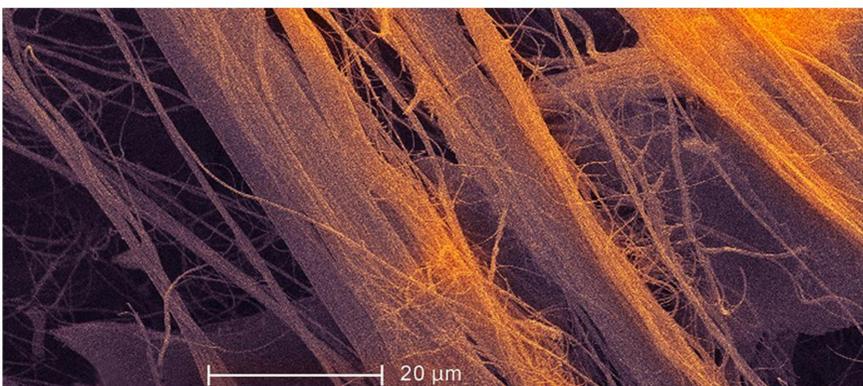


# GSENSE400BSI

## 4 MP ROLLING SHUTTER IMAGE SENSOR

**GSENSE400BSI** is a 4 Megapixels resolution BSI CMOS image sensor with 11  $\mu\text{m}$  pixel size. As the first backside illuminated scientific CMOS image sensor in the world, GSENSE400BSI features low readout noise of  $1.6 e^-$ , high dynamic range of 94 dB, and low dark current of  $0.27 e^-/s/pix$  at deep cooling of  $-40^\circ\text{C}$ . With special ARC, the sensor provides peak of 95% (570 nm). This image sensor has two operation modes, STD mode in 48 fps or HDR mode which is optimized for high dynamic range (HDR) applications with half frame rate. In HDR mode, the sensor achieves a linear dynamic range of 95 dB. These features make GSENSE400BSI ideal for high-end scientific imaging, corona detection, astronomy, spectroscopic, and forensic imaging applications.



### Key Features and Benefits

- ▶ Backside Illumination Scientific CMOS
- ▶ Peak QE of 95%
- ▶ Low Noise, Low Power for Long Exposure Modes

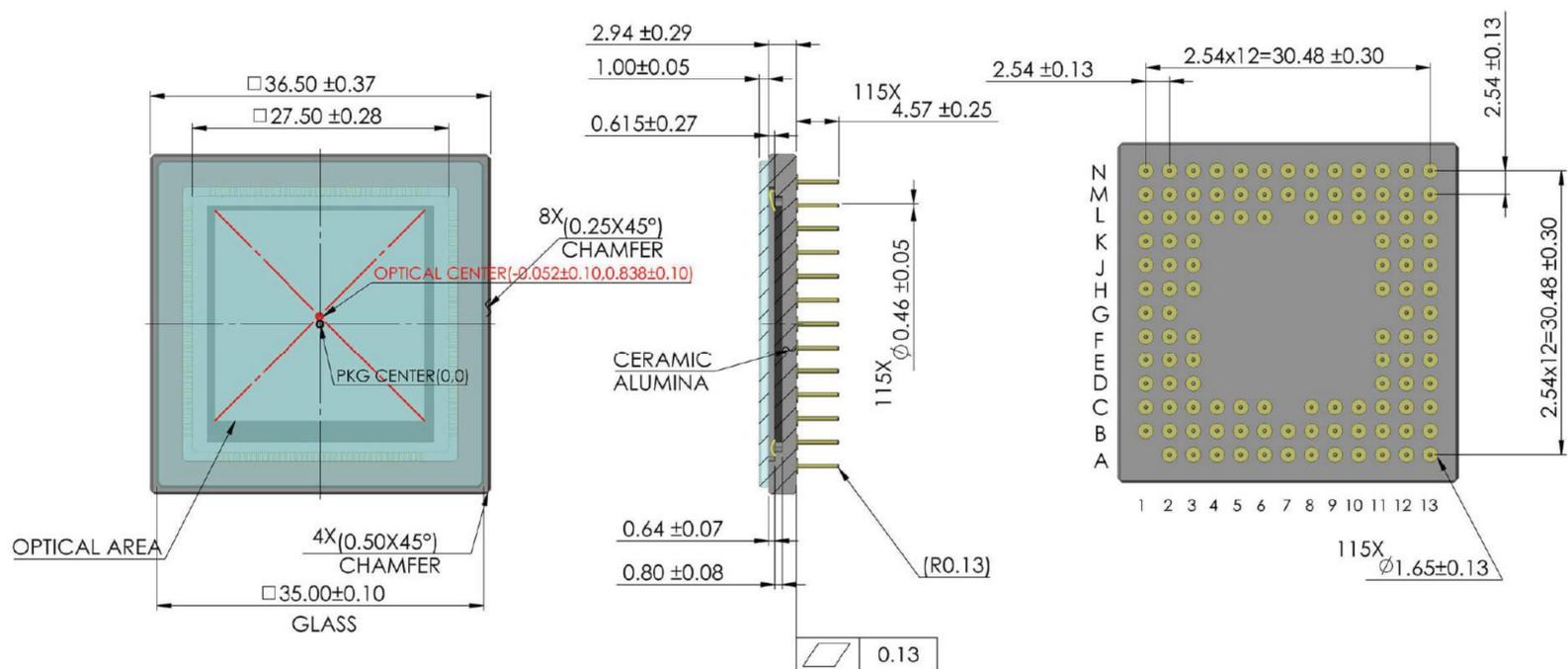
### Application

- ▶ Spectroscopy
- ▶ Life Sciences
- ▶ Astronomy
- ▶ Microscopy
- ▶ X-Ray

## Specifications

Nr of Active Pixels	2048(H) x 2048(V)	Optical Format	2"
Pixel Size	11 $\mu\text{m}$ x 11 $\mu\text{m}$	Photosensitive Area	22.5 mm x 22.5 mm
Shutter Type	Rolling Shutter	Peak QE	95% (570 nm)
Full Well Capacity	91 ke <sup>-</sup>	Temporal Noise	1.6 e <sup>-</sup>
Dark Current	0.27 e <sup>-</sup> /pixel/s (-40°C)	Dynamic Range	95 dB (HDR)
Max Frame Rate	48 fps (STD)	Output Format	8 ch LVDS
Max. Data Rate	2.4 Gbps	ADC	12 bit
Chroma	Mono	Power Consumption	<650 mW
Supply Voltage	3.3 V (analog) 1.8 V (digital)	Package	115 pins PGA (36.5 mm x 36.5 mm)

## Package Drawing



## Contact Gpixel

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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](http://www.gpixel.com).  
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