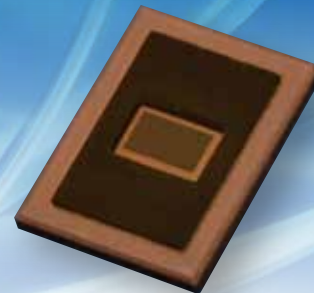




Full-HD super high sensitivity CMOS image sensor

BT200C



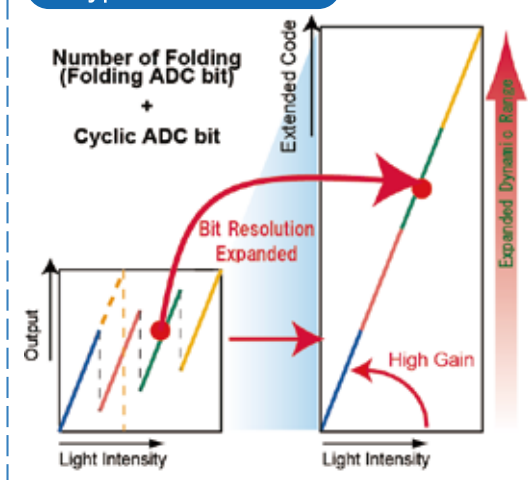
Description

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)
- 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

Hyper Bit® ADC



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

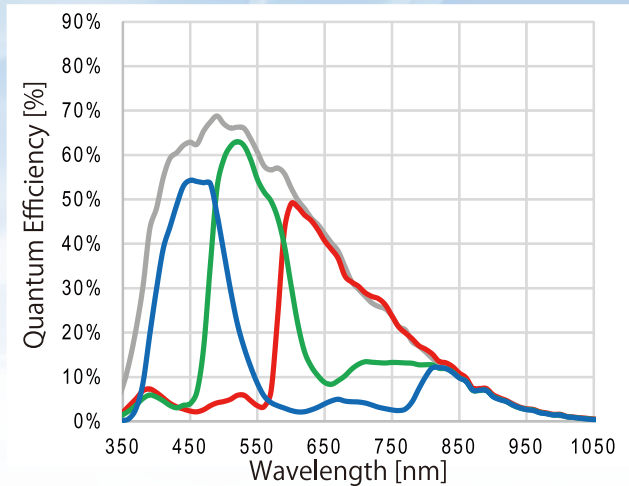
Website: <http://brookmantech.com> Tel: +81-53-482-7741 Email: bt_request@brookmantech.com

Specifications

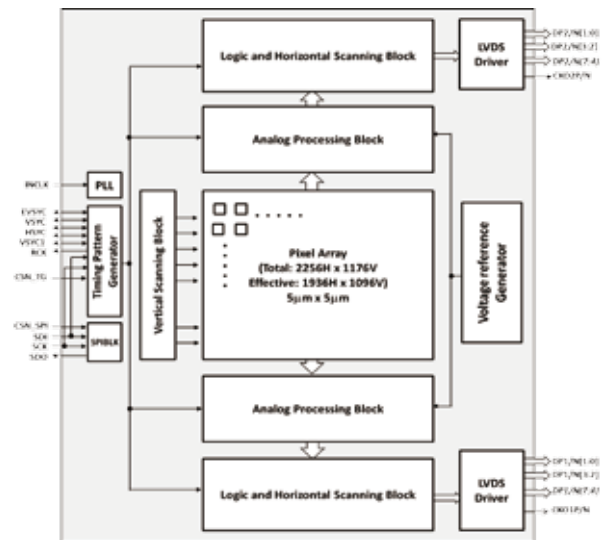
Preliminary

Optical format	2/3 Type
Pixel size	5.0 μ m x 5.0 μ m
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 and 60fps
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	Available
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

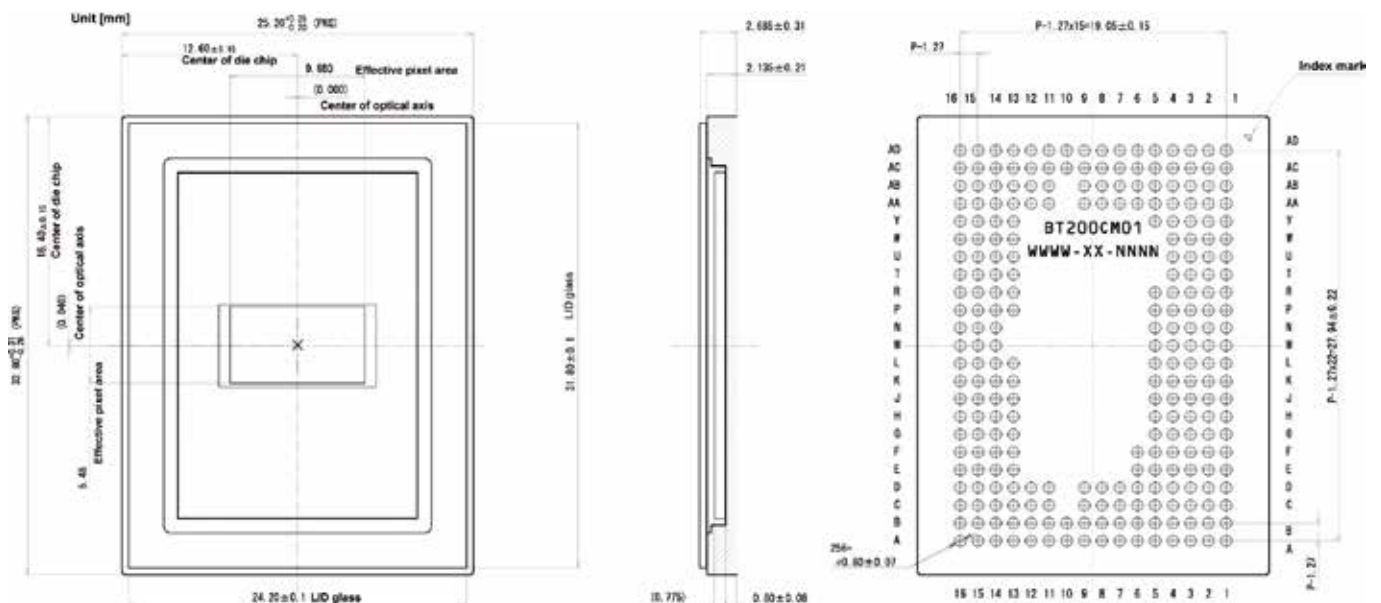
Q.E. Curve



Block Diagram



Sensor Package



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