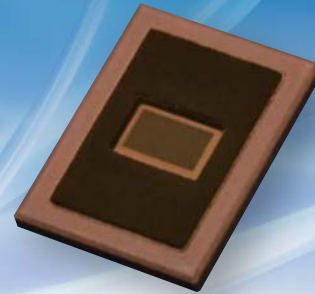




Full-HD super high sensitivity CMOS image sensor

BT200C



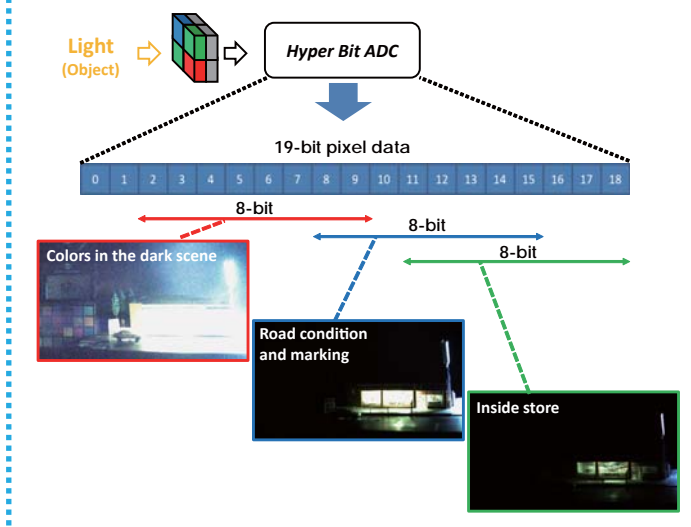
Description

BT200C is a 2-megapixels (Type 2/3) super high sensitivity CMOS image sensor. It is capable of grabbing high sensitivity color images clearly even in a dark scene under 0.01Lux such as a star-filled night. Brookman Technology's creative Hyper Bit® ADC, using folding integration and cyclic A/D conversion, is implemented in this chip so that it achieves an image with low temporal noise and wide dynamic range (>78dB @intra-scene). A sensor type is available in both color (Bayer RGB) and monochrome. This chip is suitable for various camera applications which require high sensitivity imaging.

Features

- Full-HD resolution: 1936(H) x 1096(V)
- Optical format: Type 2/3
- Active pixel area: 9.64mm (H) x 5.44 mm (V), 11.1mm (D)
- High sensitivity with low noise
- Electronic rolling shutter
- On-chip high speed Hyper Bit® ADC
19bit(30fps), 18bit(60fps) and 16bit(120fps)
- Windowing (Vertical only)
- Capable of slave mode with external horizontal sync. and vertical sync. signals
- Selectable analog gain
- Low power consumption (<1.5W)
- Available in color (Bayer RGB) and monochrome sensor

BT200C Hyper Bit® Imaging



Applications

- Low-light imaging camera
- Medical application
- Scientific experiment
- Security and Surveillance
- Industrial inspection

This development is supported by Japan Science and Technology Agency (JST), Adaptable and Seamless Technology transfer Program through Target-driven R&D (A-STEP).

For all product and custom CIS design inquiries, feel free to contact us below.

Brookman Technology, Inc. 125 Daikumachi, Nakaku, Hamamatsu, 430-0936 Japan

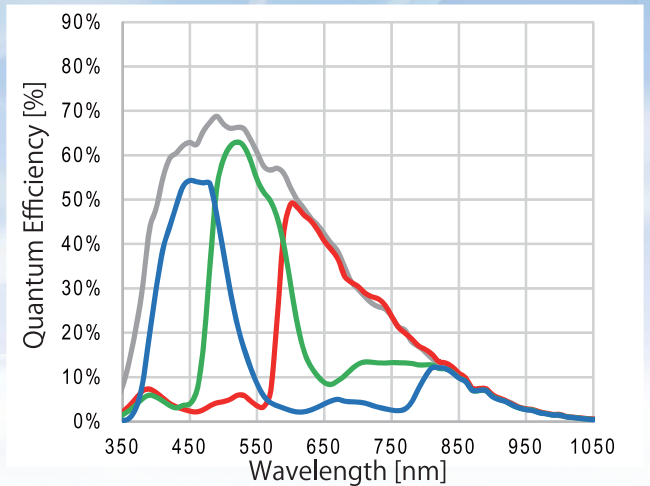
Website: <http://brookmantech.com> Tel: +81-53-482-7741 Email: bt_request@brookmantech.com



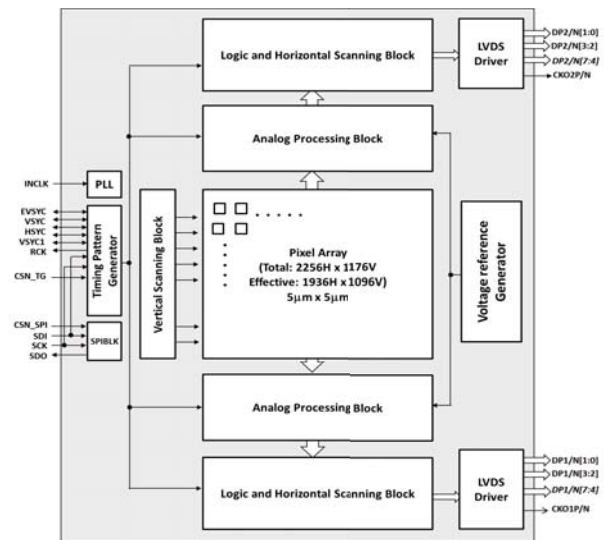
Specifications

Optical format	2/3 Type
Pixel size	5.0μm x 5.0μm
Total pixels	2256(H) x 1176(V)
Effective pixels	1936(H) x 1096(V)
Pixel type	Pinned 4Trs.
Shutter	Electronic rolling shutter
Windowing(ROI)	Available(V-direction only)
ADC resolution	On-chip 19-bit@30fps
Frame rate	30fps, 60fps and 120fps
Output interface	8-lane or 16-lane LVDS
Data rate	Max. 540Mbps/lane
Full well capacity	>20ke-
Dynamic range	78dB
SNR(Max.)	46dB
Dark noise	2.4e- (Analog gain 1x) 0.7e- (Analog gain 8x)
Sensitivity	4.0V/lux*s (Mono) 2.8V/lux*s (Green)
PRNU	<1%@Half saturation
Q.E.	68%@Mono (λ=490nm)
Dark current	<3e-/pixel/sec @20°C
Analog Gain	1x, 2x, 4x and 8x
Power supply	1.2V, 1.8V and 3.3V
Power consumption	<1.5W
Package type	256-pin CLGA
Chroma	Monochrome and Bayer RGB
Input clock rate	13.5MHz

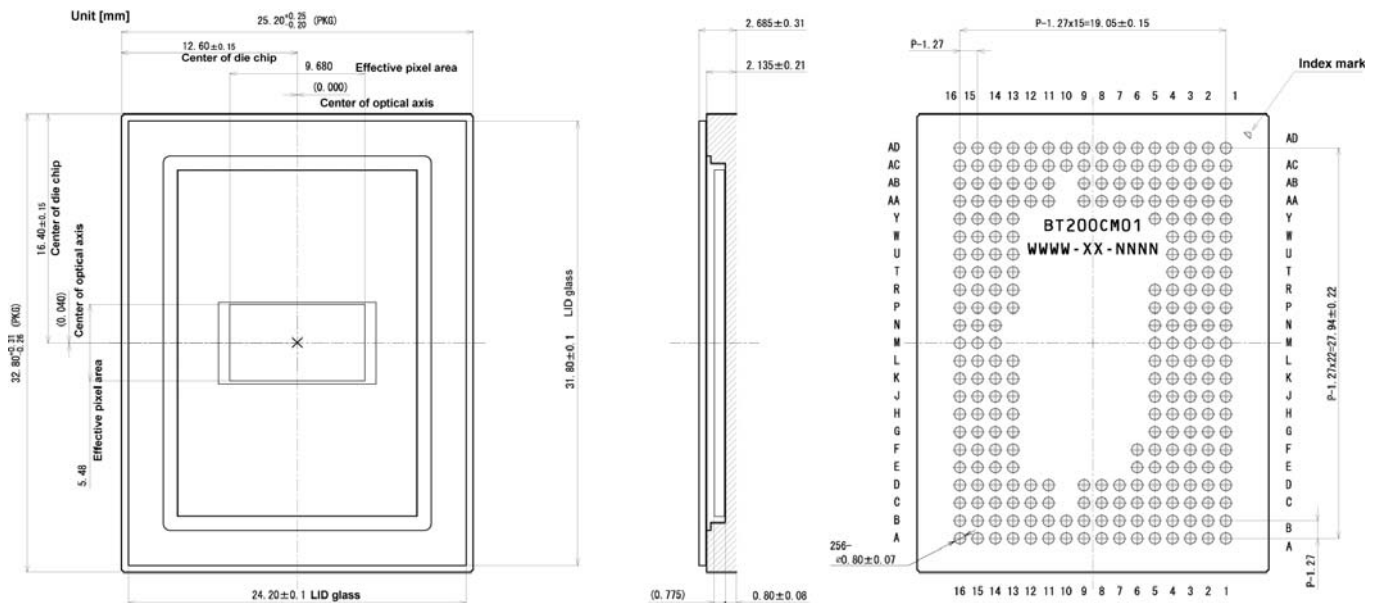
Q.E. Curve



Block Diagram



Sensor Package



For all product and custom CIS design inquiries, feel free to contact us below.

Brookman Technology, Inc. 125 Daikumachi, Nakaku, Hamamatsu, 430-0936 Japan

Website: <http://brookmantech.com> Tel: +81-53-482-7741 Email: bt_request@brookmantech.com

