

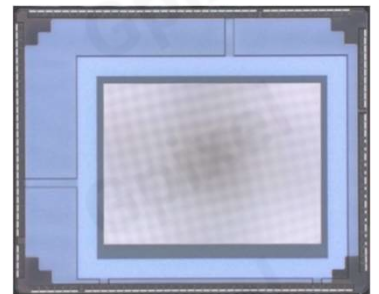
GTOF0503 Product Flyer



VGA ITOF GLOBAL SHUTTER CMOS IMAGE SENSOR

GTOF0503 is a VGA featuring a 5 μ m 3-tap state-of-the-art iToF pixel incorporating a pixel array with a resolution of 640 x 480 pixels. The BSI technology provides excellent sensitivity at NIR wavelengths. In addition, the wafer stacking enables very high modulation frequencies of up to 165 MHz and 30 depth frames per second which results in industry-leading depth accuracy at short, mid and long-range distances even in challenging ambient light conditions by using pulse modulation iToF technique. On-chip binning further increases SNR for low light image environments.

Advanced features such as multiple acquisition modes, depth with single and dual frequency, low-power standby modes and an industry standard MIPI CSI-2 interface, allow very versatile and flexible operation, providing a cost-effective all-in solution, making this product the ultimate choice for various 3D imaging applications.



Key Features

- 5 μ m square pixels
- 3-tap iToF Global Shutter pixel
- High NIR response
- High Modulation Frequencies up to 165 MHz
- Up to 85% demodulation contrast
- MIPI CSI-2 interface

Applications

- Machine Vision
- Automated Guided Vehicle
- Industrial Automation
- Bin Picking
- Logistics
- Smart Factory

Sensor Specifications

Resolution	640 x 480	Optical format	1/4"
Pixel size	5 μ m x 5 μ m	Photo-sensitive area	3.2 mm x 2.4 mm
Shutter type	3-tap iToF Global Shutter	Quantum efficiency	>20% @ 940 nm (TBD)
Full well capacity	10ke ⁻	ADC	11 Bit
Dark noise	<7 e ⁻	Modulation contrast	>80% at 3 ns (TBD)
Dynamic range	>60 dB @10bit	Depth Frame rate	Dual frequency: 30 fps Single frequency: 60fps
Output interface	(max)4-lane CSI-2 MIPI RAW12 1.6 Gbps 2-lane default	Region of Interest	Up to 4 ROI vertically
Chroma	Mono	Power consumption	\pm 330 mW
Power supply	2.8V / 1.8V / 1.2V/ 1.3V	Package	139 pads

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