



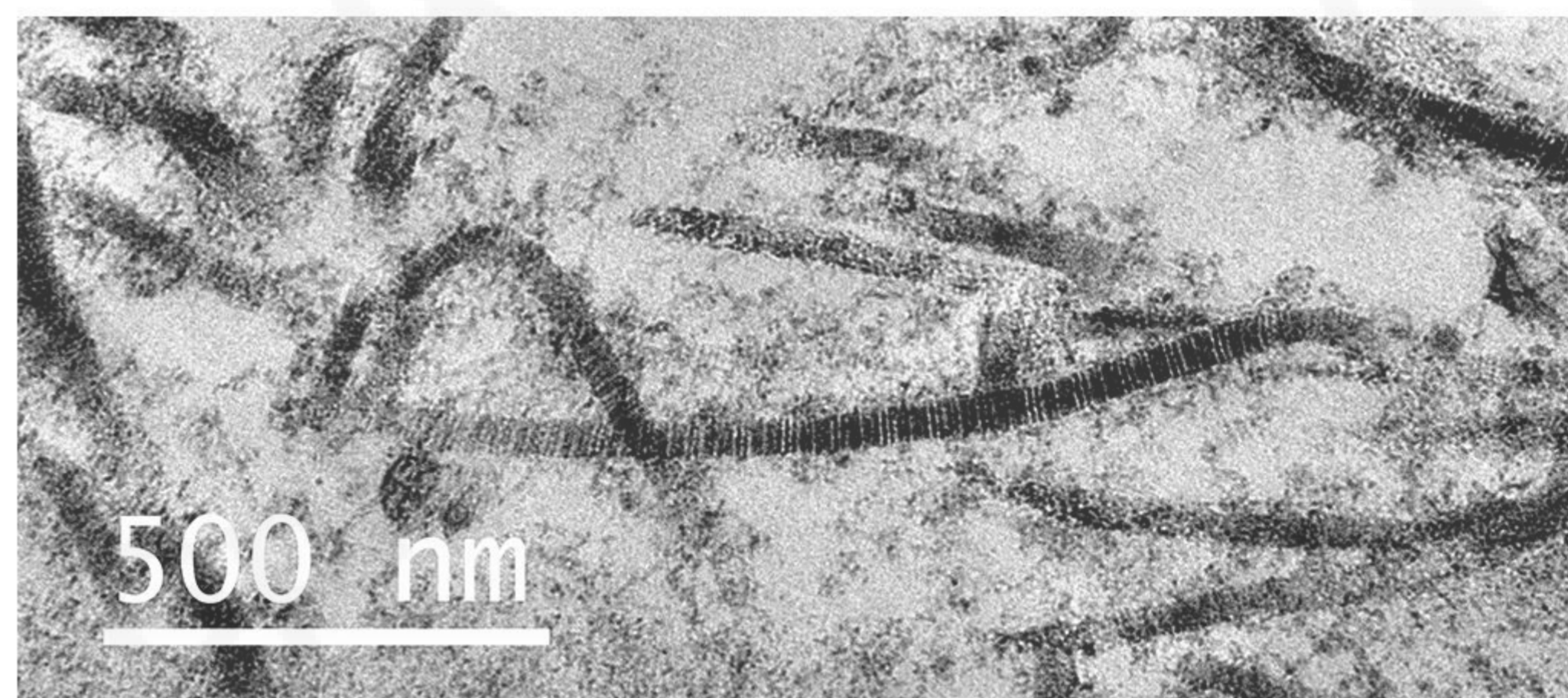
GSENSE4040BSI

16.8 MP ROLLING SHUTTER IMAGE SENSOR

GSENSE4040BSI is a BSI CMOS image sensor of 16.8MP (4096 x 4096) resolution with $9\ \mu\text{m} \times 9\ \mu\text{m}$ pixel size, and a photosensitive area of 36.8 mm x 36.8 mm (52 mm diagonal).

Using dual gain HDR operation mode, 84.6 dB is achieved with 39.2k e^- full well capacity and 2.3 e^- readout noise. 18 pairs of LVDS channels running at 600 MHz per channel support full-resolution imaging at a frame rate of 24 fps.

GSENSE4040BSI is assembled in 140 pins PGA ceramic package with a removable glass lid. This sensor is pin compatible with GSENSE4040FSI for fast and easy integration.



Key Features and Benefits

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

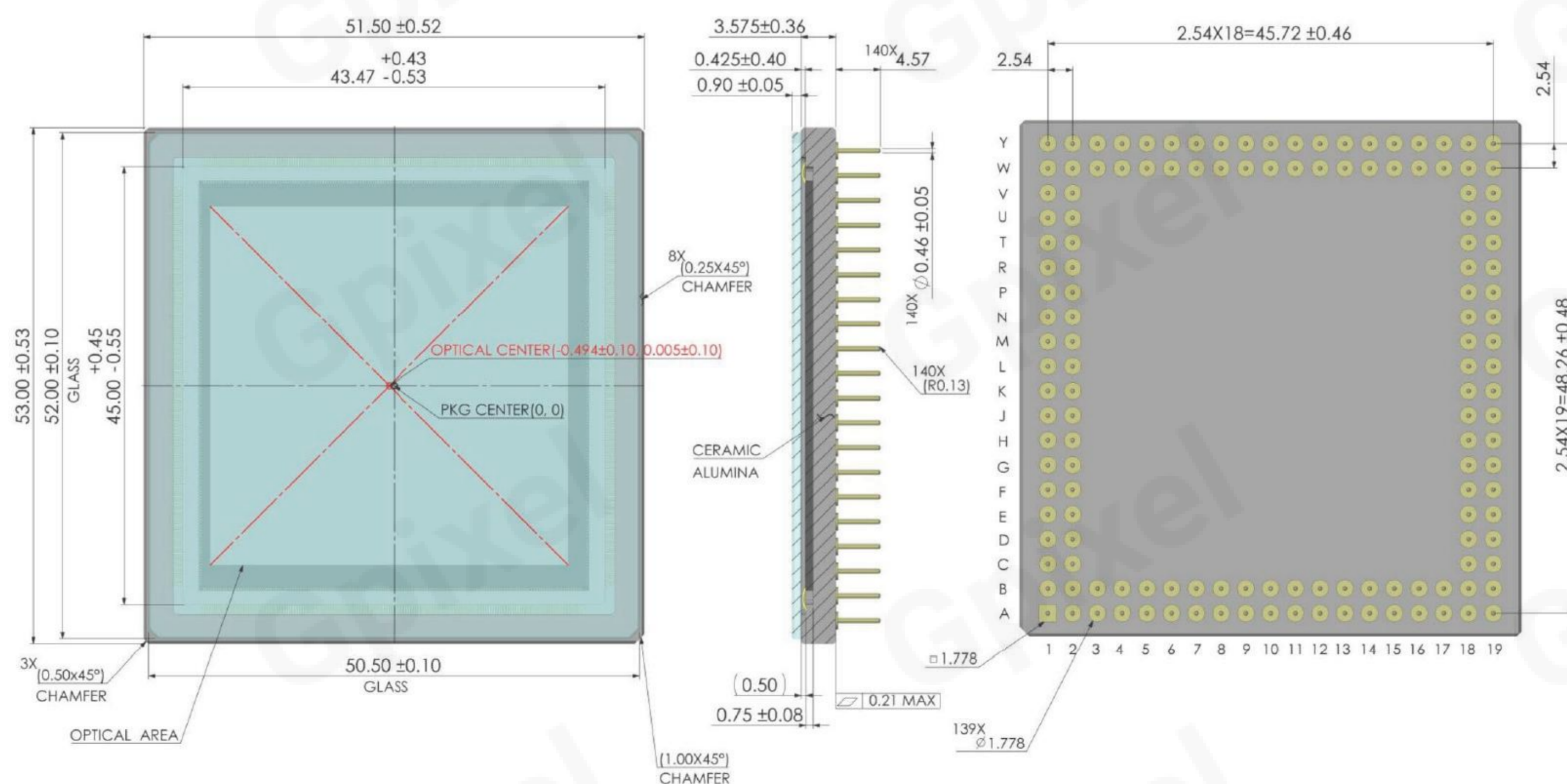
Application

- ▶ 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 ⁻	Temporal Noise	2.3 e ⁻
Dark Current	0.04 e ⁻ /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



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