



GSENSE1081BSI

81 MP SCIENTIFIC CMOS IMAGE SENSOR

GSENSE1081BSI is designed with large imaging area for demanding scientific imaging applications. Sensor provides active resolution of 8900(H) x 9120(V) with 10 μm x 10 μm pixel size. An inter-scene dynamic range is 84.5 dB combined from maximum full well capacity of 90.68 ke^- and readout noise of 5.35 e^- .

Sensor supports on-chip 16 bit ADC, with LVDS channel running up to 250 MHz, providing frame rate up to 0.34 fps. GSENSE1081BSI is assembled in high-end SiC package with one flexi-cable, by this design, the dead space at 3x package sides is minimized and makes sensor well fit for applications require a mosaic sensor array. The thermal expansion of SiC is close to silicon die which is suitable for deep cooling applications.



Key Features and Benefits

- ▶ 97% Peak QE (610 nm)
- ▶ Anti-Glowing
- ▶ On-chip 16 bit Column-Parallel ADC
- ▶ Silicon Carbide with one Flexi-Cable
- ▶ Dark Current 0.00373 $\text{e}^-/\text{pixel}/\text{s}$ (-70°C)

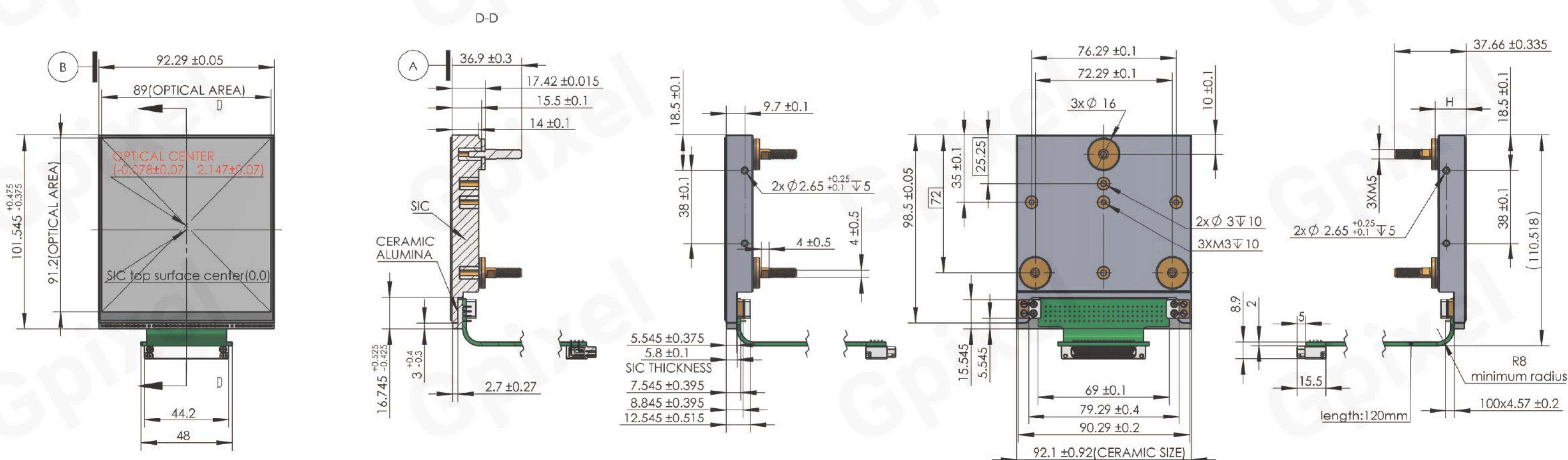
Application

- ▶ Astronomy

Specifications

Nr of Active Pixels	8900(H) x 9120(V)	Optical Format	7.96"
Pixel Size	10 μm x 10 μm	Photosensitive Area	89.00 mm x 91.20 mm
Shutter Type	Rolling Shutter	Peak QE	97.11% (610 nm)
Full Well Capacity	90.68 ke ⁻	Temporal Noise	5.35 e ⁻
Dark Current	0.00373 e ⁻ /pixel/s (-70°C)	Dynamic Range	84.5 dB
Max Frame Rate	0.34 fps (16 bit) 0.94 fps (15 bit)	Output Format	5对LVDS
Max. Data Rate	500 Mbps (16 bit) 1.6 Gbps (15 bit)	ADC	15/16 bit
Chroma	Mono	Power Consumption	1.4 W
Supply Voltage	5 V (analog) 1.8 V (digital)	Package	100 pins SiC package (92.29 mm x 101.55 mm)

Package Drawing



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