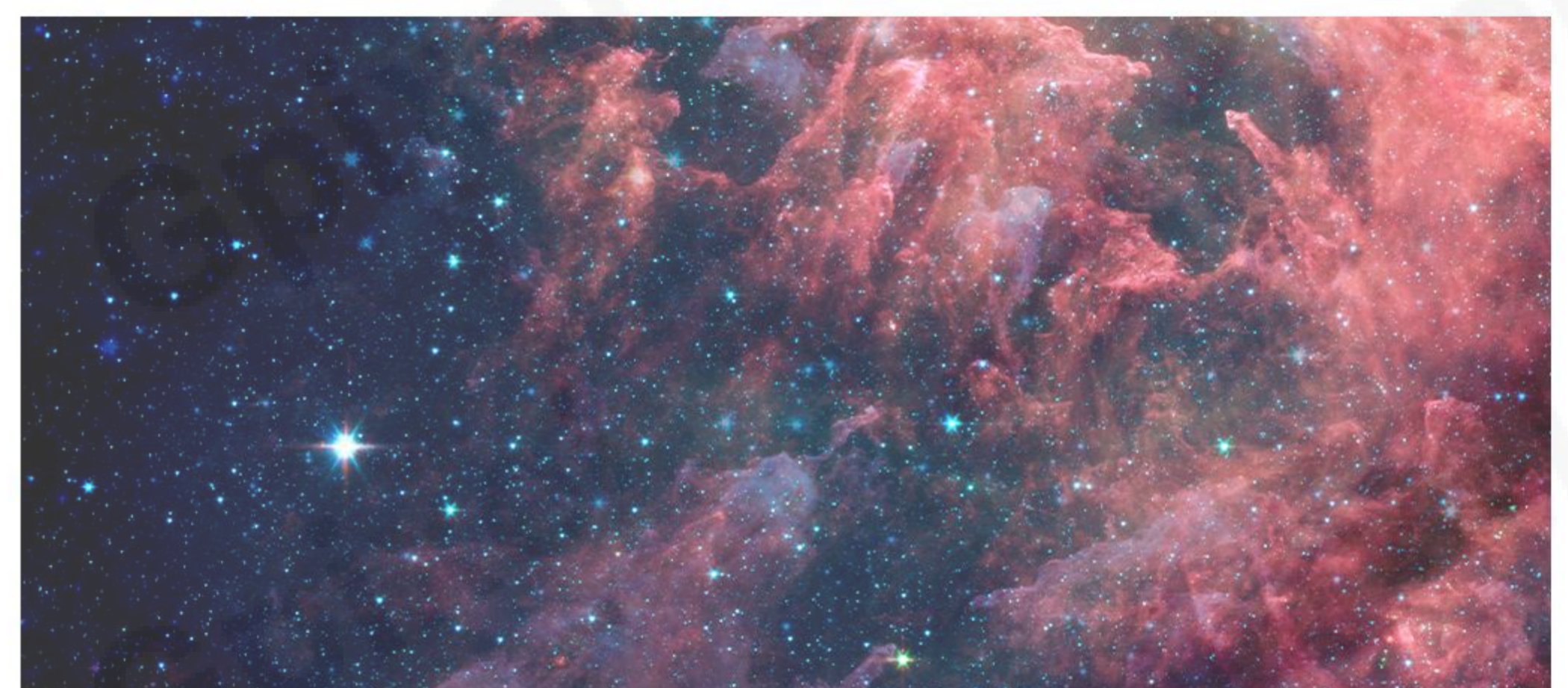




# GSENSE64105BSI

105MP 6.4  $\mu\text{m}$  SCIENTIFIC CMOS IMAGE SENSOR

The **GSENSE64105BSI** is a 104.8 megapixel large format scientific CMOS image sensor featuring a 6.4  $\mu\text{m}$  pixel pitch and a 65.5 mm  $\times$  65.5 mm square photosensitive area, enabling exceptionally wide field capture. Designed for the most demanding scientific applications, **GSENSE64105BSI** offers ultra low read noise of 1.25  $e^-$ , high intra scene dynamic range of 98.8 dB, and a peak quantum efficiency of 75% (550 nm), providing excellent sensitivity for faint signal detection. Its dual gain HDR architecture delivers stable linearity across bright and dim regions, while the sensor's super high resolution enables enhanced reconstruction of fine spatial. With a dark current of just 6.28  $e^-/s/pix$  (20  $^{\circ}\text{C}$ ), 24 lane high speed LVDS output, and a power efficient <1.6 W design, **GSENSE64105BSI** is ideally suited for wide field astronomy, precision photometry, large area spectroscopy, and advanced scientific instrumentation that requires both extreme sensitivity and large format fidelity.



## Key Features and Benefits

- ▶ High Resolution of 104.8M with 6.4  $\mu\text{m}$  Rolling Shutter Pixel
- ▶ 75% Peak QE (550 nm)
- ▶ Low Noise 1.25  $e^-$
- ▶ FWC up to 110  $ke^-$
- ▶ Support HDR Mode

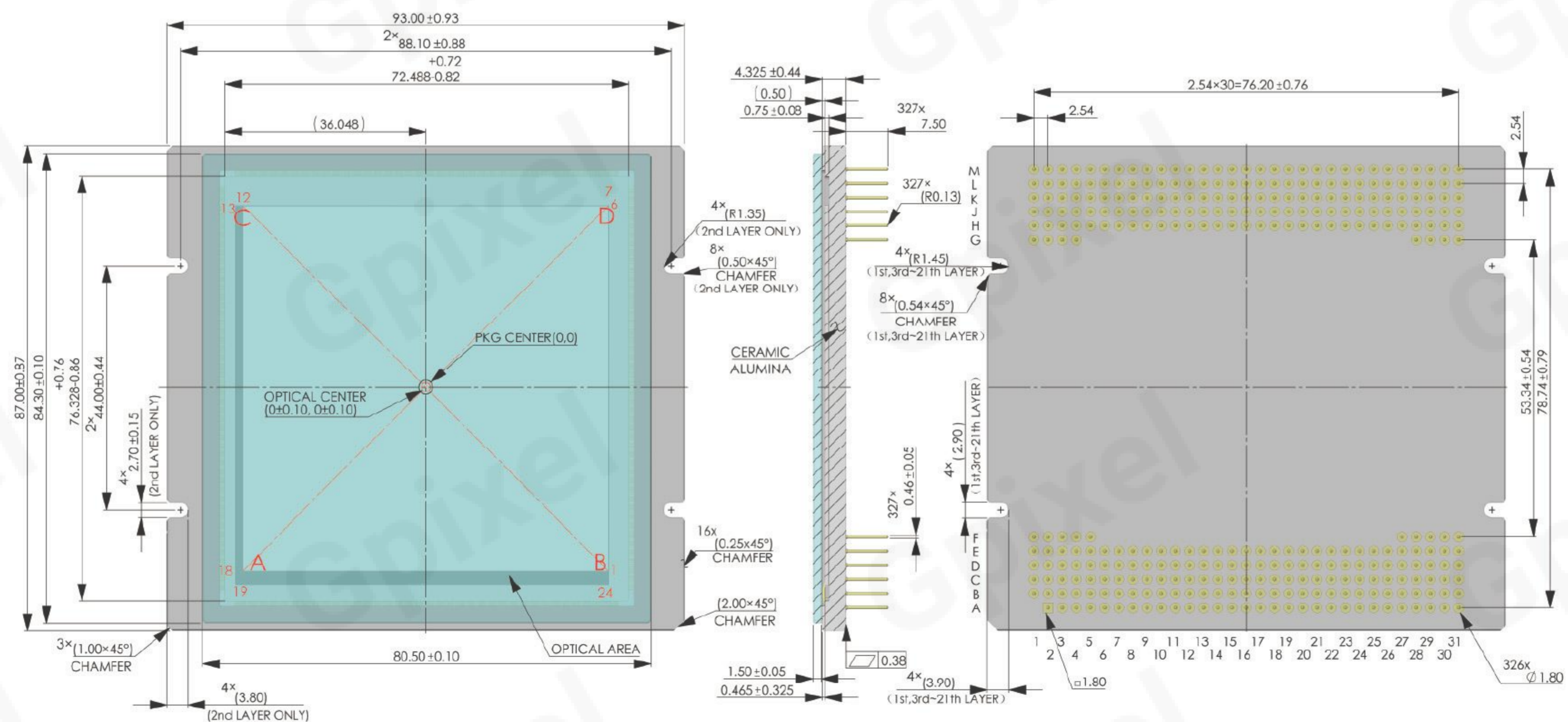
## Application

- ▶ Life Sciences
- ▶ Astronomy

## Specifications

Nr of Active Pixels	10240 (H) × 10240 (V)	Optical Format	5.79 " / 92.7 mm
Pixel Size	6.4 μm x 6.4 μm	Photosensitive Area	65.536 mm x 65.536 mm
Shutter Type	Rolling Shutter	Peak QE	75% (550 nm)
Full Well Capacity	110 ke <sup>-</sup> (12 bit HDR, 13 bit LG) 11.5 ke <sup>-</sup> (13 bit HG)	Temporal Noise	1.25 e <sup>-</sup> (12 bit HDR) 16 e <sup>-</sup> (13 bit LG) 1.7 e <sup>-</sup> (13 bit HG)
Dark Current	6.28 e <sup>-</sup> /pixel/s (20°C)	Dynamic Range	98.8 dB (12 bit HDR) 76.9 dB (13 bit LG) 76.6 dB (13 bit HG)
Max Frame Rate	1.25 fps	Output Format	24 pairs of LVDS
Max. Data Rate	6.72 Gbps	ADC	12/13 bit
Chroma	Mono	Power Consumption	<1.6 W
Supply Voltage	3.3 V (Analog) 1.5 V (Digital) 3.3 V (IO)	Package	327 pins PGA (93.0 mm x 87.0 mm)

## Package Drawing



## Contact Gpixel

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