragile bond wires, which is ideal for the precision mounting of a scintillation crystal. By means of solder bumps and surface mount technology (SMT), multiple X7 photodiode elements can be assembled to create larger linear or matrix arrays with very high fitting accuracy. First Sensor develops and manufactures custom specific arrays, sensors and complete systems for OEM customers worldwide.

Important features of the new X7 photodiodes:

- Optimized for scintillator luminescence
- Ultra-flat chip-scale package (CSP)
- Photodiode surface without bond wires for scintillator mounting
- Accurately fitting linear or matrix array assemblies

Typical applications of the X7 photodiodes include contact-free and non-destructive inspection and security systems such as container scanners, cargo scanners and baggage scanners.



#### About First Sensor

First Sensor is a leading supplier of sensor solutions in the Medical, Industrial, Mobility, and Electronic Engineering & Manufacturing Services fields. First Sensor develops and manufactures high-quality, customer-specific sensor solutions for the detection of light, radiation, pressure, flow, level and acceleration. The company produces in-house and along the value adding-chain from component to system level. In 2013, First Sensor achieved annual sales of €109 million. Employing more than 750 people, the company is represented at 18 locations around the world.

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