



SONY
SenSWIR
technology guide

SONY

SWIR Image Sensor Technology SenSWIR™

OVERVIEW

As manufacturers in various industries continue to seek higher productivity, there is growing interest in sensing both in visible and invisible light range.

In IMX990 and IMX991, SenSWIR™ technology has enabled Sony to overcome challenges in pixel miniaturization to offer sensors that are compact, high-resolution, and capable of imaging from visible light to SWIR (Short Wavelength Infra-Red) light range. IMX990 and IMX991 are global shutter sensors with a digital output allowing for many features and functionality in industrial camera applications such as ROI and trigger mode.

The advances in performance and functionality introduced by the IMX990 and IMX991 pave the way for the development of SWIR industrial cameras and inspection equipment for a diverse range of applications such as inspection, identification, and measurement.

TECHNICAL FEATURES

Higher resolution and smaller systems from the industry's smallest pixels, at 5µm

Advantages of the sensors promise to expand SWIR sensing applications. The sensors' higher resolution offers higher inspection precision, and smaller cameras afford greater freedom in installation.

Broad imaging (0.4-1.7µm) from a single sensor that extends to the visible spectrum

Inspection that once required multiple cameras to cover visible and SWIR wavelengths can now be performed with a single unit. Such broad coverage expands both the type of objects that can be inspected and the type of inspection available. System costs can be reduced, and faster image processing can increase throughput.

Enhanced capabilities from digital output

Unlike the analog output that most SWIR sensors are limited to, the sensors achieved the same functionality as the current industrial CMOS image sensors by supporting digital output. Analog sensors require developers to implement an ADC or other functionality for industrial equipment on the camera. In contrast, the new sensors already include this functionality, which saves time and effort in camera development and makes it easier to develop versatile cameras.

Sony's SenSWIR™ sensors are available
through **Macnica ATD Europe**.



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Contact information:

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