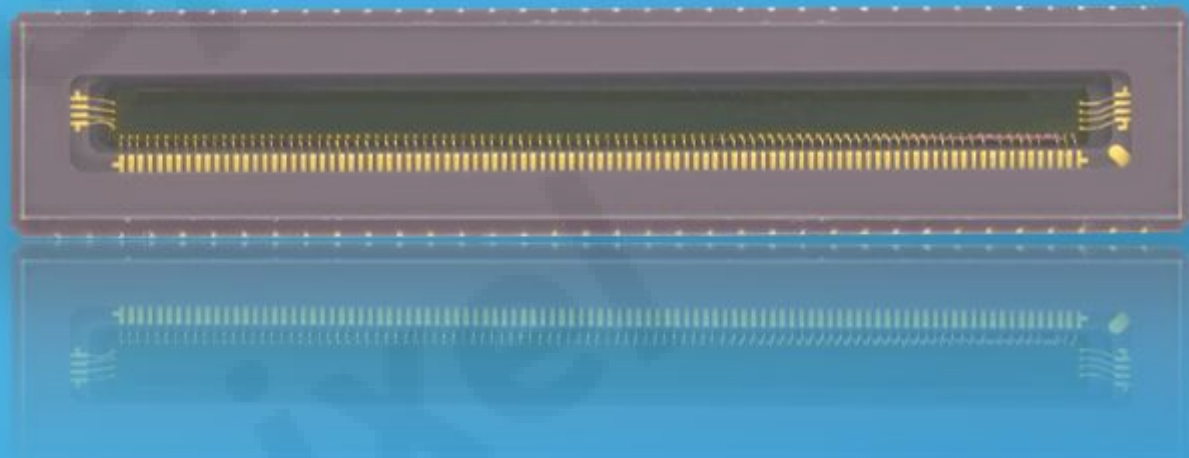




# GLR1402BSI-M

2048 pixels, 14  $\mu\text{m}$  x 350  $\mu\text{m}$  RESOLUTION LINE SCAN CMOS IMAGE SENSOR

**GLR1402BSI-M** is a single-line linear sensor image sensor with rectangular pixels designed for spectroscopy, OCT, encoder and various other image reading applications.

**GLR1402BSI-M** has 2048 pixels in 1 row, with a pixel size of 14  $\mu\text{m}$  x 350  $\mu\text{m}$ , yielding an impressive max. 176 ke<sup>-</sup> full well capacity and boasting a mere 3.1 e<sup>-</sup> of noise.

Data is read out at 14 bits per pixel with 80 dB of dynamic range, or by combining two 12 bit pixel reads, high and low gain, to achieve a maximum dynamic range of 95.1 dB. GLR1402BSI-M supports both sLVDS and CMOS data outputs, customer can switch different data channels with 12 bit / 14 bit based on demand.



## Key Features and Benefits

- ▶ Back Side Illuminated (BSI) Pixels
- ▶ High Sensitivity
- ▶ High Speed: up to 29 kHz
- ▶ Dual Gain HDR
- ▶ UV Version QE 70.4% (280 nm)
- ▶ 12/14 bit ADC

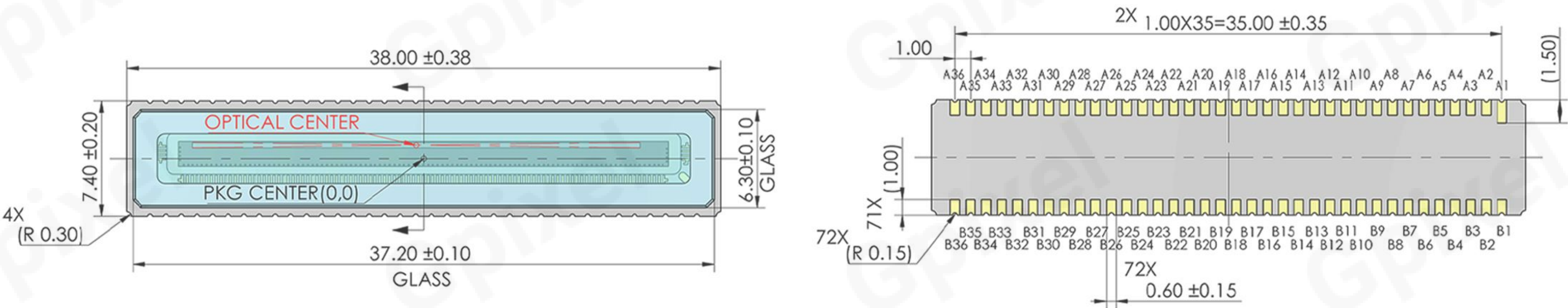
## Applications

- ▶ Spectroscopy

Specifications

|                     |                                                       |                      |                                                             |
|---------------------|-------------------------------------------------------|----------------------|-------------------------------------------------------------|
| Nr of Active Pixels | 2048 (H) x 1 (V)                                      | Optical Format       | 28.672 mm                                                   |
| Pixel Size          | 14 μm x 350 μm                                        | Shutter Type         | Global Shutter                                              |
| Peak QE             | 90.7% (420 nm)                                        | Temporal Noise       | 3.1 e <sup>-</sup> (HDR HG)<br>44.7 e <sup>-</sup> (HDR LG) |
| Full Well Capacity  | 176 ke <sup>-</sup>                                   | Dark Current         | 3.8 ke <sup>-</sup> /s/pix                                  |
| Dynamic Range       | 95.1 dB                                               | Max Line Rate        | 29 kHz                                                      |
| Output Format       | 4 ch Sub-LVDS<br>CMOS parallel output                 | Channel Multiplexing | Sub-LVDS 4/2/1                                              |
| ADC                 | 12/14 bit                                             | Max. Data Rate       | 2.4 Gbps (Sub-LVDS)<br>600 M (CMOS)                         |
| Chroma              | Mono                                                  | Power Consumption    | < 350 mW                                                    |
| Supply Voltage      | 3.6 V (Analog)<br>1.5 V (Digital)<br>1.8 - 3.3 V (IO) | Package              | CLCC 72 pins with<br>quartz glass lid<br>(38.0 mm x 7.4 mm) |

Package Drawing



Contact Gpixel

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