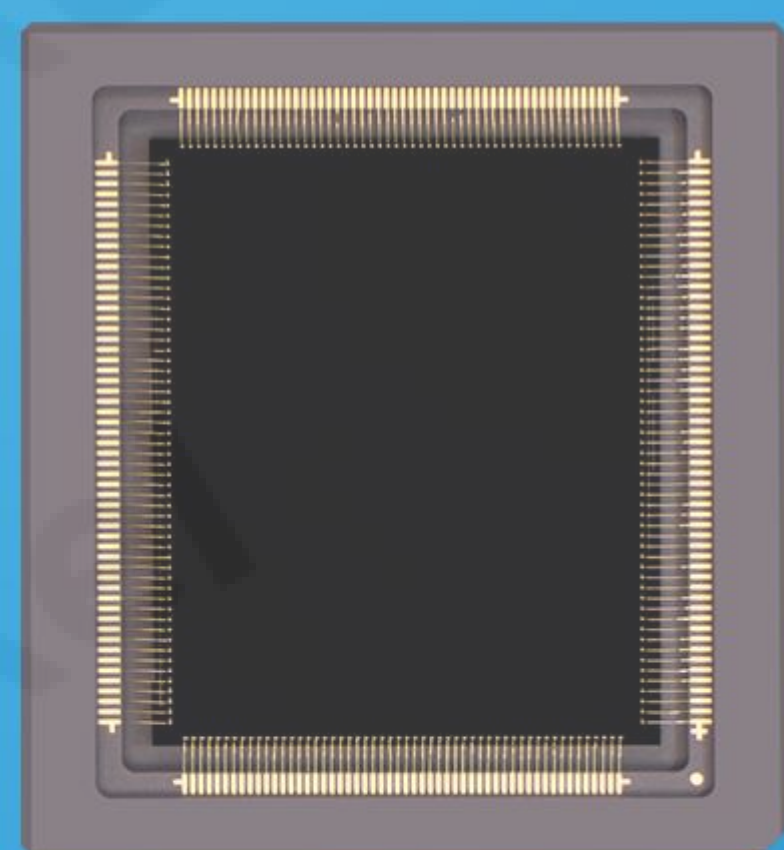


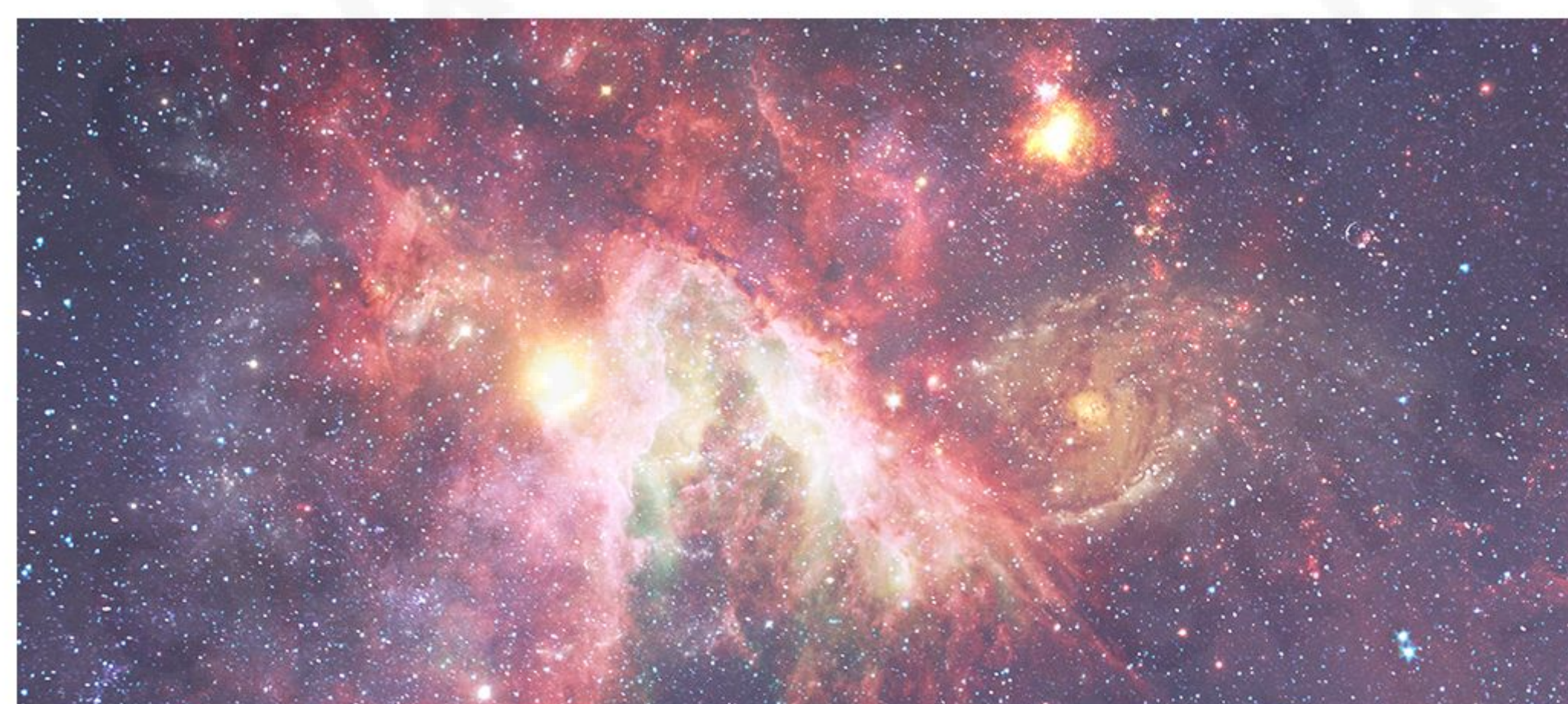
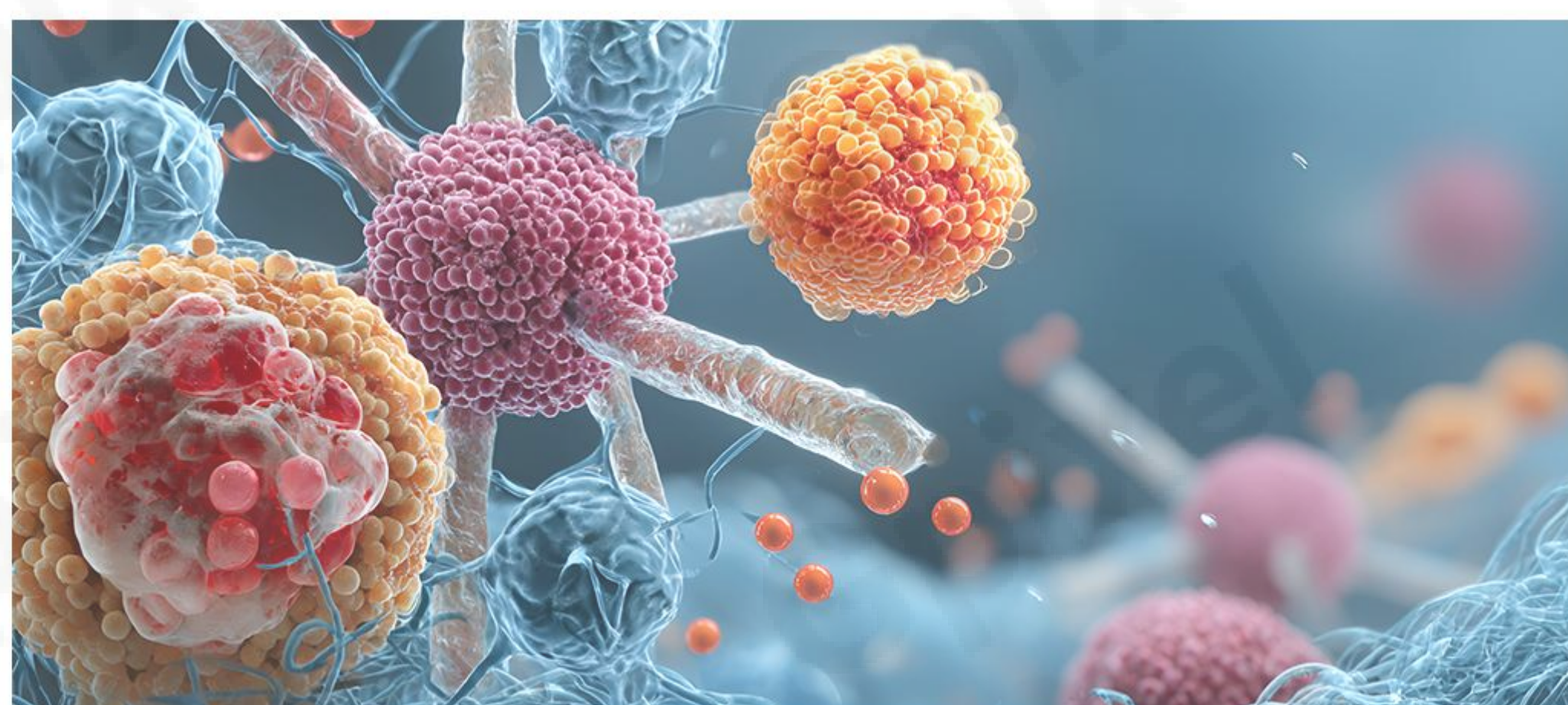


GSENSE2020BSI

4 MP ROLLING SHUTTER IMAGE SENSOR

GSENSE2020BSI is a backside illuminated (BSI) scientific CMOS image sensor, with 4 MP resolution and $6.5\ \mu\text{m}$ pixel size. With six-transistor (6T) pixel architecture, GSENSE2020BSI features readout noise of $1.6\ \text{e}^-$, full well of $55\ \text{ke}^-$, as well as peak QE of 95%. In addition, the sensor supports correlated multiple sampling (CMS), the read noise can be further reduced to $1.2\ \text{e}^-$ with 2-CMS operation.

GSENSE2020BSI's max. frame rate is 74 fps with 11bit HDR mode. The frame rate, as well as the global reset function, make GSENSE2020BSI the best solution for industrial inspection requiring superior UV sensitivity. In addition, GSENSE2020BSI is pin-compatible with GSENSE2020 and GSENSE2011, allowing easy hardware integration with minimized development, and fast time-to-market.



Key Features and Benefits

- ▶ Scientific BSI CMOS
- ▶ Peak QE of 95%
- ▶ Low Noise, Low Power for Long Exposure Modes

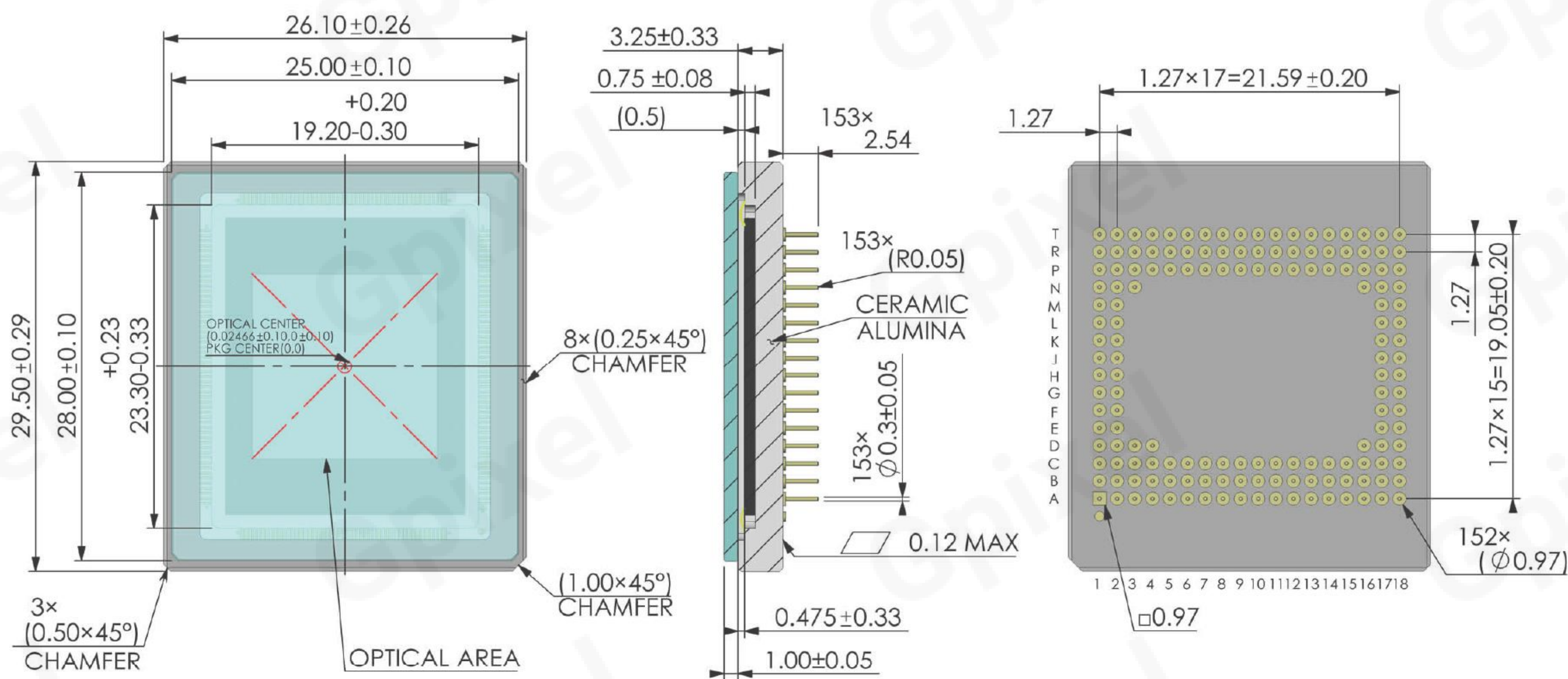
Application

- ▶ Spectroscopy
- ▶ Life Sciences
- ▶ Astronomy
- ▶ Microscopy
- ▶ X-Ray

Specifications

Nr of Active Pixels	2048(H) x 2048(V)	Optical Format	1.2"
Pixel Size	6.5 μm x 6.5 μm	Photosensitive Area	13.3 mm x 13.3 mm
Shutter Type	Rolling Shutter	Peak QE	95% (560 nm)
Full Well Capacity	55 ke ⁻ (HDR,LG)	Temporal Noise	1.2 e ⁻ (CMS) 1.6 e ⁻ (HDR,LG)
Dark Current	0.07 e ⁻ /pixel/s (-30 °C)	Dynamic Range	90.5 dB
Max Frame Rate	43 fps (12 bit) 74 fps (11 bit)	Output Format	8 ch LVDS (12 bit) 16 ch LVDS (11 bit)
Max. Data Rate	9.6 Gbps (11 bit)	ADC	11/12 bit
Chroma	Mono	Power Consumption	<1.2 W
Supply Voltage	3.5 V (analog) 2.0 V (digital)	Package	153 pins μPGA (26.1 mm x 29.5 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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