



OG05C

5-Megapixel Product Brief



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

The OG05C global shutter (GS) CMOS image sensor features a 3.45-micron (μm) back-side illuminated (BSI) pixel for high sensitivity, industry-leading shutter efficiency and excellent low-light performance for applications including factory automation (FA), robotics, logistics, industrial barcode scanners, and intelligent transportation systems (ITS). The advanced performance in a smaller pixel enables it to replace larger 4.8 μm pixel front-side illuminated (FSI) sensors traditionally used in machine vision products.

The OG05C10 (color) and OG05C1B (monochrome) are 5-megapixel BSI GS sensors that feature OMNIVISION's industry-leading technologies, including Nyxel® near-infrared (NIR) and PureCel®Plus-S.

The OG05C comes in a 1/1.443-inch optical format (OF) and supports 120 frames per second (fps) with 106 dB shutter efficiency. 20Ke- full-well capacity (FWC) increases high dynamic range (HDR) with low noise level, resulting in clearer pictures. On-chip dual conversion gain (DCG™) HDR extends dynamic range, reproducing motion artifact-free and low-noise images in challenging lighting conditions.

The GS sensor fits the standard C-mount lens and supports both LVDS and MIPI interfaces.

Applications

- Intelligent transportation systems (ITS)
- Factory automation (FA)
- Machine vision cameras
- Industrial bar code scanning
- Robotics

Features

- **Active array size:** 2464 x 2064
- **Maximum image transfer rate:**
 - 2464 x 2064: 120 fps (10-bit)
 - 2464 x 2064: 60 fps (12-bit)
 - 2464 x 2064: 60 fps (12/14-bit DCG™ HDR mode)
- **Power supply:**
 - Analog: 2.8V
 - Digital: 1.2V
 - I/O pins: 1.8V
- **Output interfaces:** 4/8-lane LVDS/4-lane MIPI
- **Output formats:** 10/12/14-bit RAW
- **Lens size:** 1/1.443"
- **Pixel size:** 3.45 μm x 3.45 μm

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