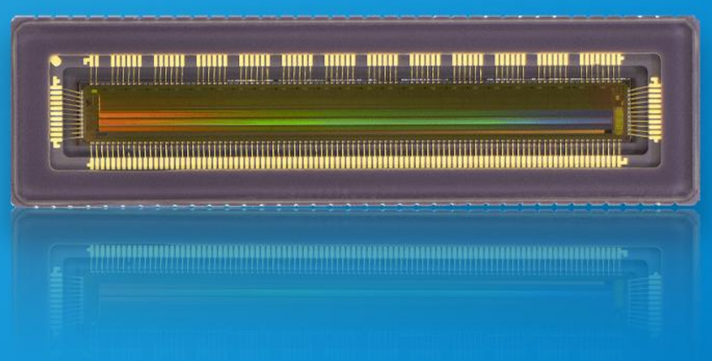


# GL0402

## 4K 7 µm GLOBAL SHUTTER LINE SCAN CMOS IMAGE SENSOR

**GL0402** is a 4096 x 2 resolution, 7um square pixel, global shutter linear image sensor that supports a maximum line rate of 200kHz in single line mode and 100kHz in dual line mode. **GL0402** offers a read noise of less than 5.2 $e^-$ and 10 $ke^-$ FWC, providing a 65.6 dB intra-scene dynamic range. In pixel low gain setting, FWC increases to 27.5 $ke^-$. The monochromatic version of **GL0402** supports 1x2 and 2x2 binning to further increase sensitivity, which is described in a separate application note.

**GL0402** uses and external clock and all required timing is generated by the on chip sequencer, reducing the amount of external components needed. Output channel multiplexing enables flexibility in FPGA selection. **GL0402** enables a cost effective camera solution for demanding inspection applications.

## Key Features and Benefits

- High Speed
- Low Noise
- High Dynamic Range

## Applications

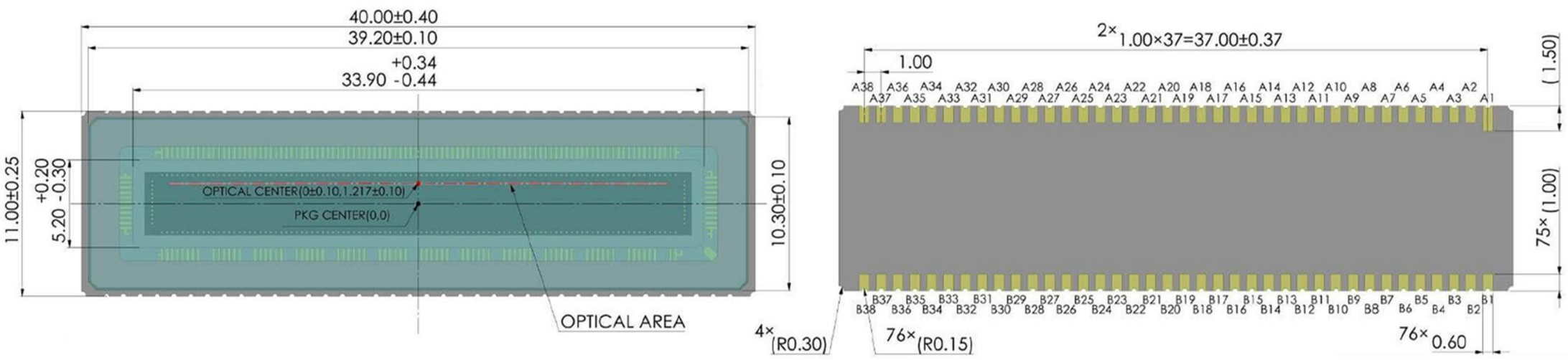
- Automation & Inspection

info@gpixel.com www.gpixel.com

## Specifications

| | | | |
|---|---|---|---|
| Nr of Active Pixels | 4096 (H) x 2 (V) | Optical Format | 28.67 mm |
| Pixel Size | 7 µm x 7 µm | Shutter Type | Global Shutter |
| Peak QE | 75.57% (570 nm) | Temporal Noise | 5.2 $e^-$ |
| Full Well Capacity | 25 k$e^-$ (LG)<br>10 k$e^-$ (HG) | Angular Response | 20°(85% Response) |
| Dynamic Range | 65.6 dB (HG) | Max Line Rate | 200k fps (single line)<br>100k fps (dual line) |
| Output Format | 12 ch Sub-LVDS | Channel Multiplexing | 12/6 |
| ADC | 12 bit | Max. Data Rate | 10.944 Gbps |
| Chroma | Mono, RGB Color | Power Consumption | < 2.25 W |
| Supply Voltage | 3.3 V (analog)<br>2 V (digital)<br>1.8 V - 3.3 V (I/O) | Package | CLCC 76 pins<br>(40.0 mm x 11.0 mm) |

## Package Drawing




## Contact Gpixel

**GPIXEL CHINA CHANGCHUN (HQ)**

Building 5, Optoelectronic Information

Industrial Park, 7691 Ziyou Road,

130033 Changchun, Jilin, China

Phone: +86-431-85077785

**GPIXEL EUROPE**

Gpixel NV

Copernicuslaan 60, 2018

Antwerpen, Belgium

Phone: +32-33034442

**GPIXEL JAPAN**

Gpixel Japan Co., Ltd.

TOC Osaki Building 18th Floor, 1-6-1 Osaki,

Shinagawa-ku, Tokyo, 141-0032 Japan

Phone: +81-03-5962-1600



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