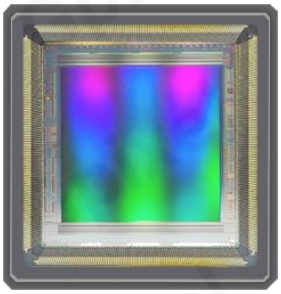
GMAX0505 Product Flyer

25MP GLOBAL SHUTTER IMAGE SENSOR

Designed with small 2.5μm charge domain global shutter pixel, **GMAX0505** offers the high resolution of 25 Megapixels within 1.1" optical format. Despite its small pixel pitch, **GMAX0505** achieves more than 65% peak QE and excellent angular response thanks to the latest light pipe technology. In addition, with optimized tungsten shielding structure on top of the pixel's memory node, the sensor's shutter efficiency is more than 80dB. **GMAX0505** supports 10bit and 12bit output, and the frame rate is up to 150fps.



The sensor is assembled in a ceramic Land Grid Array (LGA) package, allowing easy integration and mass production. The superior performance and the cost-effective packaging of **GMAX0505** offer camera manufactures great advantage over various applications.

Key Features

- 2.5 um Global Shutter pixel
- High resolution GS in 1.1"optical format
- Optimized tungsten shielding structure
- NIR enhanced – Red Fox
- High speed and Good PLS
- Pin-compatible with GMAX2505 and GMAX2509

Applications

- High Resolution Industrial Inspection
- Machine Vision
- Motion Capture
- Industrial bar coding
- Aerial mapping

Gpixel

Sensor Specifications

Resolution	26 MP - 5120(H) x 5120(V)	Optical format	1.1"
Pixel size	2.5 μm x 2.5 μm	Photosensive area	12.8 mm x 12.8 mm
Shutter type	Global shutter	Parasitic Light Sensitivity	< - 80 dB (angular dependence)
Peak QE	65.5% @ 500 nm	Angular response	> 13° (80% response)
Full well capacity	6.5k e- @ PGA gain x1.0	Temporal noise	1.6 e- @ 12-bit, PGA gain x5 3.4 e- @ 10-bit, PGA gain x2.5
Max. SNR	38.1 dB @ PGA gain x1.0	Dynamic Range	65.8 dB @ 12-bit, PGA gain x2.5 61.4 dB @ 10-bit, PGA gain x2.5
Dark Current	1.0 e-/pixel/s @ 30 °C	ADC	10/12 bit
Maximum frame rate	150 fps @ 10 bit 42 fps @ 12 bit	Output format	48 pairs of Sub-LVDS
Power consumption	<1.1 W @ 12 bit <1.5 W @ 10 bit	Max. Data rate	46.08 Gbps
Supply voltage	3.3 V /1.3 V for analog 1.8 V - 3.3 V for IO 1.3 V for digital	Channel multiplexing	48/24/16/12/8/6/4/2
Chroma	Bayer RGB, Mono, Red Fox	Package	226 pins LGA 22.3 mm x 22.4 mm

Ordering Information

Sensor Part No.	Description
GMAX0505-DVM-HLT-AU1	Monochrome, Sealed glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 1
GMAX0505-DVM-HLT-AU2	Monochrome, Sealed glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 2
GMAX0505-DVM-NLT-AU1	Monochrome, Sealed glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 1
GMAX0505-DVM-NLT-AU2	Monochrome, Sealed glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 2
GMAX0505-DVC-HLT-AU1	Bayer RGB, Sealed glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 1
GMAX0505-DVC-HLT-AU2	Bayer RGB, Sealed glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 2
GMAX0505-DVC-NLT-AU1	Bayer RGB, Sealed glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 1
GMAX0505-DVC-NLT-AU2	Bayer RGB, Sealed glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 2
GMAX0505-DVM-HLT-AR2	Monochrome, Removable glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 2
GMAX0505-DVM-NLT-AR2	Monochrome, Removable glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 2
GMAX0505RF-DNM-HLT-AU1	Red Fox, Sealed glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 1
GMAX0505RF-DNM-HLT-AU2	Red Fox, Sealed glass lid, High speed, 150 fps @ 10bit 48 x Sub-LVDS, Grade 2
GMAX0505RF-DNM-NLT-AU1	Red Fox, Sealed glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 1
GMAX0505RF-DNM-NLT-AU2	Red Fox, Sealed glass lid, Normal speed, 42 fps @ 12bit 16 x Sub-LVDS, Grade 2

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