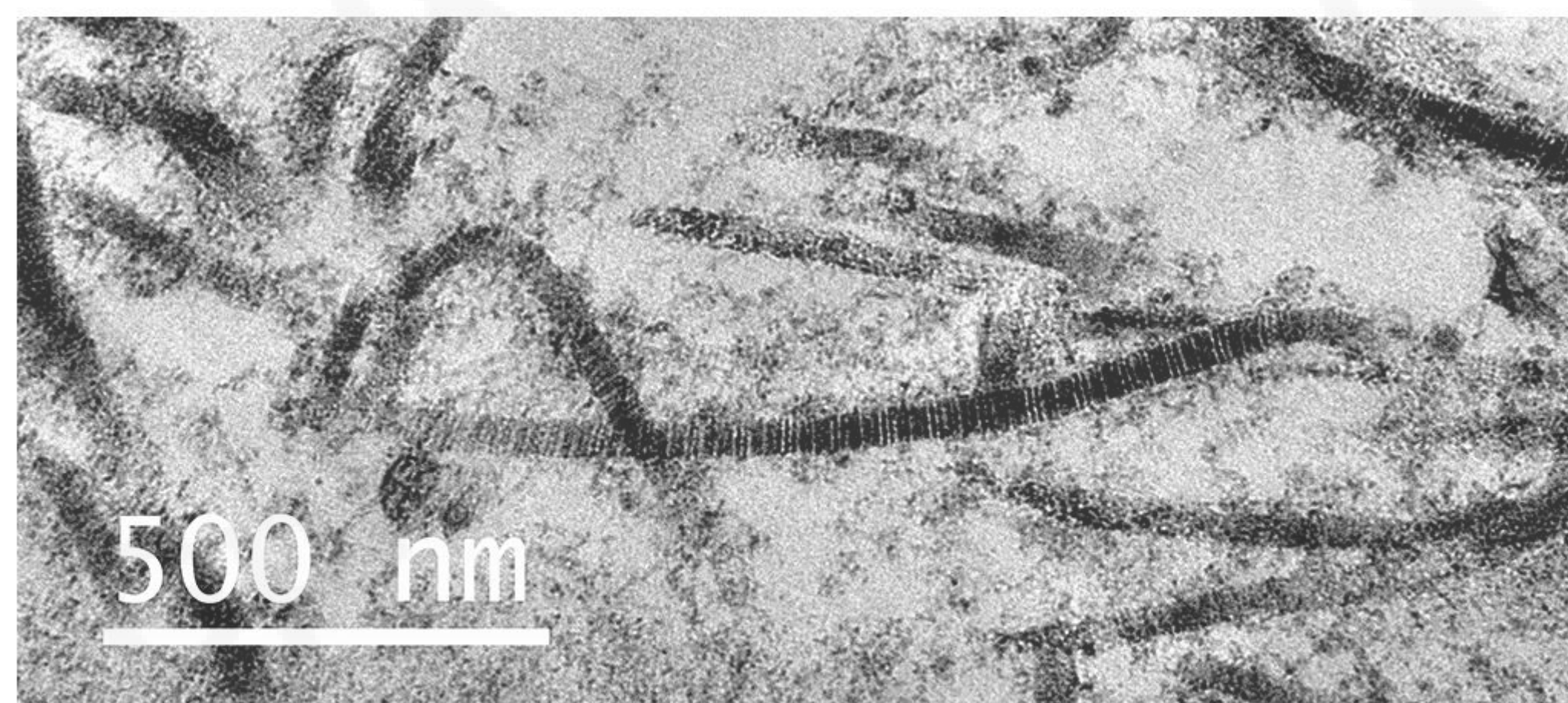




# GSENSE4040BSI

16.8 MP ROLLING SHUTTER IMAGE SENSOR

**GSENSE4040BSI** 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  $\text{e}^-$ , high dynamic range of 94 dB, and low dark current of 0.27  $\text{e}^-/\text{s}/\text{pix}$  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

- ▶ Large Format BSI Scientific CMOS
- ▶ Low Readout Noise

## Application

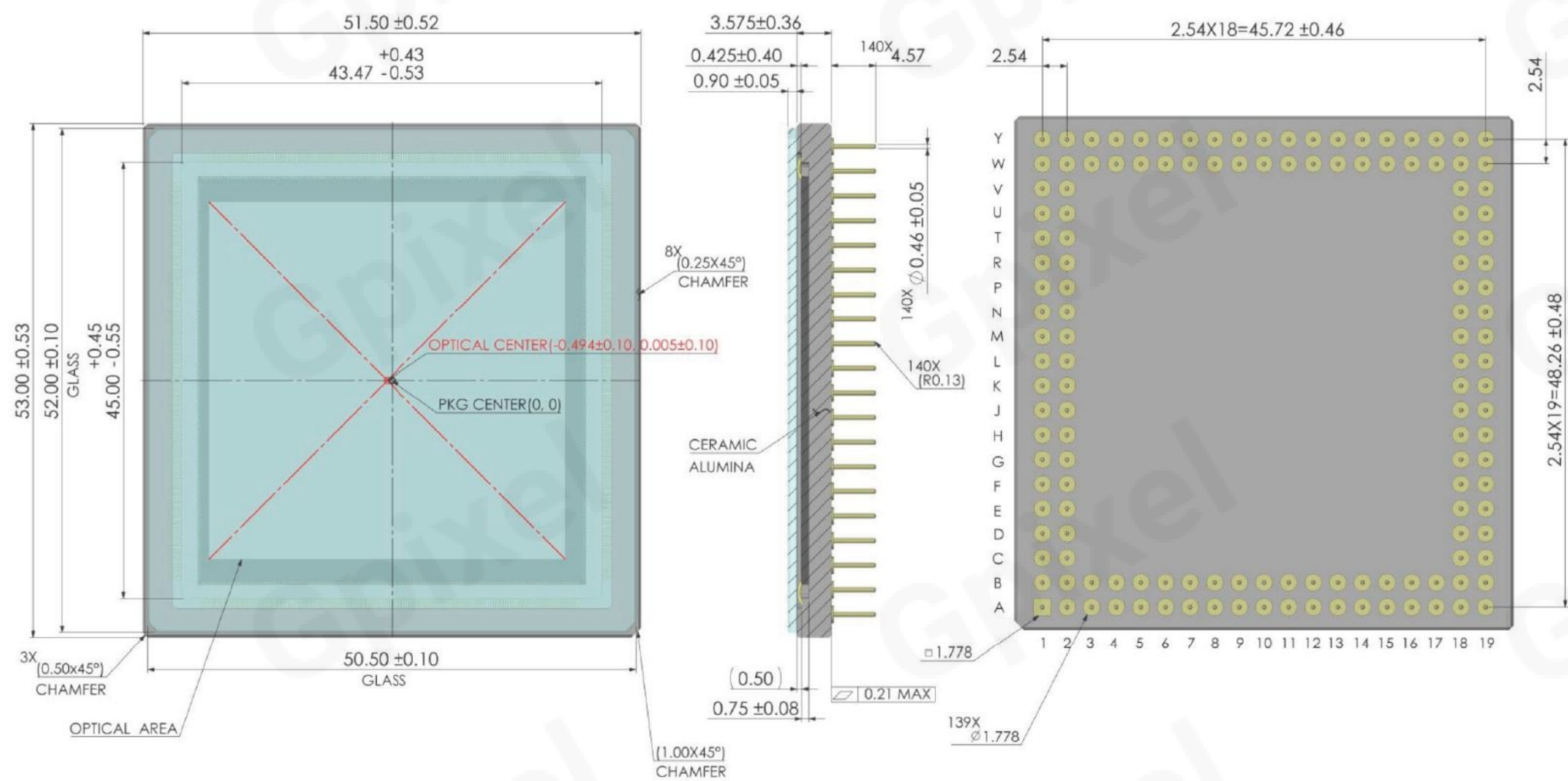
- ▶ Spectroscopy
- ▶ Life Sciences
- ▶ Astronomy
- ▶ Microscopy
- ▶ X-Ray



## Specifications

Nr of Active Pixels	4096(H) x 4096(V)	Optical Format	3.3"
Pixel Size	9 μm x 9 μm	Photosensitive Area	36.864 mm x 36.864 mm
Shutter Type	Rolling Shutter	Peak QE	90% (600 nm)
Full Well Capacity	39.2 ke <sup>-</sup>	Temporal Noise	2.3 e <sup>-</sup>
Dark Current	0.04 e <sup>-</sup> /pixel/s (-40°C)	Dynamic Range	84.6 dB
Max Frame Rate	24 fps	Output Format	18 ch LVDS
Max. Data Rate	10.8 Gbps	ADC	12 bit
Chroma	Mono	Power Consumption	< 1.4 W
Supply Voltage	3.3 V (analog) 1.8 V (digital)	Package	140 pins PGA (51.5 mm x 53.0 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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