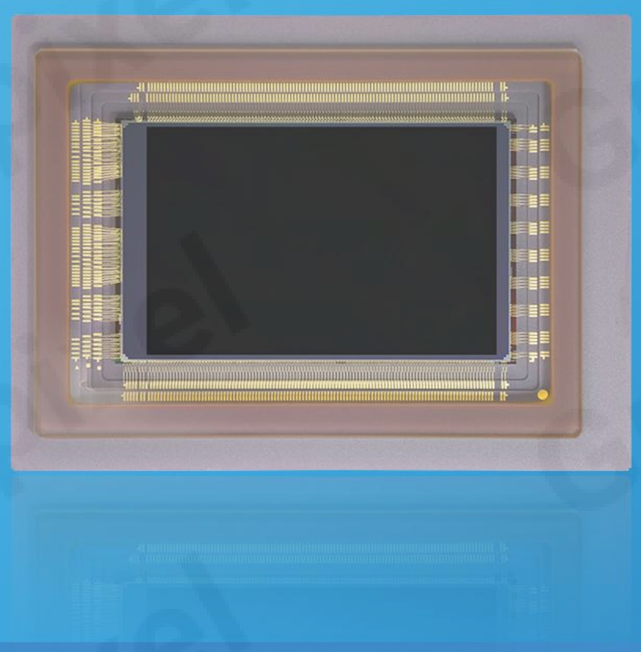


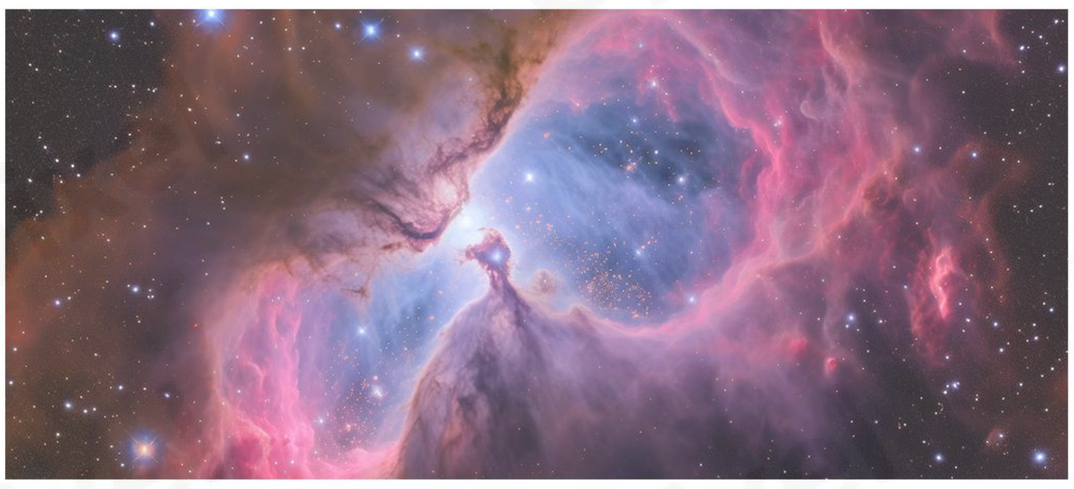
GSENSE3243BSI

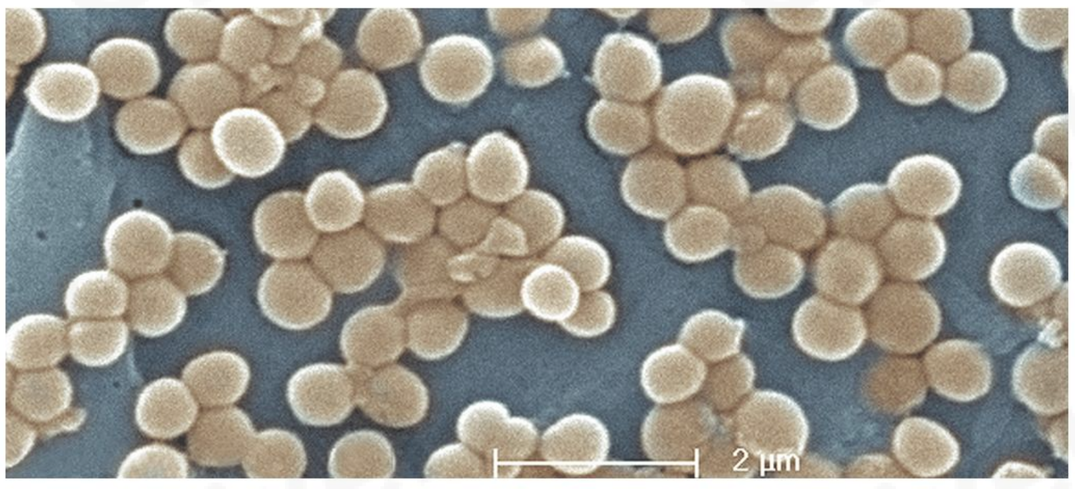
43 MP ROLLING SHUTTER CMOS IMAGE SENSOR

GSENSE3243BSI is a 31 mm diagonal stacked BSI image sensor designed with 3.2 µm pixels. The full resolution of the sensor can be read out at a bit depth of 14 bits and a maximum frame rate of 100 fps using an on-chip high speed serial interface or at 50 fps over 32 sub LVDS channels operating at 1.05 Gbps/channel.

The image sensor has a peak quantum efficiency over 80%, a wide angle response, read noise of 3.3 e^- at full speed, and a dark current less than 1 e^- /pixel/second (0 °C).

The sensor incorporates multiple features to enhance dynamic range including the dual-gain output, on-chip compression HDR function and digitally programmable piecewise linear HDR feature. The sensor achieves a dynamic range of 75 dB in dual gain mode and up to 104 dB using the more advanced HDR features.





Key features and Benefits

- Stacked BSI
- High Sensitivity
- Low Noise
- High Dynamic Range
- Multi-Slope HDR
- Dual Gain HDR

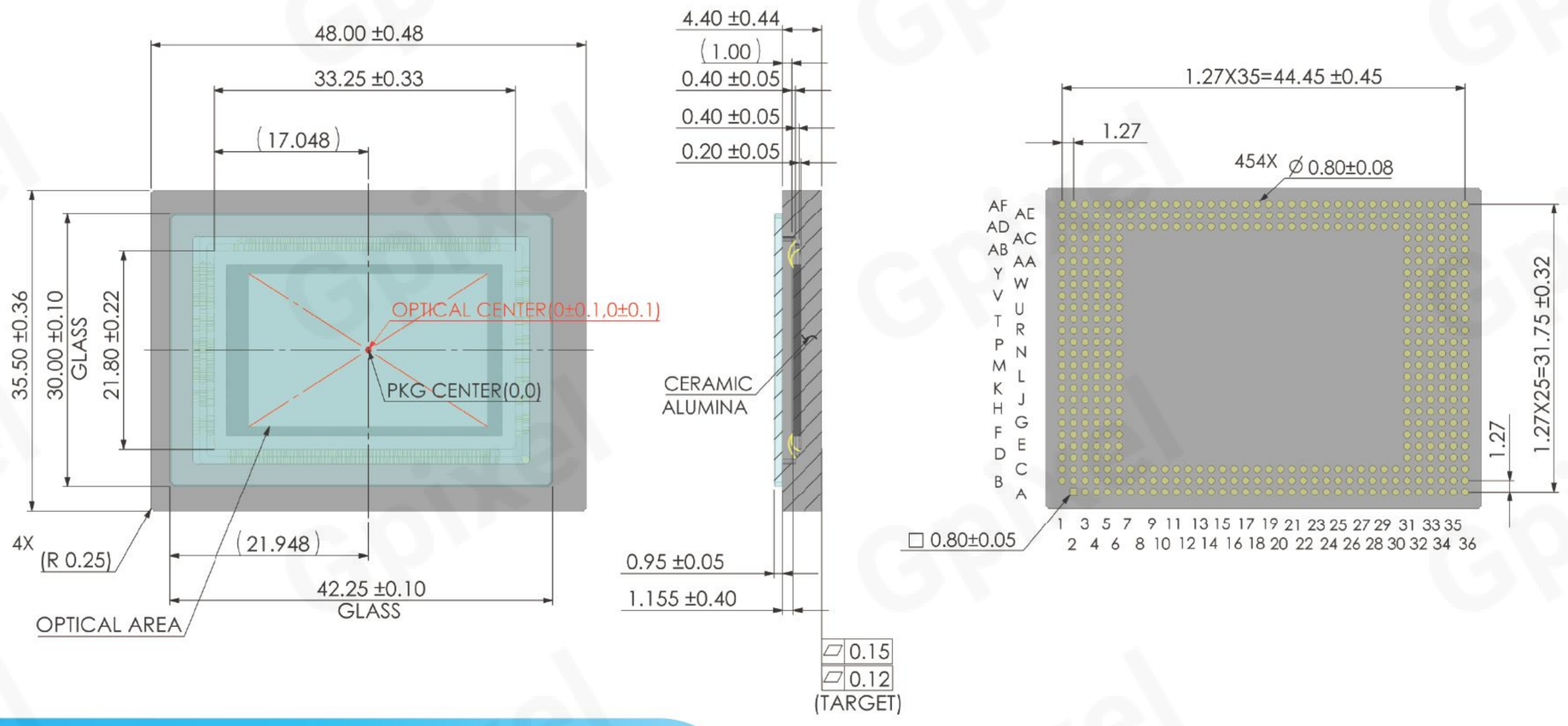
Application

- Spectroscopy
- Life Sciences
- Astronomy
- Microscopy

Specifications

Nr of Active Pixels	8192 (H) x 5232 (V)	Optical Format	APS-C
Pixel Size	3.2 μm × 3.2 μm	Photosensitive Area	26.2 mm (H) x 16.7 mm (V)
Shutter Type	Rolling Shutter	Peak QE	80% (550 nm,Mono)
Full Well Capacity	21 ke^-(single exposure) 85 ke^-(multi-exposure)	Temporal Noise	3.3 e^- (STD,HG) 4.4 e^- (HDR)
Dark Current	1 e^-/pixel/s(0 °C)	Dynamic Range	77.2 dB 83.8 dB HDR multi-exp
Max Frame Rate	100 fps	Output Format	32 ch LVDS 16 ch GSI
Max. Data Rate	84 Gbps	ADC	14 bit
Chroma	Mono	Power Consumption	2-4 W
Supply Voltage	3.3 V,1.8 V,1.25 V -2.2 V,4.5 V	Package	455 pins PGA (48 mm x 35.5 mm)

Package Drawing



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