

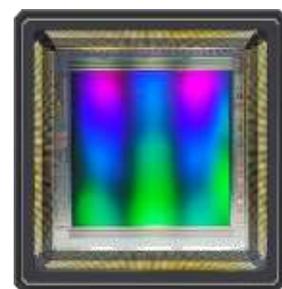
# GMAX0505 Product Flyer



## 25MP GLOBAL SHUTTER IMAGE SENSOR

Designed with small 2.5 $\mu$ m 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  $\mu$ m 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

## Sensor Specifications

Resolution	5120 x 5120	Optical format	1.1"
Pixel size	2.5 $\mu$ m x 2.5 $\mu$ m	Photo-sensitive area	12.8mm x 12.8mm
Shutter type	Global shutter	Quantum efficiency	> 65%
Full well capacity	6.5 ke <sup>-</sup>	Shutter efficiency	1/10000
Dark noise	1.6 e <sup>-</sup>	Dark current	<1e <sup>-</sup> /p/s @ 25°C
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

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