

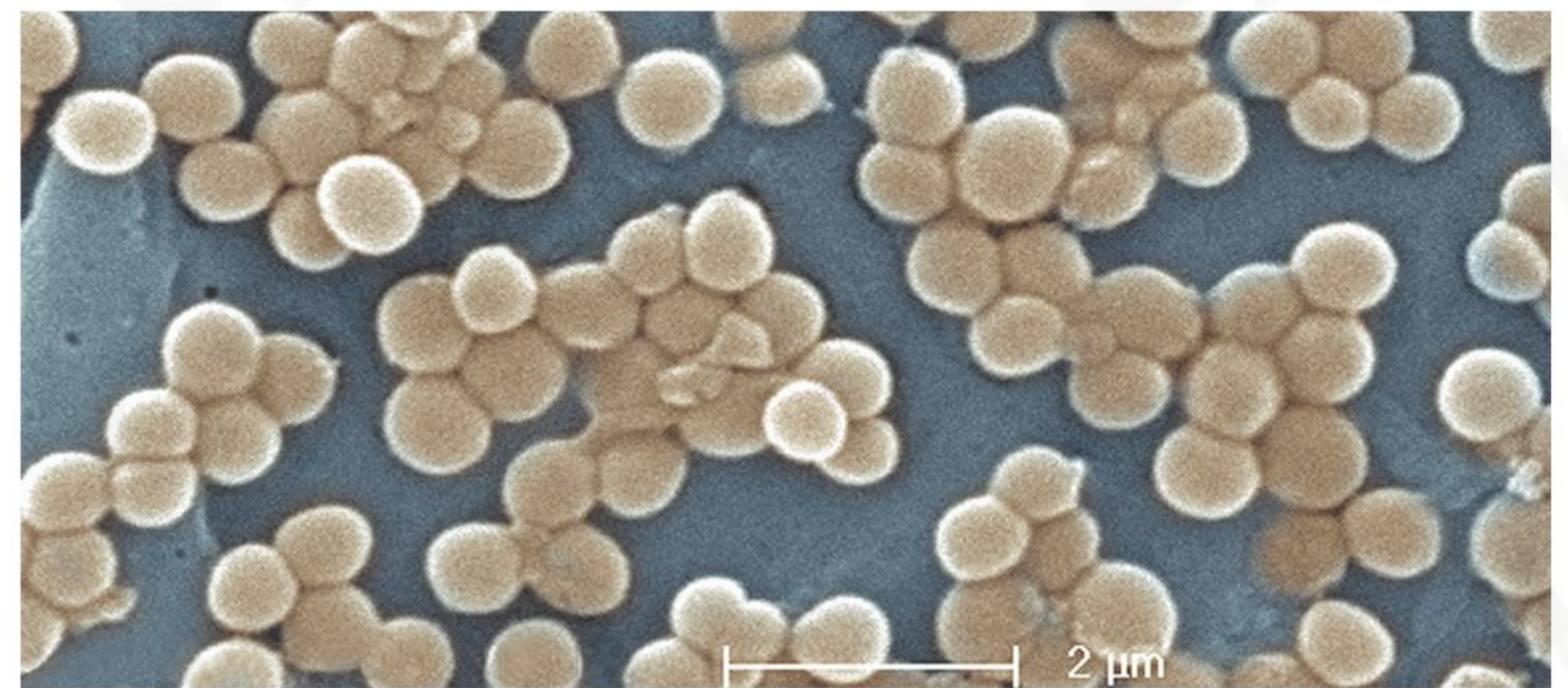
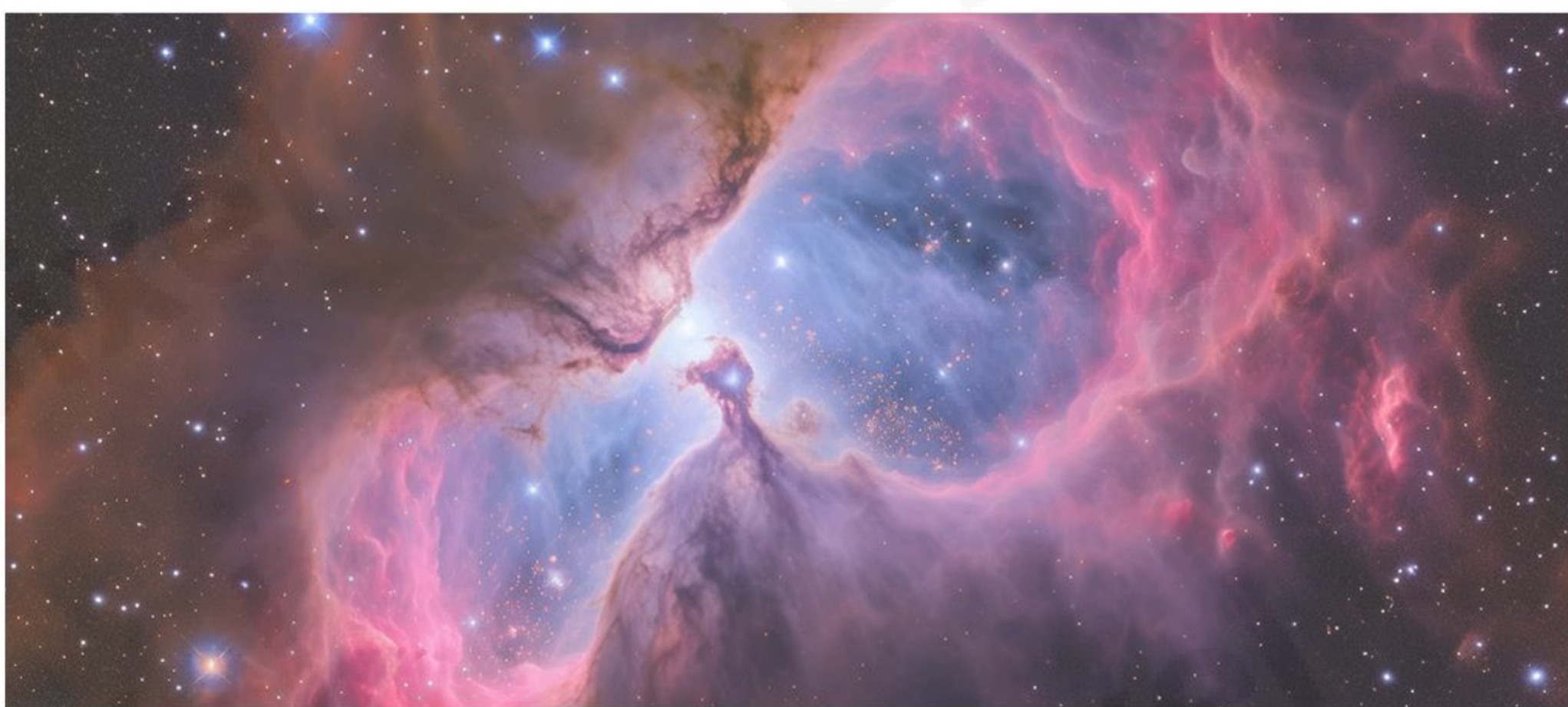
GSENSE3243BSI

43 MP ROLLING SHUTTER CMOS IMAGE SENSOR

GSENSE3243BSI is a APS-C stacked BSI image sensor designed with 3.2 μm pixels. The full resolution of the sensor can be read out at a bit depth of 14 bit and a maximum frame rate of 100 fps using an on-chip high speed serial interface or at 50 fps over 32 Sub LVDS channels operating at 1.05 Gb-ps/channel.

The image sensor has a peak quantum efficiency over 80%, a wide angle response of 37° , read noise of $2.0 e^-$ at full speed, and a dark current less than $1 e^-/\text{pixel}/\text{second}$ at 0 degree.

The sensor incorporates multiple features to enhance dynamic range including the dual-gain output, on-chip compression HDR function and digitally programmable piecewise linear HDR feature. The sensor achieves a dynamic range of 77.2 dB in dual gain mode and up to 83 dB using the more advanced HDR features.



Key features and Benefits

- ▶ Stacked BSI
- ▶ High Sensitivity
- ▶ Low Noise
- ▶ High Dynamic Range
- ▶ Multi-Slope HDR
- ▶ Dual Gain HDR

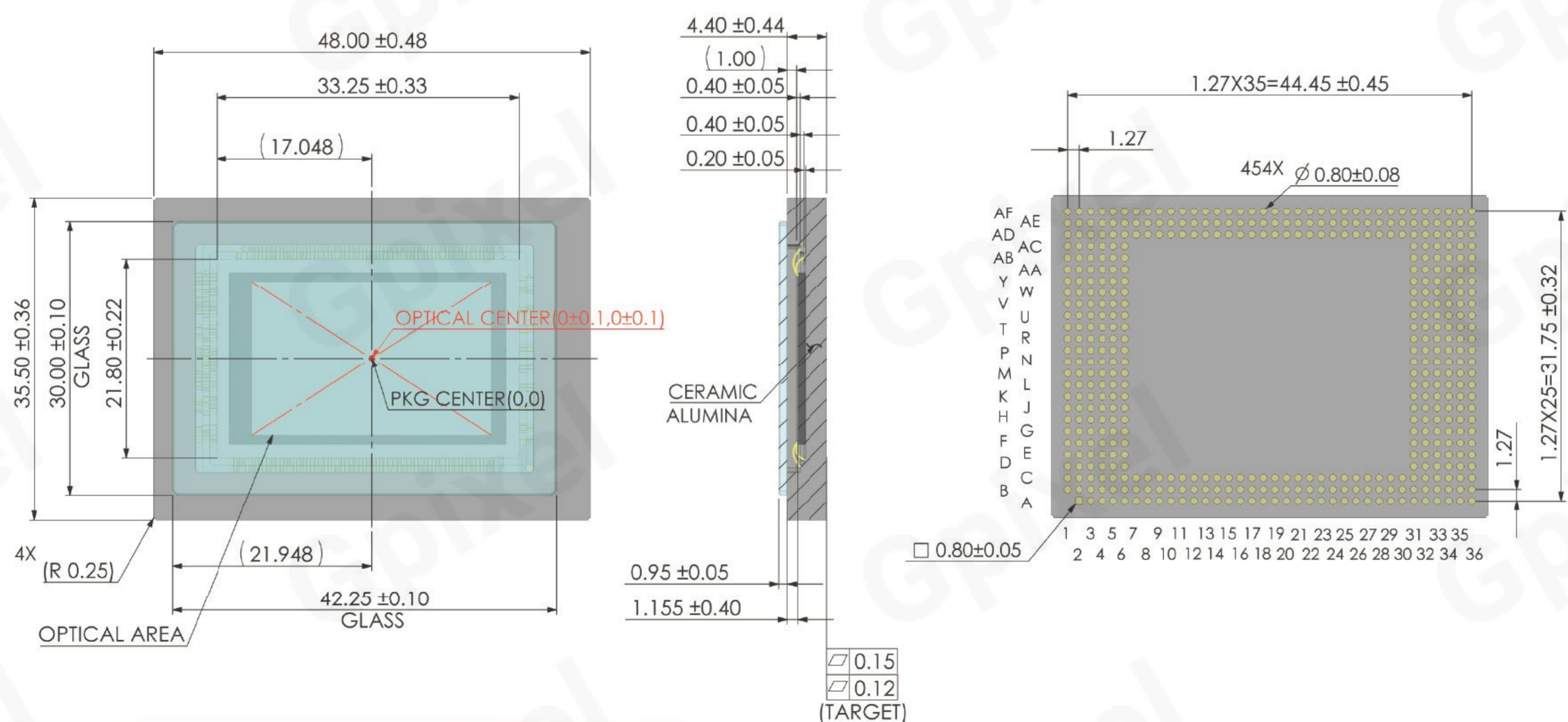
Application

- ▶ Spectroscopy
- ▶ Life Sciences
- ▶ Astronomy
- ▶ Microscopy

Specifications

Nr of Active Pixels	8192 (H) x 5232 (V)	Optical Format	APS-C
Pixel Size	3.2 μm x 3.2 μm	Photosensitive Area	26.2 mm (H) x 16.7 mm (V)
Shutter Type	Rolling Shutter	Peak QE	80% (550 nm, Mono)
Full Well Capacity	85 ke ⁻ (HDR multi-exp)	Temporal Noise	2.0 e ⁻ (Standard HG) 2.7 e ⁻ (HDR)
Dark Current	7.8 e ⁻ /pixel/s (40 °C)	Dynamic Range	83 dB (HDR multi-exp)
Max Frame Rate	100 fps	Output Format	32 ch LVDS 16 ch GSI
Max. Data Rate	84 Gbps	ADC	14 bit
Chroma	Mono	Power Consumption	2-4 W
Supply Voltage	3.3 V, 1.8 V, 1.25 V -2.2 V, 4.5 V	Package	455 pins LGA (48 mm x 35.5 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



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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