The OS05B CMOS image sensor, which combines the best-in-class pixel technology and quantum efficiency (QE) in a 5 megapixel (MP) design for professional and high-end consumer security cameras, such as industrial and factory surveillance systems, webcams, and high-end baby monitors. The OS05B has a 1/2.78-inch optical format and its 2.0-micron BSI pixel is based on the PureCel® Plus technology. It also features OMNIVISION’s Nyxel® near-infrared (NIR) technology for crisp, clear images in low-light conditions.

The OS05B has selective conversion gain – high conversion gain increases sensitivity and reduces the readout noise level while achieving optimum SNR under low-light conditions, and low conversion gain achieves a higher full well capacity in bright conditions. It captures high-resolution video at 60 frames per second with two-exposure staggered HDR. The OS05B supports MIPI and LVDS interfaces.

Find out more at www.ovt.com.
Applications

- security camera
- action camera
- high resolution consumer cameras

Technical Specifications

- active array size: 2592 x 1944
- maximum image transfer rate @ 10-bit:
  - 2592 x 1944: 60 fps
  - 1920 x 1080: 80 fps
  - 1280 x 720: 240 fps
  - 640 x 480: 360 fps
- temperature range:
  - operating: -30°C to +85°C
  - junction temperature: +60°C
- lens size: 1/2.78" (linear)
- scan mode: progressive
- pixel size: 1.998 µm x 1.998 µm
- image area: 5210.784 µm x 3916.08 µm
- programmable controls for:
  - frame rate
  - mirror and flip
  - cropping
  - windowing
- supports output formats:
  - 12-bit/10-bit RAW RGB
- supports images sizes:
  - 5MP (2592x1944)
  - 4MP (2592x1944)
  - 1080p (1920x1080)
  - 720p (1280x720)
  - VGA (640x480)
- supports 2x2 binning
- standard serial SCCB interface
- up to 4-lane MIPI serial output interface (supports maximum speed up to 1500 Mbps/lane * 4-lane, or 1200 Mbps/lane * 2-lane)
- staggered HDR RAW data output
- programmable I/O drive capability
- built-in temperature sensor
- MIPI serial output interface (1-lane, 2-lane, or 4-lane)
- image quality controls:
  - defect pixel correction
  - automatic black level calibration

Ordering Information

- OS05B10-A45A-001A-Z (color, lead-free)
- 45-pin CSP

Supports output formats

- 10/12-bit RGB RAW

Product Features

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