

GSENSE6510BSI

10.2 MP SCIENTIFIC CMOS IMAGE SENSOR

GSENSE6510BSI is a 3200 x 3200 (10.2 MP) resolution image sensor with industry-standard 6.5 μm x 6.5 μm pixel and large 29.4 mm diagonal for increased throughput in microscopy applications compared to 19 mm sCMOS devices. With a peak QE of 95% and read noise of 0.7 e^- median, the sensor achieves exceptional signal-to-noise in extreme low light applications.

The sensor offers five imaging modes. In 12 bit mode, the sensor delivers 62.3 dB of dynamic range with a read noise floor of 1.3 e^- (88 fps). In 11 bit HDR mode, the sensor uses dual-gain readout to achieve 78.8 dB of dynamic range with a read noise of 1.8 e^- at the same 83 fps. Additionally, the sensor offers two high-speed modes, an 8 bit mode reaching 500 fps and an 11 bit mode reaching 166 fps. A 12 bit low noise mode achieves 0.7 e^- read noise.



Key Features and Benefits

- ▶ BSI
- ▶ High Sensitivity
- ▶ Low Noise
- ▶ Dual Gain HDR
- ▶ High Frame Rate

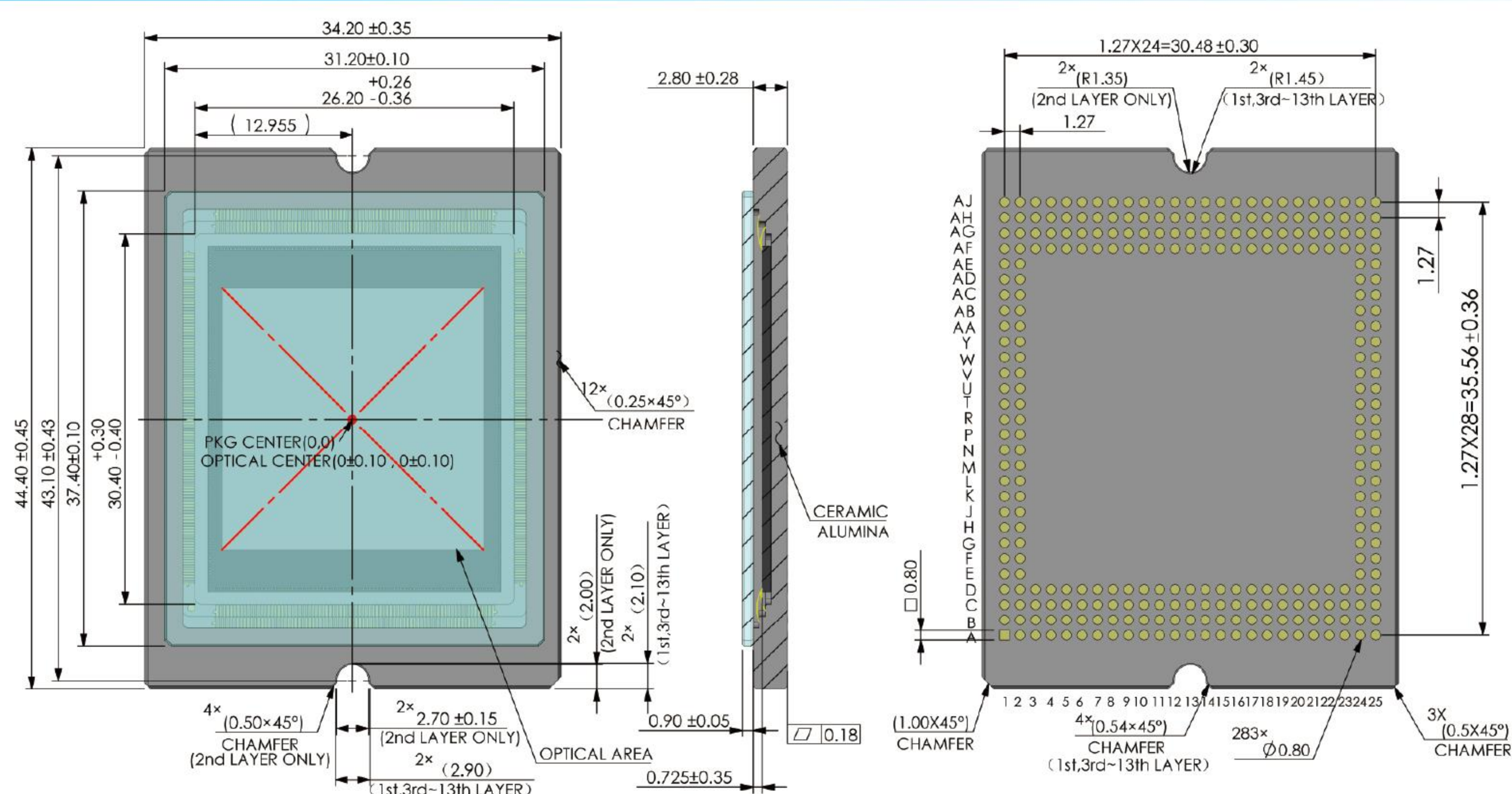
Application

- ▶ Life Sciences
- ▶ Microscopy

Specifications

Nr of Active Pixels	3200 (H) x 3200 (V)	Optical Format	1.9"
Pixel Size	6.5 μm x 6.5 μm	Photosensitive Area	20.8 mm x 20.8 mm
Shutter Type	Rolling Shutter	Peak QE	95% (610 nm)
Full Well Capacity	21 ke ⁻	Temporal Noise	0.7 e ⁻ (12 bit, 16 x CMS)
Dark Current	0.2 e ⁻ /pixel/s (-10°C)	Dynamic Range	78.8 dB (11 bit HDR)
Max Frame Rate	500 fps (8 bit)	Output Format	72对LVDS
Max. Data Rate	69.12 Gbps (8 bit)	ADC	8/11/12 bit
Chroma	Mono	Power Consumption	< 5 W (8 bit) < 2.7 W (12 bit)
Supply Voltage	3.6 V (analog) 2 V (digital)	Package	284 pins LGA (44.4 mm x 34.2 mm)

Package Drawing



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