GSENSE1081BSI Product Flyer

81MP 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 10μm x 10μm pixel size. An inter-scene dynamic range is 84.5dB combined from maximum full well capacity of 90ke- and readout noise of 5.45e-.Sensor supports on-chip 16bit ADC, with LVDS channel running up to 250MHz, providing frame rate up to 0.34fps. 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

- Large format sensor with frame rate up to 0.34fps
- 97% Peak QE@610nm
- Anti-glowing
- On-chip 16-bit column-parallel ADC
- 2 LVDS output pairs
- On-chip temperature sensor
- Silicon carbide with one flexi-cable

Applications

- Scientific Imaging Applications
- Astronomy Applications

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Sensor Specifications

Resolution	8900 (H) x 9120 (V)	Photo-sensitive area	89.00mm x 91.20mm
Pixel size	10μm x 10μm	Quantum efficiency	97.11% @ 610nm
Shutter type	Rolling shutter	Dark noise	5.45e
Maximum FWC	91.7ke	Frame rate	0.34fps @ 2 pairs of LVDS
Dynamic range	84.5dB	Power consumption	1.4W @ full resolution & full speed
Output interface	5 pairs of LVDS in total - 4 for pixel data - 1 for DDR clock	Dark current	0.00373e-/s/pix @ -70℃
Data rate	500Mbps @ 2 pairs of LVDS running at 250MHz	Pixel clock rate	Up to 15.625MHz @ 16-bit
Chroma	Mono	Operation temperature	-85℃ to +50℃
I/O voltage	5V for analog 1.8V for digital	Package	100-pin SiC package

Ordering Information

Sensor Part No.

GSENSE1081BSI-ABM-NFN-NN0
BSI Image Sensor. Monochrome without micro lens on die.
100-pin Silicon carbide ceramic package. Without glass lid.
Grade 0

GSENSE1081BSI-ABM-NFN-NN1
BSI Image Sensor. Monochrome without micro lens on die.
100-pin Silicon carbide ceramic package. Without glass lid.
Grade 1

GSENSE1081BSI-ABM-NFN-NN2
BSI Image Sensor. Monochrome without micro lens on die.
100-pin Silicon carbide ceramic package. Without glass lid.
Grade 2

Contact Gpixel HQ

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