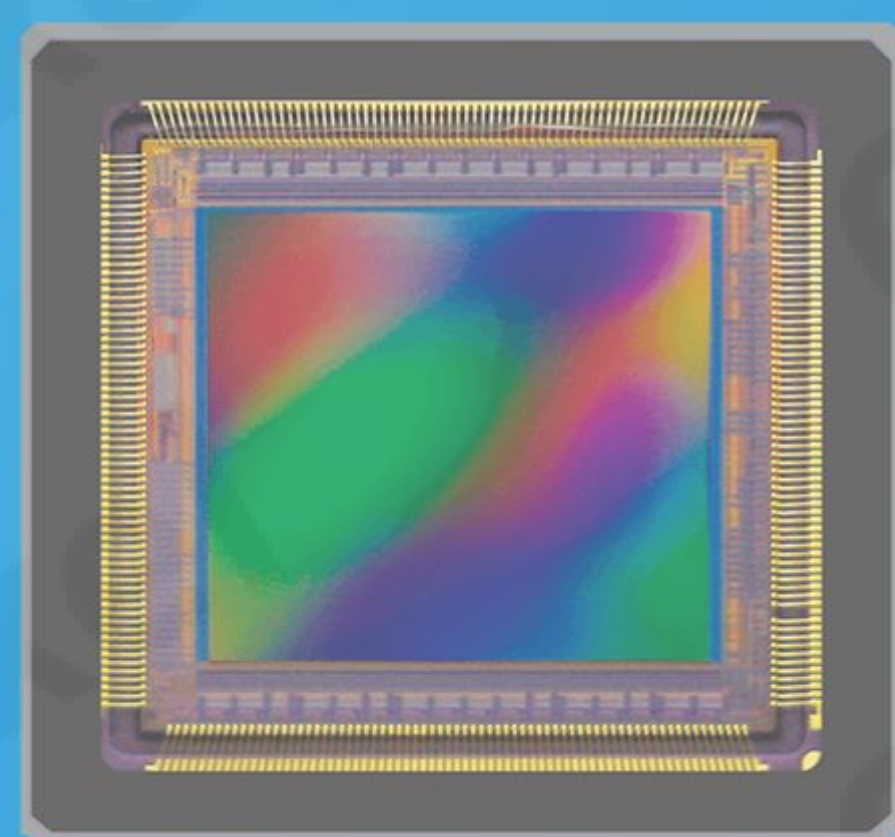
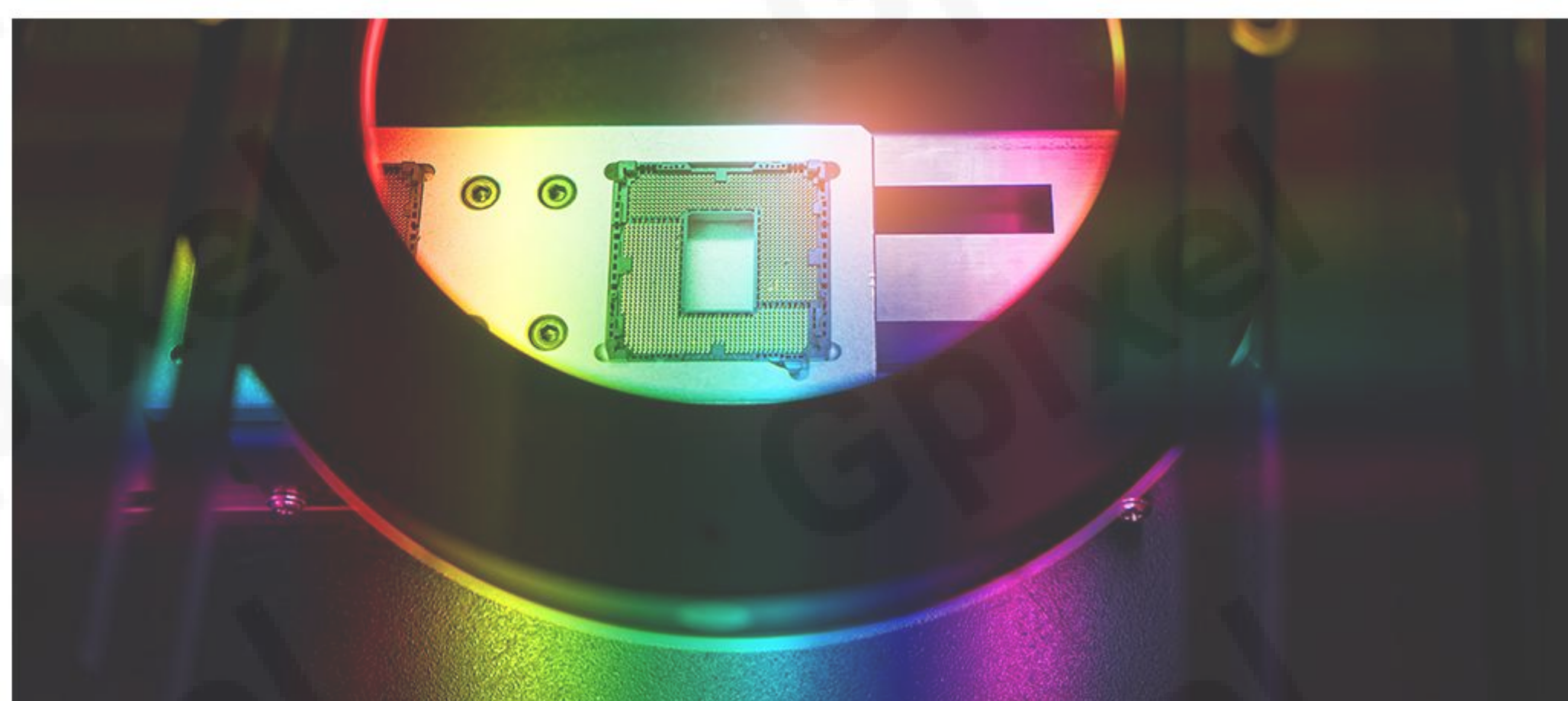




GMAX2518

18 MP GLOBAL SHUTTER IMAGE SENSOR

GMAX2518 has an optical format of 1" and features 18 Mega Pixel (4508×4096) Global Shutter pixels based on the proven GMAX $2.5 \mu\text{m}$ architecture, operating with true correlated double sampling (CDS) for low read noise and high dynamic range. In addition, the dual light pipe technology provides excellent PLS and angular response, with 32 pairs of sub-LVDS each run at 960 MHz, the sensor output with maximum 30.72 Gbps data, achieving maximum frame rate of 150 fps in 10 bit output and 64 fps in 12 bit output. The sensor integrates an on-chip sequencer, programmable through SPI, and is designed to be fully pin compatible with GMAX0505, GMAX2509 and GMAX2505 to significantly shorten time to market for camera manufactures. GMAX2518 will be assembled in a 19.5 x 20.8 mm 226-pins LGA ceramic package, which is mechanically compatible to fit into an industry standard 29 mm x 29 mm camera housing.



Key Features and Benefits

- ▶ $2.5 \mu\text{m}$ Global Shutter Pixel
- ▶ $> 64\%$ Peak QE, $< -80 \text{ dB}$ Shutter Efficiency
- ▶ High Data Throughput up to 30.72 Gbps
- ▶ High Speed and Good PLS
- ▶ Max Frame Rate: 139 fps
- ▶ Mechanically Compatible with Industry Standard Camera

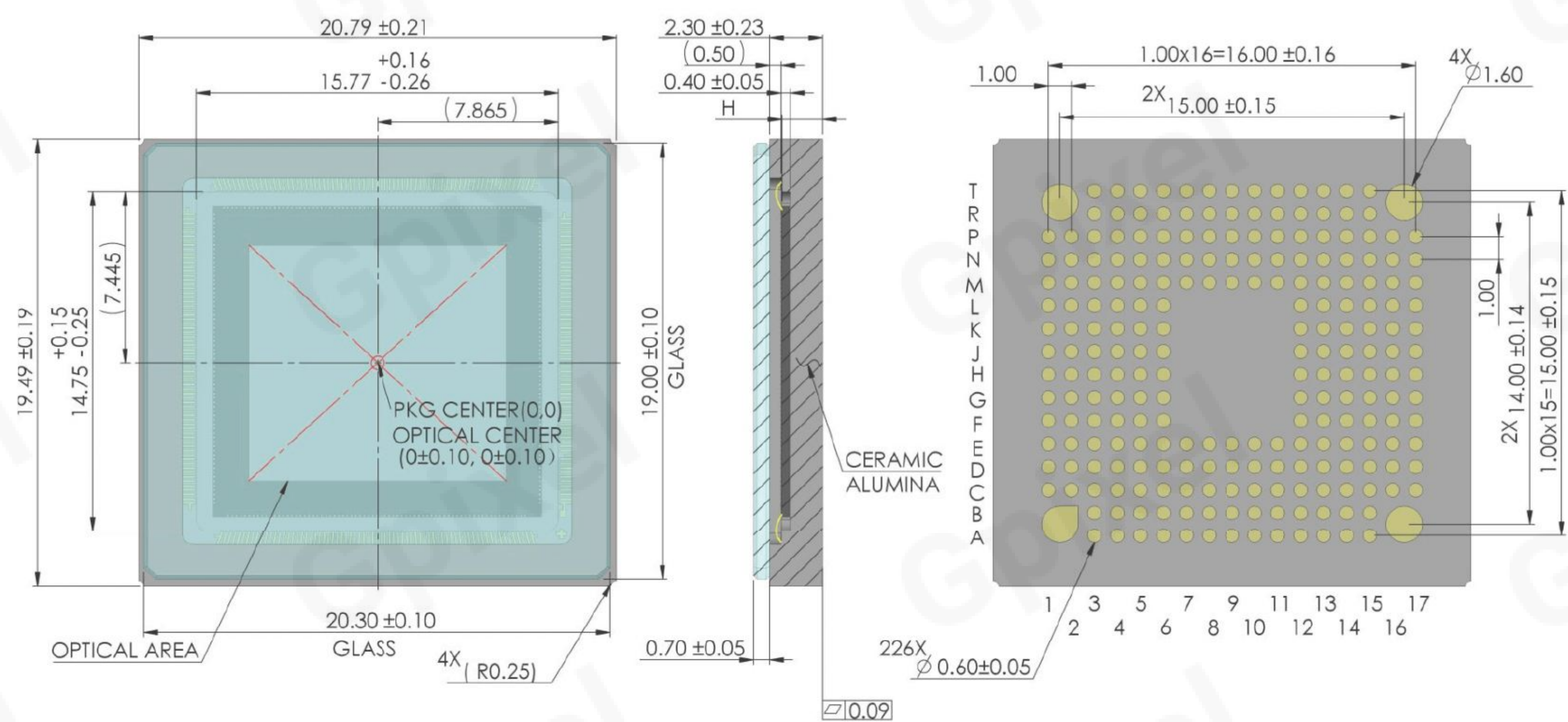
Application

- ▶ High Resolution Industrial Inspection
- ▶ Machine Vision
- ▶ Intelligent Traffic System (ITS)

Specifications

Nr of Active Pixels	4508(H) x 4096(V)	Optical Format	1"
Pixel Size	2.5 μm x 2.5 μm	Photosensitive Area	11.3 mm x 10.2 mm
Shutter Type	Global Shutter	Parasitic Light Sensitivity	<-80 dB
Peak QE	64.0% (520 nm)	Angular Response	>12° (80% Response)
Full Well Capacity	8.0 ke ⁻ (PGA gain 1.0x)	Temporal Noise	1.7 e ⁻ (12 bit,PGA gain 4x) 4.7 e ⁻ (10 bit,PGA gain 1.75x)
Max. SNR	39.0 dB (PGA gain 1.0x)	Dynamic Range	66.9 dB (12 bit,PGA gain 1.75x) 61.9 dB (10 bit,PGA gain 1.75x)
Dark Current	6.5 e ⁻ /pixel/s (45 °C)	ADC	10/12 bit
Max Frame Rate	139 fps (10 bit) 64 fps (12 bit)	Output Format	32 ch Sub-LVDS
Power Consumption	<1.2 W	Max. Data Rate	30.72 Gbps
Supply Voltage	3.3 V/1.3 V (analog) 1.8 V-3.3 V (IO) 1.3 V (digital)	Channel Multiplexing	32/16/12/8/4/2
Chroma	Mono & RGB Color	Package	226 pins LGA (20.8 mm x 19.5 mm)

Package Drawing



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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.
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