Gpixel

The BSI Compatible CIS for Professional Applications - GSENSE6060BSI

Applications:

➢ **Astronomy**

➢ **High-end Scientific Imaging**
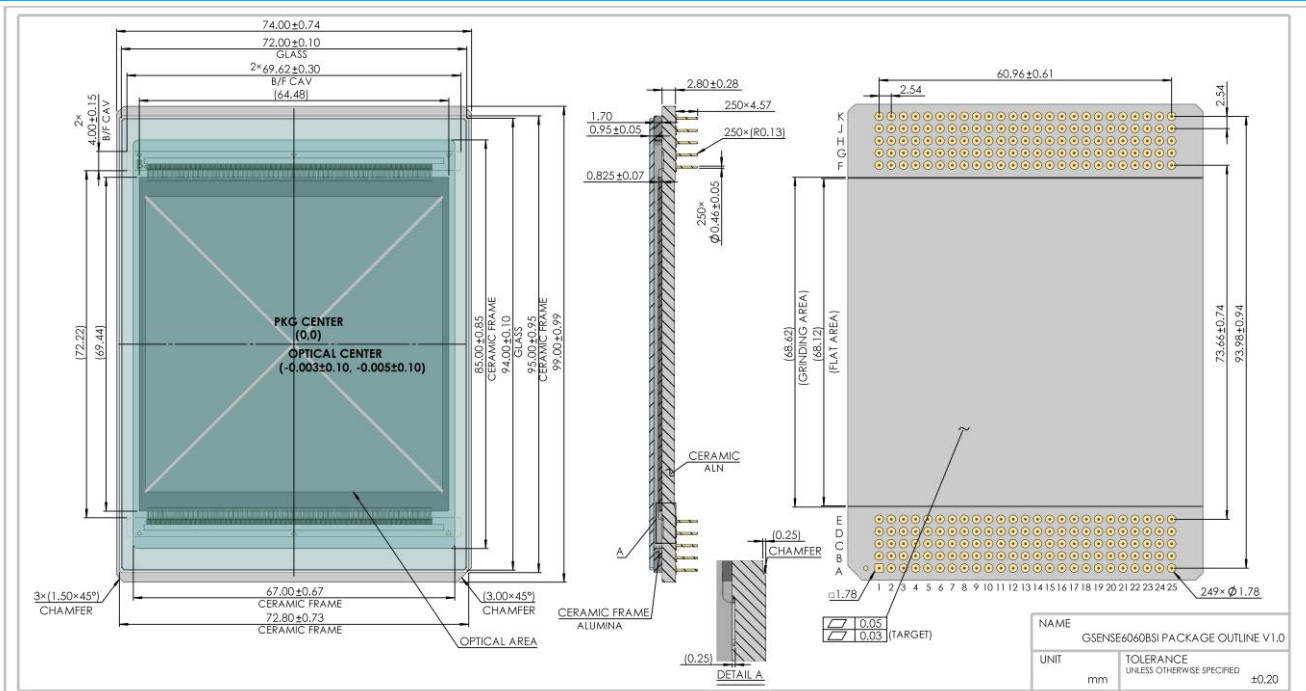
➢ **X-ray Imaging**

➢ **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 26fps with 12bit ADC, allowing scientists to observe with the never-achieved temporal resolution. The on-chip 14bit ADC combing 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 SPECIFICATIONS

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 @ 420Mbps (12bit) 14 × LVDS @ 420Mbps (14bit)
Quantum efficiency	95% @580nm	Dark current	0.02e$^-$/p/s @ -55 °C 20e$^-$/p/s @ 25 °C
Package	250-pin PGA (ALN)	Chroma	Mono
Supply voltage	6.5V / 1.85V	Power consumption	3.5W @ 14bit / 4.5W @ 12bit

Operation mode	Full well capacity	Dark noise	Dynamic range	Frame rate
14bit Standard	68ke$^-$@LG	2.3e$^-$@HG	77dB@LG	8fps
12bit Standard	94ke$^-$@LG	2.7e$^-$@HG	73dB@LG	26fps
12bit HDR	95ke$^-$	3e$^-$	90dB	11ps

Please address all product inquiries to GPIXEL
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