



OG05B

5-Megapixel Product Brief



2.2-micron BSI Global Shutter CMOS Image Sensor for Industrial Machine Vision Applications

The OG05B global shutter (GS) sensor features the industry's smallest 2.2 μm backside illuminated (BSI) pixel for high resolution in a compact design, replacing the larger 2.5 μm frontside-illuminated (FSI) GS sensors traditionally used in machine vision cameras.

This high-resolution, small-format GS sensor provides the highest shutter efficiency available on the market with the ability to capture high-speed moving objects clearly and accurately at high frame rates, ideal for industrial barcode scanners, robotics, and intelligent transportation systems (ITS). It also features high sensitivity, low noise and enhanced NIR quantum efficiency (QE) for industry-leading low-light performance.

The OG05B is a 5-megapixel (MP) resolution GS CMOS image sensor in a 1/2.53-inch optical format (OF). It has a fast frame rate of 60 fps and high shutter efficiency of 106 dB.

The OG05B features OMNIVISION's Nyxel® near-infrared (NIR) technology, which boosts QE to 700-1050 nm, enabling the capture of brighter images from farther away; PureCel®Plus-S stacked-die architecture for best-in-class image sensor performance; and CSP package technology for the smallest possible solution.

The OG05B supports 4-lane MIPI & DVP.

Applications

- Machine vision cameras
- Logistics applications
- Industrial bar code scanning
- Robotics

Features

- **Active array size:** 2592 x 1944
- **Maximum image transfer rate:**
 - 2592 x 1944: 60 fps
- **Power supply:**
 - Analog: 2.8V
 - Digital: 1.2V
 - I/O pads: 1.8V
- **Output interfaces:**
MIPI CSI-2, parallel 10-bit DVP
- **Output formats:** 10-bit RAW
- **Lens size:** 1/2.53"
- **Pixel size:** 2.2 μm x 2.2 μm

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