

OS05A20

5-Megapixel Product Brief



First Nyxel® CMOS Image Sensor Brings Superior 5MP Image Quality to Video Surveillance Cameras Day or Night

The 5-megapixel OS05A20 is the world's first CMOS image sensor to implement Nyxel® technology, OMNIVISION's breakthrough near-infrared (NIR) technology that allows image sensors to see better and farther under low- and no-light conditions. By using Nyxel® technology and a 2.0-micron pixel, the OS05A20 PureCel® image sensor has the unique ability to capture high-quality, high-resolution day or night, making it ideally suited for professional surveillance systems.

Nyxel® technology combines thick-silicon pixel architectures with extended deep trench isolation (DTI) to improve quantum efficiency (QE) up to 3x for 850 nm sensitivity and up to 5x for 940 nm sensitivity, while maintaining all other image-quality metrics. These improvements deliver unrivaled image quality, extended image-detection range and a reduced light-source requirement, leading to lower power consumption.

Available in a 1/2.7-inch optical format, the OS05A20 is capable of capturing full-resolution 2688 x 1944 video at 60 frames per second (fps), 1080p full high definition (HD) video at 120 fps, and 720p HD video at 180 fps. The sensor comes in a chip scale package (CSP).

Applications

- Security cameras
- Action cameras
- High resolution consumer cameras

Features

- **Active array size:** 2688 x 1944
- **Maximum image transfer rate:**
  - 2688 x 1944: 60 fps
- **Power supply:**
  - Core: 1.2V
  - Analog: 2.8V
  - I/O: 1.8V
- **Output interfaces:** Up to 4-lane MIPI/LVDS serial output interface
- **Output formats:** 10/12-bit RGB RAW
- **Lens size:** 1/2.7"
- **Pixel size:** 2.0 µm x 2.0 µm

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