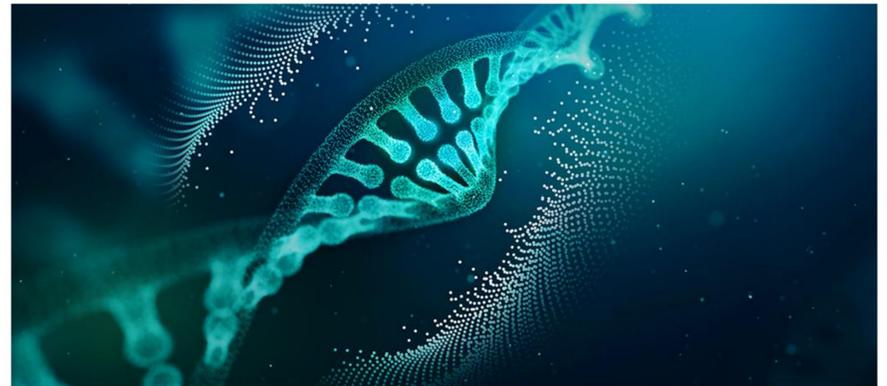
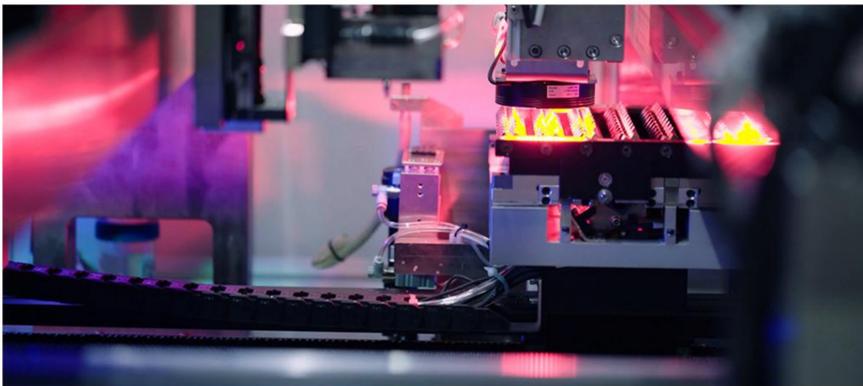


# GMAX15271BSI

## 271 MP ROLLING SHUTTER IMAGE SENSOR

**GMAX15271BSI** is a state-of-the-art rolling shutter CMOS image sensor engineered for ultra-high-resolution imaging, delivering 19,376 (H) × 14,000 (V) pixel resolution on a compact 35.9 mm diagonal image format.

Designed for high-end industrial and scientific applications does GMAX15271BSI excel in tasks requiring extreme detail and dynamic range, including flat panel display (FPD) inspection, semiconductor and PCB defect detection, precision manufacturing quality control, document scanning and cultural heritage archiving, aerial mapping, pathology, and genomics.



### Key Features and Benefits

- ▶ 1.5  $\mu\text{m}$  BSI Rolling Shutter Pixel
- ▶ 271 MP Resolution of 35.9 mm Image Format Diagonal
- ▶ Rolling Readout with Global Reset
- ▶ Frame Rate up to 8.5 fps

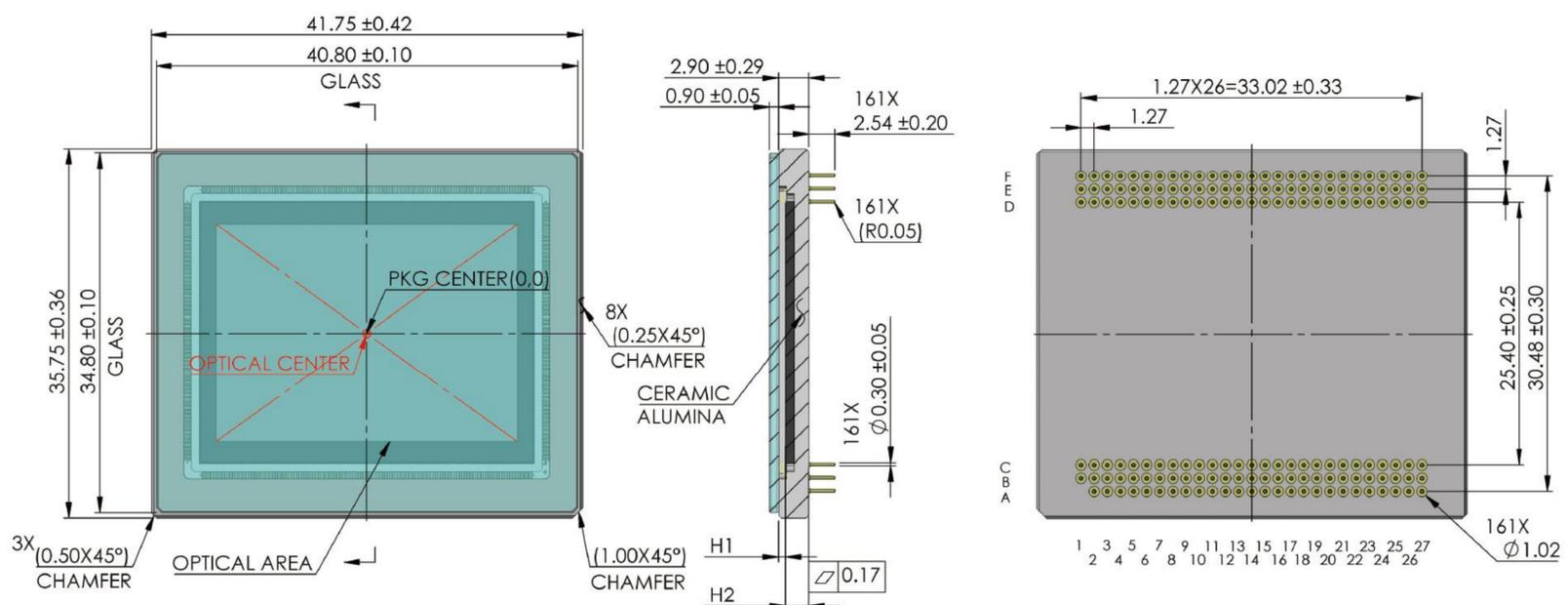
### Application

- ▶ High-end industrial inspection
- ▶ Flat panel display inspection
- ▶ Document scanning and cultural heritage archiving

## Specifications

Nr of Active Pixels	19376(H) x 14000(V)	Optical Format	2.24"
Pixel Size	1.5 $\mu\text{m}$ x 1.5 $\mu\text{m}$	Photosensitive Area	29.1 mm x 21.0 mm
Shutter Type	Rolling Shutter	Parasitic Light Sensitivity	-
Peak QE	76.7% (520 nm)	Angular Response	>17° (80% response)
Full Well Capacity	5.4 ke <sup>-</sup> (14 bit,PGA gain 1.0x) 5.1 ke <sup>-</sup> (12 bit,PGA gain 1.0x)	Temporal Noise	1.1 e <sup>-</sup> (14 bit,PGA gain 4.1x) 1.7 e <sup>-</sup> (12 bit,PGA gain 4.1x)
Max. SNR	37.3 dB (14 bit,PGA gain 1.0x) 37.0 dB (12 bit,PGA gain 1.0x)	Dynamic Range	73.8 dB (14 bit,PGA gain 1.0x) 69.5 dB (12 bit,PGA gain 1.0x)
Dark Current	2.5 e <sup>-</sup> /pixel/s ( 42 °C)	ADC	14/12 bit
Max Frame Rate	4.8 fps (14 bit) 8.5 fps (12 bit)	Output Format	32 pairs of Sub-LVDS
Power Consumption	< 2.6 W (14 bit) < 3.0 W (12 bit)	Max. Data Rate	19.2 Gbps (14 bit) 38.4 Gbps (12 bit)
Supply Voltage	4.5 V and -2.0 V (pixel) 3.3 V (analog), 1.8 V – 3.3 V (IO) 1.2 V for digital	Channel Multiplexing	32/16/8/4 ( Sub-LVDS)
Chroma	Mono, RGB Color	Package	161 pins $\mu$ PGA (41.75 mm x 35.75 mm)

## Package Drawing



## Contact Gpixel

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Disclaimer: The product information and pictures in this flyer are for reference only. For the latest information please visit [www.gpixel.com](http://www.gpixel.com).  
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