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.
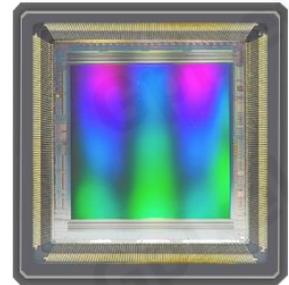
Key Features

- 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

info@gpixel.com
www.gpixel.com

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Sensor Specifications

Resolution	5120 x 5120	Optical format	1.1"
Pixel size	2.5μm × 2.5μm	Photo-sensitive area	12.8mm × 12.8mm
Shutter type	Global shutter	Quantum efficiency	> 65%
Full well capacity	6.5 ke⁻	Shutter efficiency	1/10000
Dark noise	1.6 e⁻	Dark current	<1e⁻/p/s @ 25℃
Dynamic range	61.4dB @ 10bit 65.8dB @ 12bit	Frame rate	150fps @ 10bit 42fps @ 12bit
Output interface	48 pairs of sub-LVDS	Channel multiplexing	48/24/16/12/8/6/4/2
ADC	10/12bit	Max. Data rate	46.08 Gbps
Chroma	Mono & Color	Power consumption	1458mW @ 10bit / 1042mW @ 12bit
I/O voltage	1.8V – 3.3V	Package	226 pins LGA 22.3mmx23.35mm

Ordering Information

Sensor Part No.

GMAX0505-DVM-HLT-AU1 High speed, 150fps, 10bit, mono, Grade 1	**GMAX0505-DVM-HLT-AU2** High speed, 150fps, 10bit, mono, Grade 2
GMAX0505-DVM-NLT-AU1 Normal speed, 42fps, 12bit, mono, Grade 1	**GMAX0505-DVM-NLT-AU2** Normal speed, 42fps, 12bit, mono, Grade 2
GMAX0505-DVM-HLT-AR2 High speed, 150fps, 10bit, mono, Grade 2, Removable	**GMAX0505-DVM-NLT-AR2** Normal speed, 42fps, 12bit, mono, Grade 2, Removable
GMAX0505-DVC-HLT-AU1 High speed, 150fps, 10bit, color, Grade 1	**GMAX0505-DVC-HLT-AU2** High speed, 150fps, 10bit, color, Grade 2
GMAX0505-DVC-NLT-AU1 Normal speed, 42fps, 12bit, color, Grade 1	**GMAX0505-DVC-NLT-AU2** Normal speed, 42fps, 12bit, color, Grade 1
GMAX0505RF-DNM-NLT-AU1 Normal speed, 42fps, 12bit, mono, Red Fox, Grade 1	**GMAX0505RF-DNM-NLT-AU2** Normal speed, 42fps, 12bit, mono, Red Fox, Grade 2
GMAX0505RF-DNM-HLT-AU1 High speed, 150fps, 10bit, color, Red Fox, Grade 1	**GMAX0505RF-DNM-HLT-AU2** High speed, 150fps, 10bit, color, Red Fox, Grade 2

EVK Part No.

EVA-0505-HC10 (10bit) / EVA-0505-NC12 (12bit)
USB interface, 3 stacked PCB boards

Contact Gpixel HQ

Building #5, Optoelectronic
Information Industrial Park,
#7691 Ziyou Road,
Changchun, Jilin, China.

Tel: +86-0431-85077785
Email: info@gpixel.com
Website: www.gpixel.com