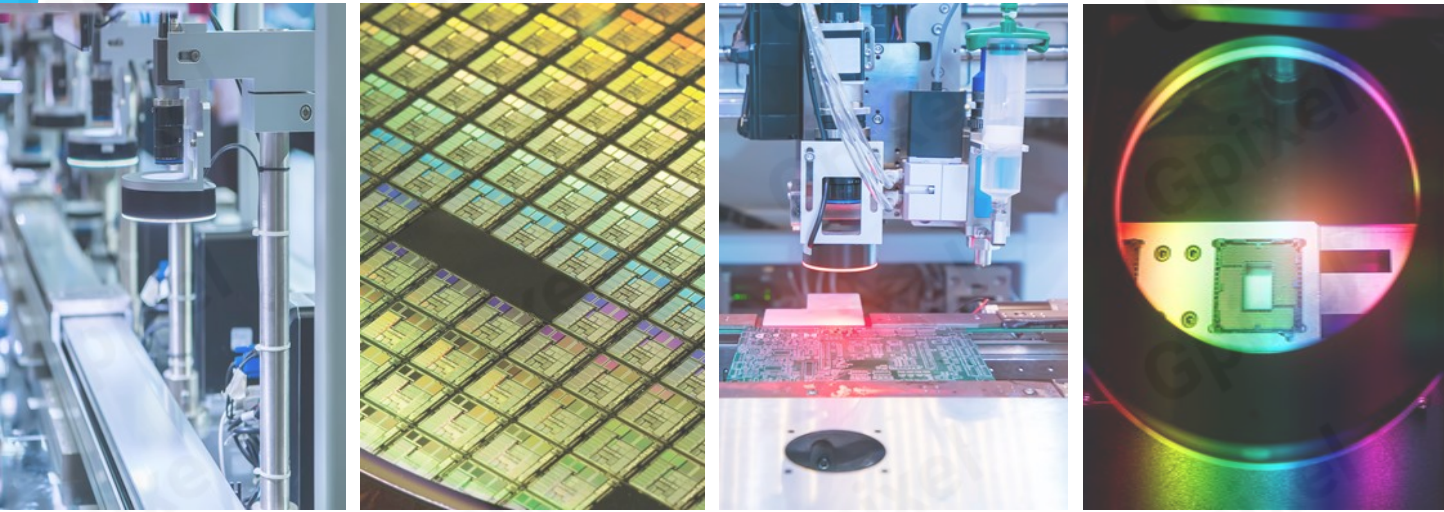


# GLT5009BSI Product Flyer

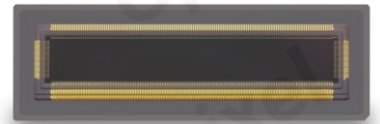


## 9072 X 256 STAGES BSI CMOS TDI IMAGE SENSOR

GLT5009BSI is a Backside illuminated (BSI), Time delay integration (TDI), charge domain CMOS image sensor with  $5\mu\text{m}$  pixels and 9072 effective resolutions. The sensor has two photosensitive bands, 256 stages and 32 stages respectively enabling a high dynamic range (HDR) imaging mode, which is designed to meet the needs of high speed and low light applications by maximizing sensitivity from the ultraviolet to the near infrared with state-of-art BSI scientific CMOS technology.

GLT5009BSI Sensor integrates an on-chip sequencer, supports channel multiplexing and selectable 2 scan directions (Forward and Reverse). It is assembled in a 269-pin  $\mu\text{PGA}$  ceramic package.

GLT5009BSI comes in 2 spectrum variants: a standard variant with a broad spectral response and a dedicated DUV version.



### Key Features

- True charge domain Time Delay Integration
- Back Side Illuminated (BSI) pixels
- High Sensitivity
- High Speed: up to 608 kHz line rate
- $\text{QE}@266\text{nm} \geq 50\%$

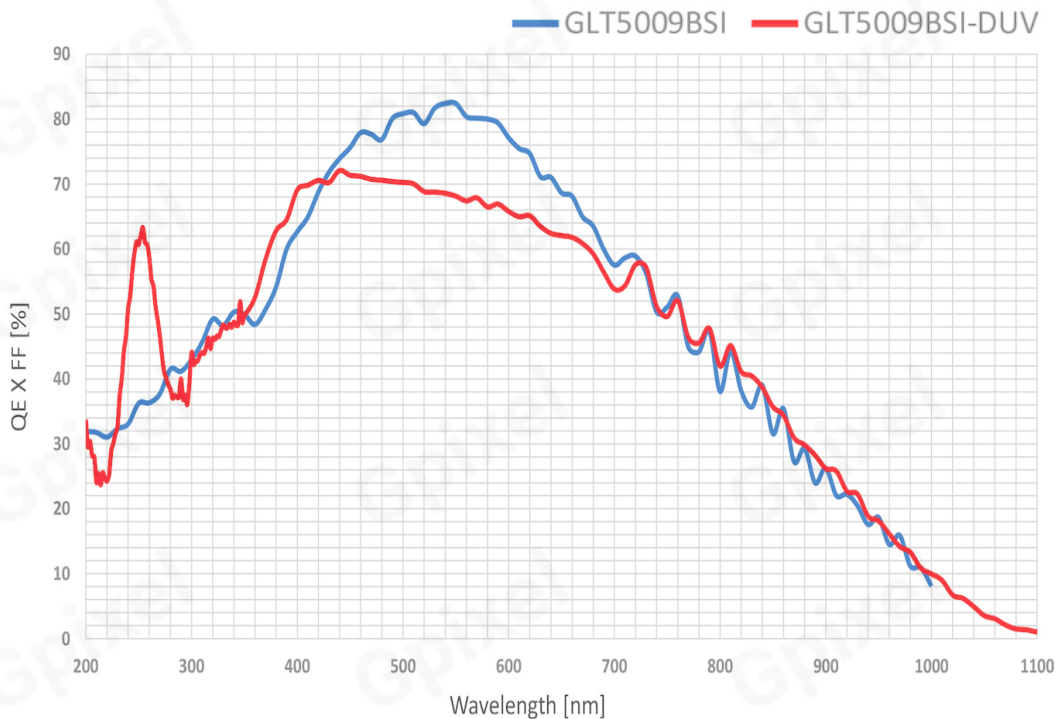
### Applications

- FPD Inspection
- PCB Inspection
- Wafer (Semiconductor) Inspection
- Fluorescence Imaging
- Digital Pathology

# Sensor Specifications

Resolution	9072 (H) x (256 + 32) (V)	Optical format	45.36 mm
Pixel size	5 $\mu\text{m}$ x 5 $\mu\text{m}$	Photo-sensitive area	P1: 45.36 mm x 1.28 mm, P2: 45.36 mm x 0.16 mm
Shutter type	Global shutter	Quantum efficiency	STD: 82.40% @ 550 nm DUV: 61% @ 248 nm
Full well capacity	15.8ke <sup>-</sup> @ 10bit 15.9 ke <sup>-</sup> @ 12bit	Temporal noise	10.5 e <sup>-</sup> @ 10 bit, 6.2 e <sup>-</sup> @ 12 bit
Dark Current	~8 ke <sup>-</sup> /pix/sec @ 30°C	Dynamic range	63.5 dB @ 10 bit, 68.1 dB @ 12bit
Max. Line rate	608 kHz @ 10 bit, 300 kHz @ 12 bit	Output format	84 ch Sub-LVDS
Data rate	74.304 Gbps	Channel multiplexing	84/42/21/12/6/3
Chroma	Mono	Power consumption	< 5.8 W @12 bit 300 kHz, < 8.2 W@10 bit 608 kHz
I/O voltage	5 V (analog), 1.8 V (ADC), 1.8 V (digital)	Package	$\mu$ PGA 269 pins (61.5 mm x 20.0 mm)

## Quantum Efficiency



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