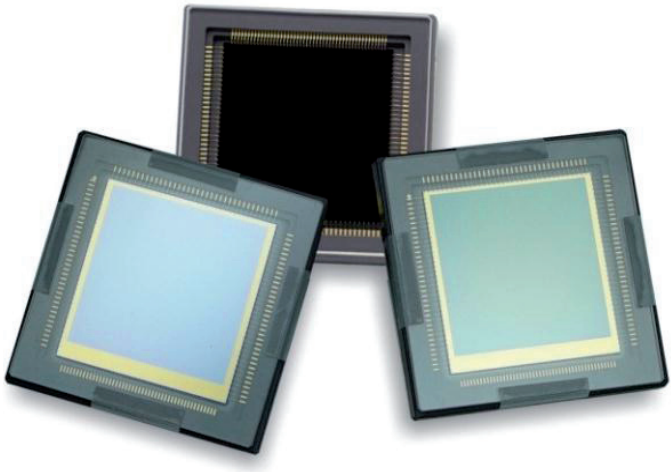
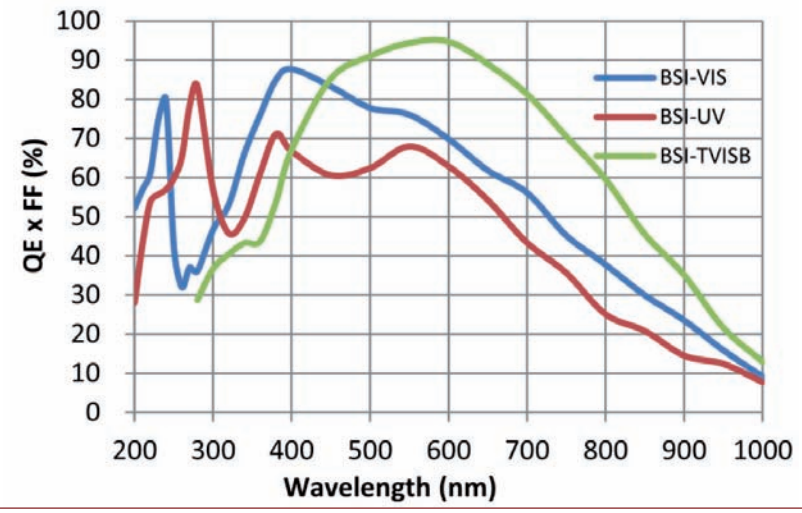
Sci-CMOS 400BSI
Backside Illuminated Scientific CMOS Image Sensor

Preliminary Short Form Datasheet



Sensor descriptions:

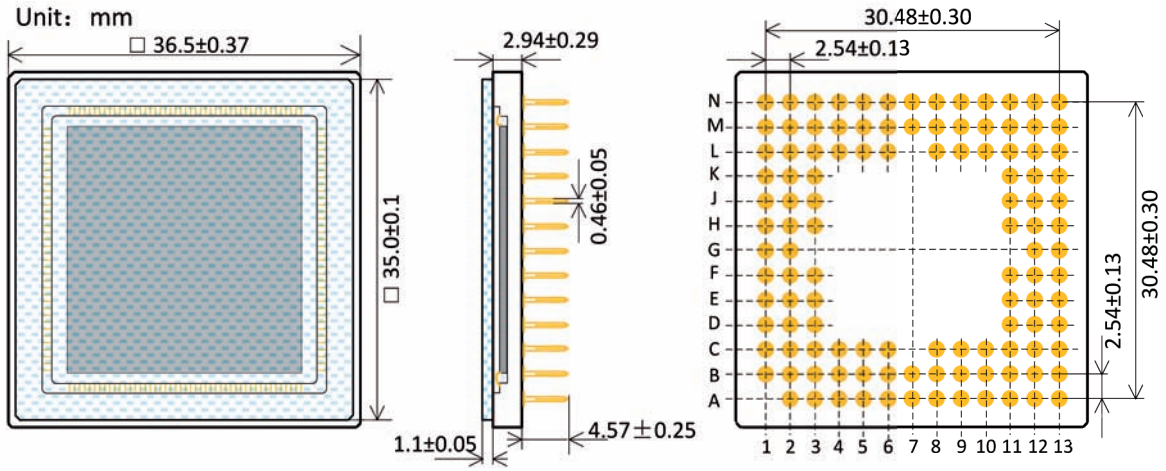
As the first backside illuminated scientific CMOS image sensor in the world, Sci-CMOS 400BSI features low readout noise of 1.2 e-, high dynamic range of 96dB, and low dark current of 0.2 e-/s/pix at deep cooling of -50 °C. Three sensor types are available with different anti-reflective coatings and epi-layer thickness, optimizing the peak QE at different wavelength for various applications: the peak QE is 83.3 % at 280 nm (-UV), 87.7 % at 400 nm (-VIS), and 95.0 % at 580 nm (-TVISB). In addition, Sci-CMOS 400BSI sensors can output 24fps at HDR mode and 48fps in STD mode. These features make Sci-CMOS 400BSI ideal for high-end scientific imaging, corona detection, astronomy, spectroscopic, and forensic imaging applications.



TVISB Specifications:

Photo-sensitive area	22.5 mm (H) x 22.5 mm (V)	SNR Max	49 dB
Pixel size	11 µm x 11 µm	Dark noise	1.2e$^-$
Resolution	2048 × 2048	Dark current	0.2 e$^-$/s/pix @ - 50 °C
Shutter type	Electronic rolling shutter	Dynamic range (HDR mode)	97.8 dB (intra-scene)
ADC	12 bit	Full well capacity	93 ke$^-$
Max frame rate	48 fps	Linear Full well capacity	92 ke$^-$
Data rate	2.4 Gbit/s @ 25 MHz	PRNU	< 2 % rms
Supply voltage	3.3 V / 1.8 V	Quantum efficiency	95 % @ 580 nm, 60 % @ 800 nm
Operating temperature	-55 °C ~ + 80 °C	FPN	< 0.1 %
Max power	< 600 mW	Package	115-pin PGA

Package:



ANDANTA GmbH Detektortechnologie
Ilzweg 7+9 • 82140 Olching/Deutschland
Tel: +49 8142 41058-0 • Fax: +49 8142 41058-29
e-mail: epost@andanta.de • www.andanta.de