

GSENSE4040BSI Product Flyer

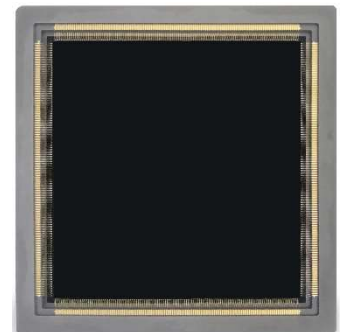


16.8MP BSI SCIENTIFIC CMOS IMAGE SENSOR

GSENSE4040BSI is a 16.8 Megapixel resolution CMOS image sensor. Featured with five transistor (5T) HDR pixel design on a $9\mu\text{m}$ pixel pitch the sensor can achieve $2.3e^-$ readout noise with $39ke^-$ FWC simultaneously by dual-gain HDR readout mode.

By 18 pairs of LVDS data output channels at working at 600Mbps GSENSE4040BSI provides a maximum frame rate of 24fps (HDR mode).

GSENSE4040BSI sensor is pin-compatible with GSENSE4040FSI sensor this feature can much save camera RD resource for development and design time.



Key Features

- $9\mu\text{m}$ Square Pixels
- Read noise $2.3e^-$
- maximum frame rate of 24fps @HDR mode
- 18 pairs of LVDS output channels
- Power consumption : $<1.4W$

Applications

- Astronomy imaging
- Medical imaging
- X-ray imaging

Sensor Specifications

Resolution	4096 x 4096	Photo-sensitive area	36.864mm × 36.864mm
Pixel size	9µm × 9µm	Operation temperature	-40°C ~50°C
Shutter type	Rolling shutter	Quantum efficiency	90%@ 550nm
Full well capacity	39 ke ⁻	Pixel clock rate	50MHz
Dark noise	2.3 e ⁻	Dark current	0.04e ⁻ /p/s @ -40°C
Dynamic range	85 dB	Frame rate	24fps
Data output interface	18 pairs of LVDS	Max. Data rate	10.8Gbps
Chroma	Mono	Power consumption	<1.4W
Supply voltage	3.3V for analog 1.8V for digital	Package	140 pins PGA 51.5mmx53mm

Ordering Information

Sensor Part No.

GSENSE4040BSI-ABM-NPN-ARO
Mono, no micro-lens, Removable glass, Grade 0

GSENSE4040BSI-ABM-NPN-BB0
Mono, no micro-lens, sealed glass, Grade 0

GSENSE4040BSI-ABM-NPN-AR1
Mono, no micro-lens, Removable glass, Grade 1

GSENSE4040BSI-ABM-NPN-BB1
Mono, no micro-lens, Sealed glass, Grade 1

GSENSE4040BSI-ABM-NPN-AR2
Mono, no micro-lens, Removable glass, Grade 2

GSENSE4040BSI-ABM-NPN-BB2
Mono, no micro-lens, Sealed glass, Grade 2

EVK Part No.

EVA-4040B-RT12, cameralink, single stacked PCB boards

Contact

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