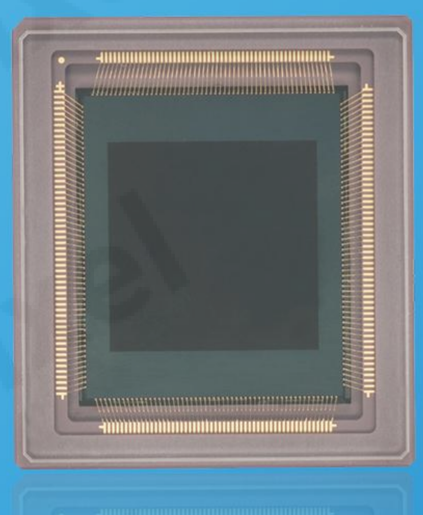
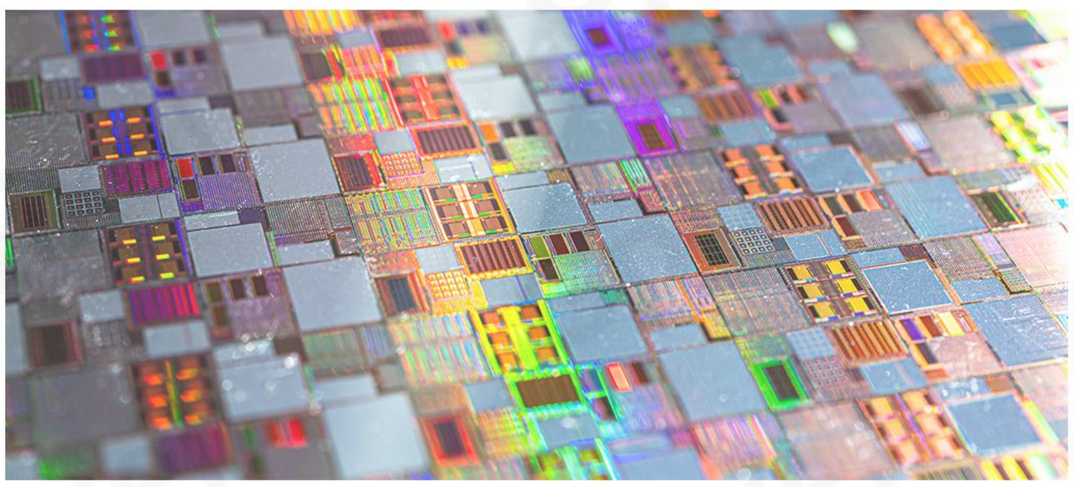
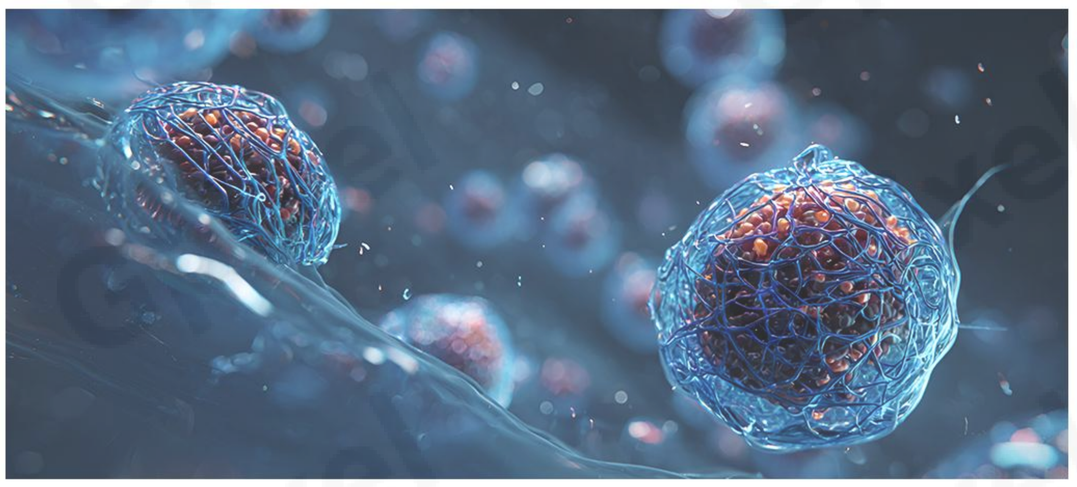


GSENSE6504BSI

4 MP BSI Rolling Shutter sCMOS IMAGE SENSOR

GSENSE6504BSI is a 2048 x 2048 (4.2 MP) resolution backside-illuminated scientific CMOS image sensor with industry-standard 6.5 µm x 6.5 µm rolling shutter pixels, 18.8 mm diagonal, and peak QE of 95%. In low-noise mode at -20℃, the sensor achieves a read noise floor of 0.43 e^- rms at 98 fps while delivering 98.7 dB of dynamic range using the on-chip dual-gain output. With a noise histogram peak of 0.28 e^-, the sensor enables single photon detection in the low-noise mode. In high-speed mode, the sensor delivers its maximum frame rate of 291 fps. Under -42℃ die temperature, sensor dark current is only 0.009 e^-/s/p. The sensor package is mechanically identical to GSENSE2020BSI for easy integration into existing camera platforms.





Key Features and Benefits

- BSI
- Extra Low Noise 0.43 e^- rms (-20℃)
- High Speed 291 fps
- Peak QE 95%

Application

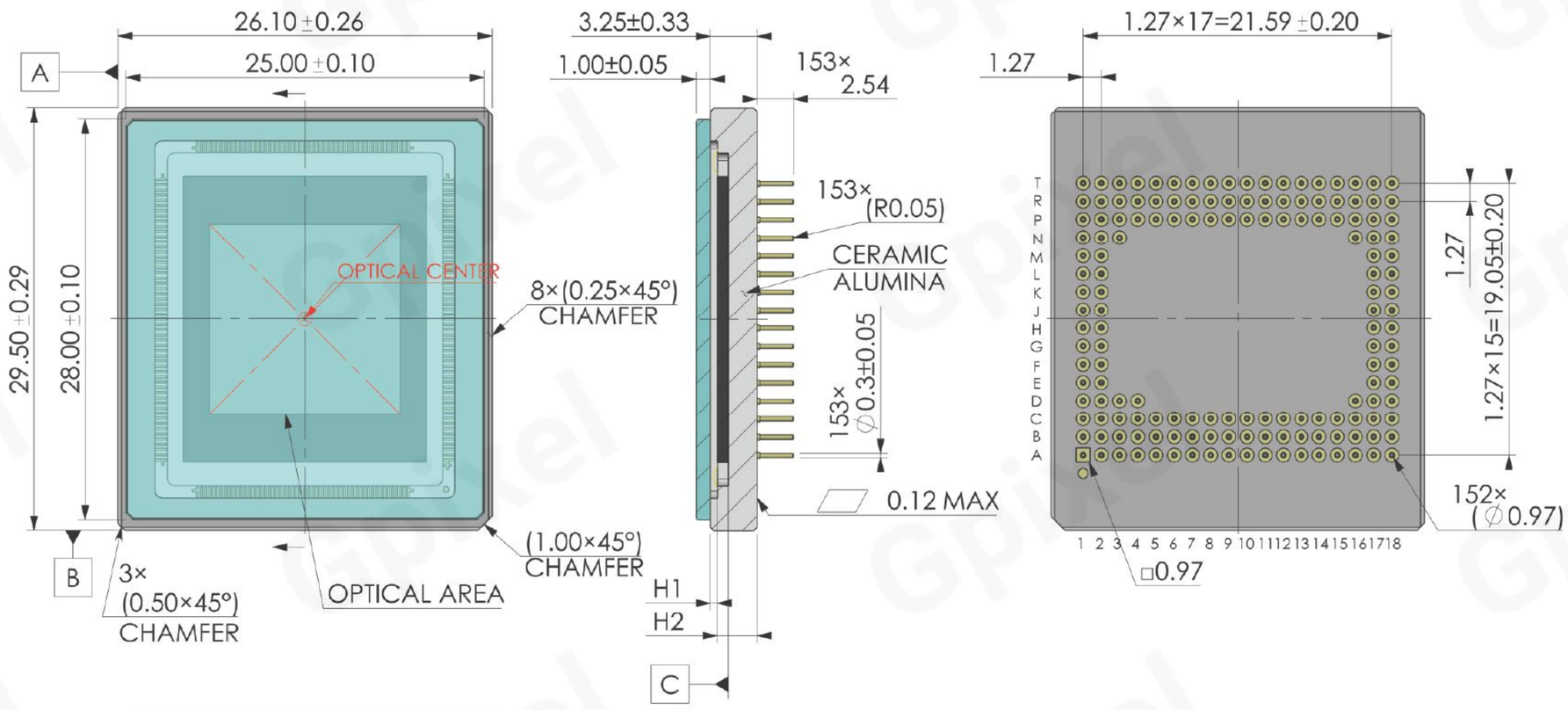
- Life Sciences
- Microscopy
- Microluminescence Imaging

info@gpixel.com www.gpixel.com

Specifications

Nr of Active Pixels	2048 (H) x 2048 (V)	Optical Format	1.2 " / 18.8 mm
Pixel Size	6.5 µm × 6.5 µm	Photosensitive Area	13.3 mm x 13.3 mm
Shutter Type	Rolling Shutter	Peak QE	95% (450 nm)
Full Well Capacity	53 ke^-	Temporal Noise	0.5 e^- (rms) (Low Noise) 0.9 e^- (rms) (HDR)
Dark Current	0.009 e^-/pixel/s (-42°C)	Dynamic Range	98.7 dB (Low Noise) 95.4 dB (HDR)
Max Frame Rate	98 (Low Noise) 169 (HDR) 291 (STD)	Output Format	16 x Sub-LVDS
Max. Data Rate	19.2 Gbps	ADC	12 bit
Chroma	Mono	Power Consumption	2 W
Supply Voltage	3.3 V (Analog) 1.5 V (Digital) 1.8 V – 3.3 V (IO)	Package	153 pins µPGA (26.1 mm x 29.5 mm)

Package Drawing



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Disclaimer: The product information and pictures in this flyer are for reference only. For the latest information please visit www.gpixel.com.

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