Gpixel

GSPRINT2001BSI

1.3 MP HIGH SPEED CMOS IMAGE SENSOR

GSPRINT2001BSI is 1.3 Megapixel (1280 x 1024) CMOS image sensor featuring backside-illuminated (BSI) global shutter pixels and a large 20 µm pixel size for outstanding sensitivity under low-light conditions. Engineered for high-speed imaging, it achieves up to 6,400 frames per second at 10 bit resolution, output over 64 pairs of Sub-LVDS channels running at 1.4 Gbps. With Quantum Efficiency (QE) reaching 87% at 440 nm and a significant UV response with 69% at 230 nm, **GSPRINT2001BSI** excels in capturing even the faintest signals under challenging lighting conditions. The sensor supports both monochrome and RGB Bayer color options, and offers advanced features such as Dual PIV mode with a minimum inter-frame time of 250 ns, making it ideal for demanding applications in scientific, PIV, metrology and various other high-speed imaging applications.

Key Features and Benefits

- ▶ Back Side Illumination (BSI) Global Shutter pixels
- ▶ 20 µm Pixel Size delivers exceptional sensitivity
- ▶ Ultra High Speed: Up to 6400 fps (10 bit)
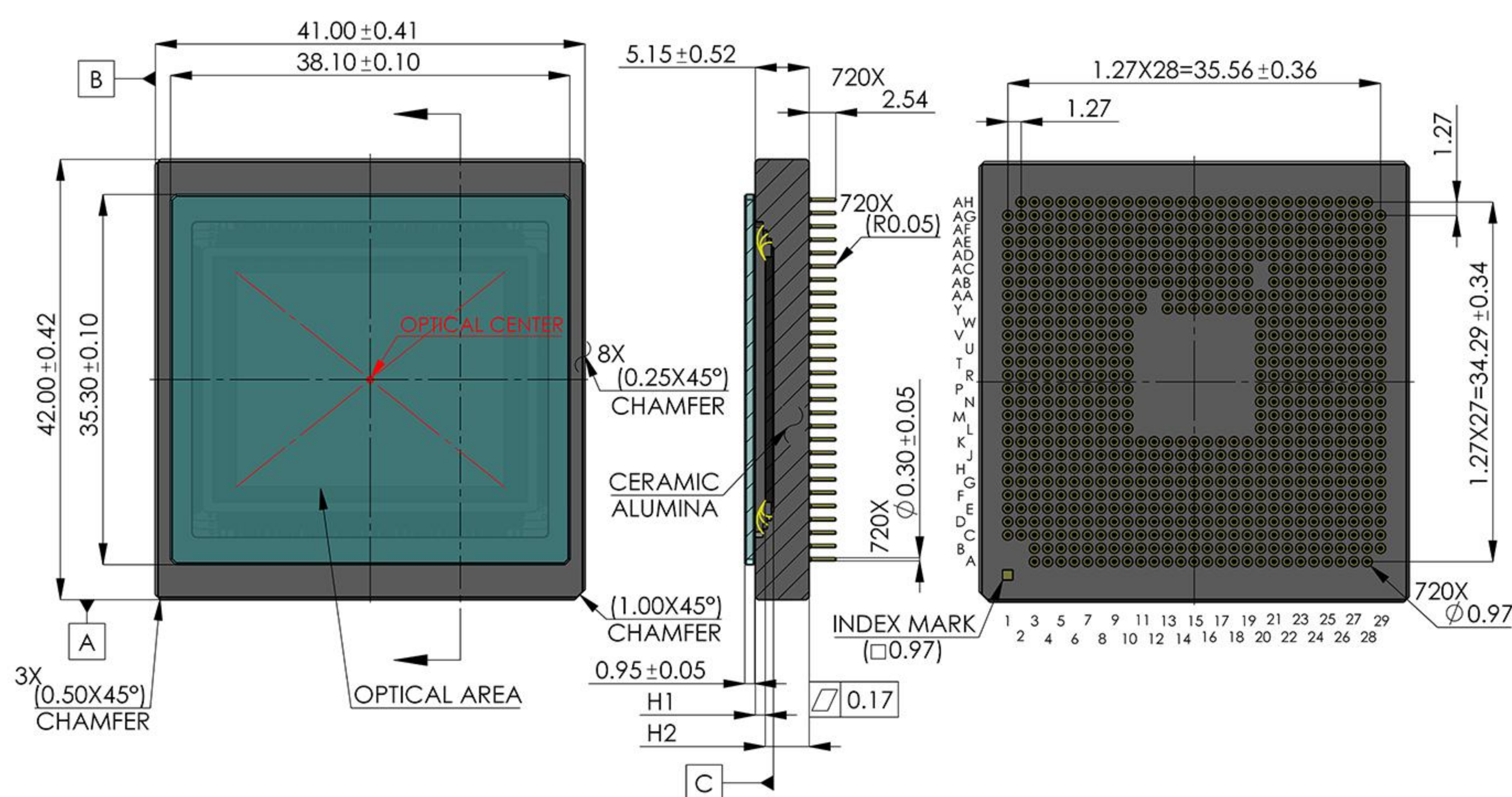- ▶ UV sensitivity with 42% (260 nm)[1] and 87% (450 nm)[2]

Applications

- ▶ High Speed Imaging
- ▶ Particle Image Velocimetry (PIV) Imaging
- ▶ Metrology
- ▶ Scientific and Life Science

Note： ① Quartz glass version ② D 263® T glass version

Nr of Active Pixels	1280 (H) x 1024 (V)	Optical Format	2.05″(32.8 mm)
Pixel Size	20 μm x 20 μm	Photosensitive Area	25.60 mm x 20.48 mm
Shutter Type	Global Shutter	PLS	-120 dB
Peak QE	87% (440 nm)	Full Well Capacity	12 ke$^-$
Temporal Noise	19 e$^-$	Max. SNR	40.8 dB
Dynamic Range	56 dB	ADC	10 bit
Max Frame Rate	6400 fps	Channel Multiplexing	64/32/16
Output Format	Sub-LVDS	Max. Data Rate	89.6 Gbps
Chroma	Monochrome & CFA	Power Consumption	7.5 W
Supply Voltage	3.3 V (analog) 1.8 V (I/O) 1.25 V (digital)	Package	720 pins uPGA (41 mm x 42 mm)

Package Drawing

Contact Gpixel

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