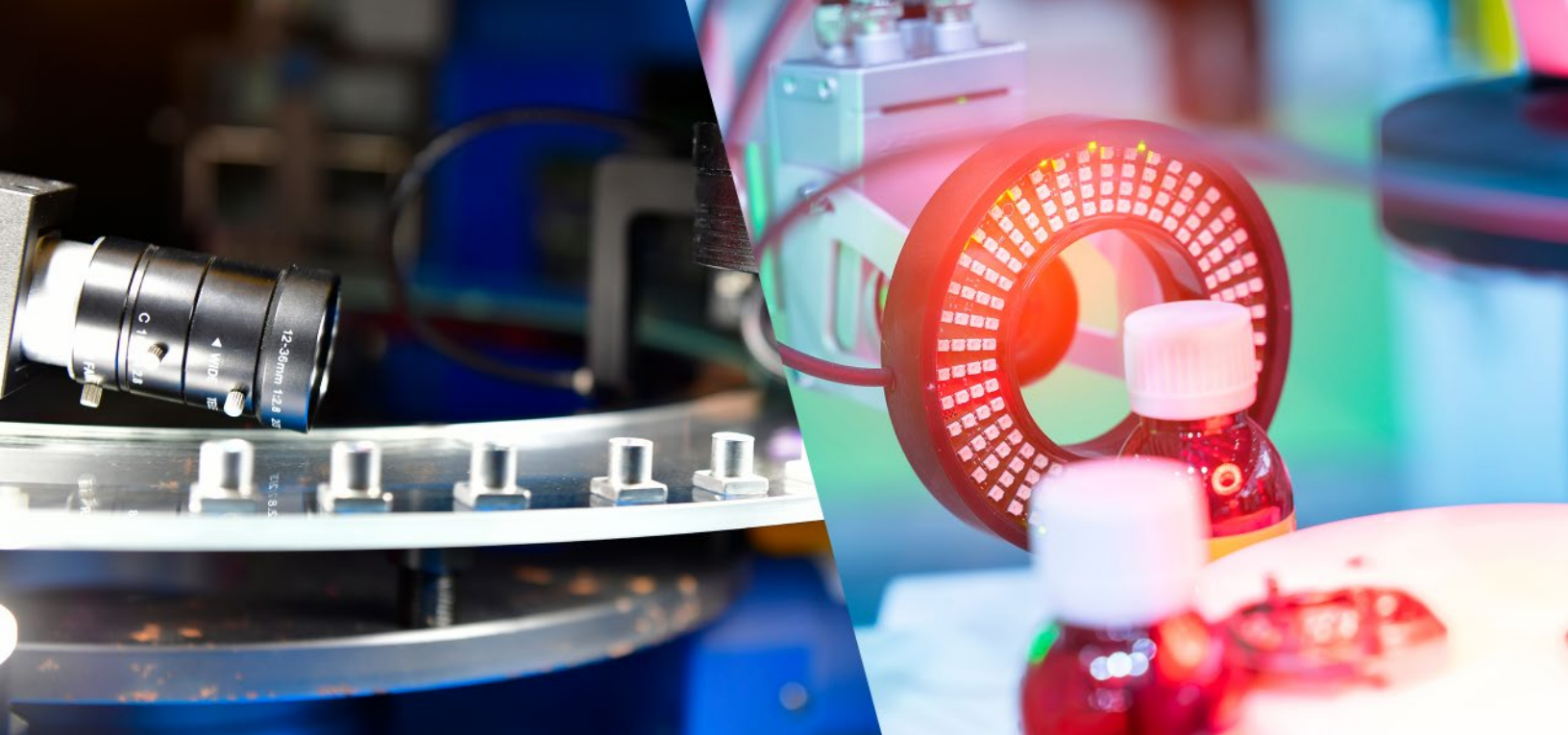




OG02C

2-Megapixel Product Brief



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

The new OG02C 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, and industrial barcode scanners. 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 OG02C10 (color) and OG021B (monochrome) are 2-megapixel BSI GS sensors that feature OMNIVISION's industry-leading

technology including Nyxel® near-infrared (NIR) and PureCel®Plus-S. The OG02C comes in a 1/2.53-inch optical format (OF) and supports 300 frames per second (fps) with 106 dB shutter efficiency. 20Ke- full-well capacity (FWC) enables higher 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 and S-mount lens and supports both LVDS and MIPI interfaces.

Applications

- Factory automation (FA)
- Machine vision cameras
- Industrial bar code scanning
- Robotics

Features

- **Active array size:** 1632 x 1264
- **Maximum image transfer rate:**
 - 1632 x 1264: 300 fps (8-bit)
 - 1632 x 1264: 240 fps (10-bit)
 - 1632 x 1264: 180 fps (12-bit)
 - 1632 x 1264: 120 fps (DCG HDR 12-bit)
- **Power supply:**
 - Analog: 2.8V
 - Digital: 1.2V
 - I/O pads: 1.8V
- **Output interfaces:** 1/2/4/8-lane LVDS, 4-lane MIPI
- **Output formats:** 10/12-bit RAW
- **Lens size:** 1/2.53"
- **Pixel size:** 3.45 μm x 3.45 μm

Version 1.1, July 2025