

# GLR1002BSI-S

2K 10  $\mu\text{m}$  x 200  $\mu\text{m}$  PIXEL SIZE  
HIGH SPEED BSI LINE SCAN CMOS IMAGE SENSOR

The **GLR1002BSI-S** is a next generation 2K back side illuminated (BSI) CMOS line scan sensor designed to elevate performance in OCT and spectroscopy applications, combining high speed readout up to 250 kHz with a rectangular 10  $\times$  200  $\mu\text{m}$  pixel optimized for precise optical alignment. Its advanced BSI global shutter architecture delivers 58% QE at 850 nm, a 155  $\text{ke}^-$  full well capacity, low read noise, and true 12 /14 bit output, enabling wide dynamic range and high contrast fringe reconstruction. High line rates are supported through 1.2 GHz Sub-LVDS outputs with < 450 mW power consumption, providing an efficient balance of speed and system integration. Engineered for both high throughput imaging and demanding diagnostic workflows, the **GLR1002BSI-S** is housed in a robust ceramic CLCC package with a double sided AR coated glass lid and a compact 40 mm  $\times$  11 mm footprint, ensuring stable mechanical integration and excellent alignment in OCT optical paths.



## Key Features and Benefits

- ▶ Pixel Size: 10  $\mu\text{m}$  x 200  $\mu\text{m}$
- ▶ Fast Line Rate: 250 kHz
- ▶ High NIR QE
- ▶ 12 bit / 14 bit ADC

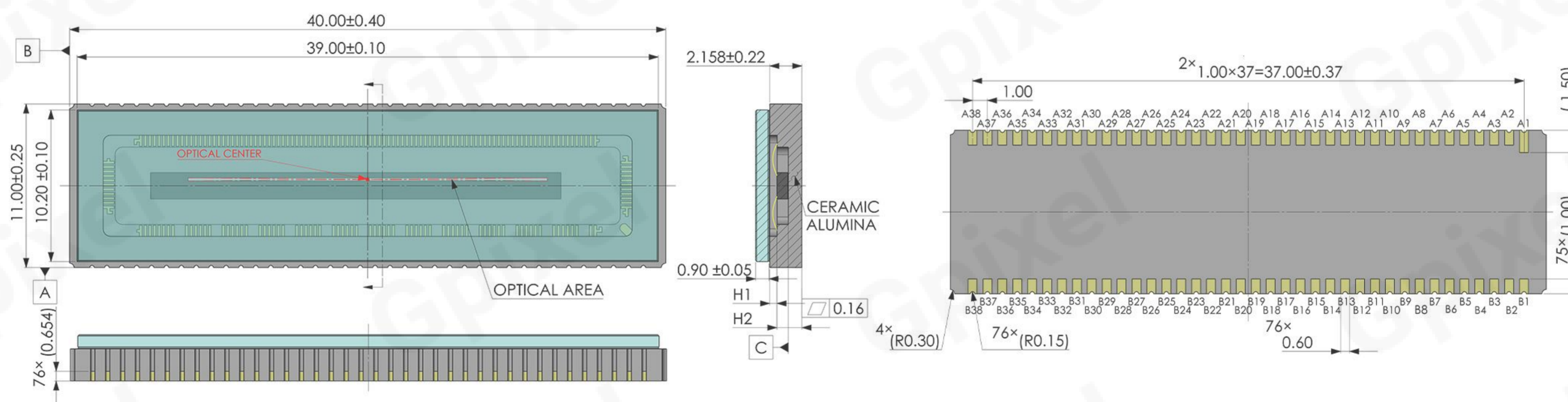
## Applications

- ▶ Optical Coherence Tomography (OCT)
- ▶ Non-Destructive Industrial Inspection
- ▶ In-Vivo Medical Endoscopy
- ▶ Spectroscopy

## Specifications

Nr of Active Pixels	2411 (H) x 1 (V)	Optical Format	24.11 mm
Pixel Size	10 μm x 200 μm	Shutter Type	Global Shutter
Peak QE	91 % (440 nm) 58 % (850 nm)	Temporal Noise	33.2 e <sup>-</sup> (12 bit) 20 e <sup>-</sup> (14 bit)
Max. SNR	51.9 dB	Dynamic Range	73.4 dB (12 bit) 77.6 dB (14 bit)
Max Line Rate	250/130 kHz (12 bit) 100 kHz (14 bit)	Dark Current	T.B.D
Output Format	7x Sub-LVDS	Max. Data Rate	8.4 Gbps
Chroma	Mono	Power Consumption	< 450 mW
Supply Voltage	3.6 V for analog 1.5 V for digital 1.8 V-3.3V for IO	Package	76 x lead CLCC (40 mm x 11 mm)

## Package Drawing



## Contact Gpixel

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