

## The BSI Compatible CIS for Professional Applications - GSENSE6060



### Applications:

- Astronomy
- High-end Scientific Imaging
- X-ray Imaging
- Medical Imaging

### SENSOR DESCRIPTION

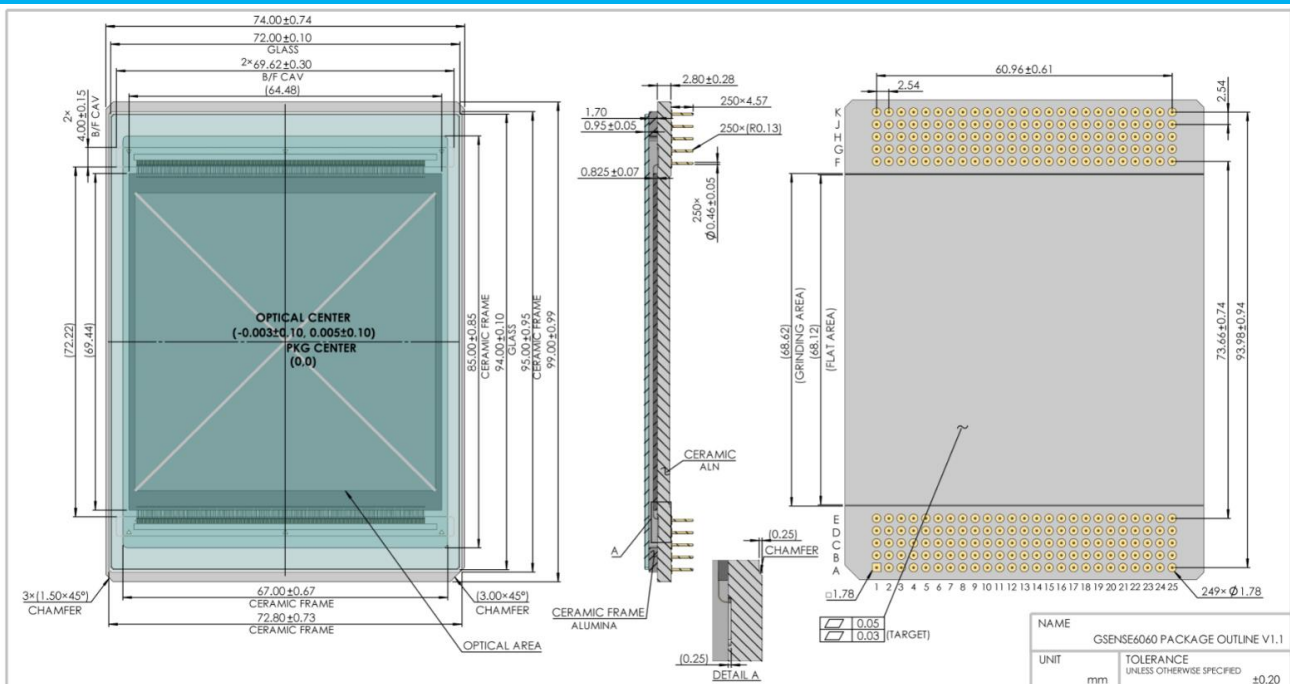
Designed with a large imaging area for demanding astronomical and scientific applications, the BSI compatible GSENSE6060 extends Gpixel's family of scientific CMOS image sensor further for professional applications.

With its top and bottom readouts, the sensor maximum frame rate is more than 44fps with 12bit ADC, allowing scientists to observe with the never-achieved temporal resolution. The on-chip 14bit ADC combining with a correlated multisampling (CMS) technique unprecedentedly extends the sensor intra-scene dynamic range to 16 bit. The two readout chains also provide the possibility for HDR combination up to 90dB. The Aluminum Nitride package provides 10x thermal conductivity than traditional Alumina packages as well as excellent flatness both at room and deep-cooled temperatures.

### SENSOR SPECIFICATION

Resolution	6144 × 6144	Pixel size	10μm × 10μm
Photosensitive area	61.44mm × 61.44mm	Shutter type	Rolling shutter with global reset option
ADC	2 × 12bit, 14bit 14bit CMS (16bit equivalent)	Output interface	50 × LVDS @ 630Mbps (12bit) 14 × LVDS @ 630Mbps (14bit)
Quantum efficiency	71.5% @ 550nm	Dark current	<0.01e <sup>-</sup> /p/s @ -65 °C
Package	250-pin PGA (ALN)	Chroma	Mono
Supply voltage	6.5V / 1.85V	Power consumption	4.3W @ 14bit / 4.9W @ 12bit HDR

Operation mode	Full well capacity	Dark noise	Dynamic range	Frame rate
14bit Standard	72ke-@LG	4.2e-@HG	75dB@LG	14fps
12bit Standard	133ke-@LG	4.1e-@HG	72dB@LG	44fps
12bit HDR	128ke-	4.6e-	89dB	19fps



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