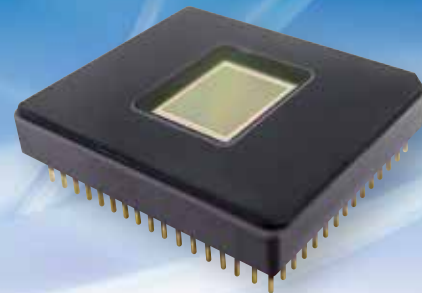




# SXGA high speed and sensitivity CMOS image sensor

# BT130A



## Description

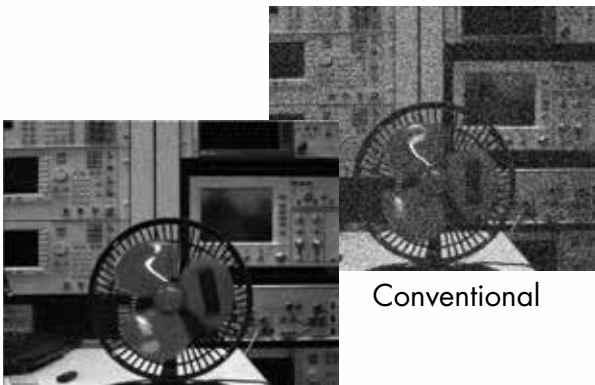
BT130A is a 1.3-megapixels (Type 1/2) high speed and high sensitivity CMOS image sensor. It operates up to 1800fps with SXGA resolution and higher frame rates by using a function of windowing while keeping low temporal noise and high sensitivity. Brookman Technology's enhanced global shutter pixel so-called "True Snapshot-PIXEL (TS-PIXEL)" is implemented. It captures every moment without motion blurs. With these further high performances, BT130A makes it possible to take a high speed video under normal fluorescent tube lighting.

## High speed and sensitivity



1800fps @SXGA color image

## Low noise and anti motion blur



True Snapshot-PIXEL

Conventional

## Features

- SXGA resolution: 1284(H) x 1028(V)
- Optical format: Type 1/2
- Active pixel area: 7.17mm(H)x5.73mm(V), 9.18mm(D)
- TS-PIXEL Global shutter
- 1800fps with SXGA resolution
- Windowing (Vertical only) with enhanced frame rate
- High sensitivity with low noise @SXGA
- Capable of slave mode with external horizontal sync. and vertical sync. signals
- On-chip 12bit high speed ADC
- Selectable analog gain
- Low power consumption (<1.5W)
- Available in color (Bayer RGB) and monochrome sensor

## Applications

- High speed camera
- Machine vision
- Motion analysis
- Industrial imaging
- Crash test analysis
- Scientific experiment

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

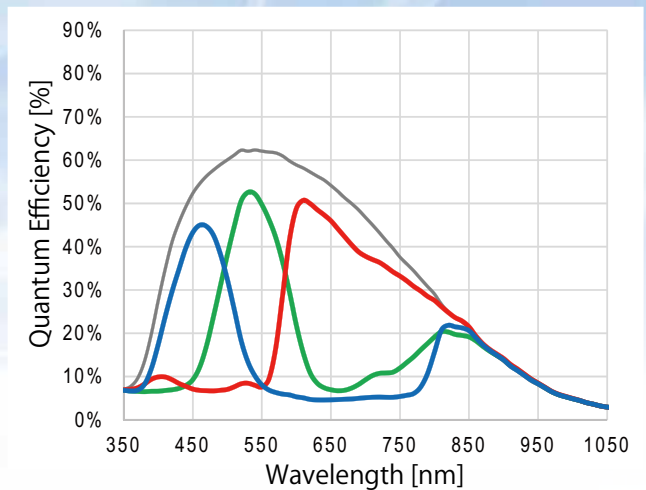
**Brookman Technology, Inc.** 125 Daikumachi, Nakaku, Hamamatsu, 430-0936 Japan

Website:<http://brookmantech.com> Tel: +81-53-482-7741 Email:[bt\\_request@brookmantech.com](mailto:bt_request@brookmantech.com)

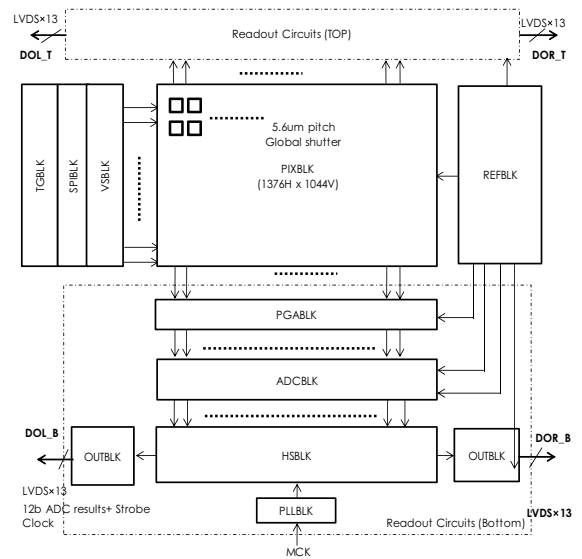
## Specifications

Optical format	1/2 Type
Pixel size	5.6 $\mu$ m x 5.6 $\mu$ m
Total pixels	1376(H) x 1044(V)
Effective pixels	1284(H) x 1028(V)
Pixel type	Pinned 4Trs.
Shutter	True-CDS global shutter
Windowing(ROI)	Available(V-direction only)
ADC resolution	12-bit on-chip
Frame rate	1800fps@SXGA
Output interface	48-lane LVDS
Data rate	Max. 680Mpix/s @lane
Full well capacity	16ke-
Dynamic range	>64dB
SNR(Max.)	41dB
Dark noise	9.4e-
Sensitivity	6.8V/lux*s (Mono) 3.4V/lux*s (Green)
PRNU	1%@Half saturation
Q.E.	62%@Mono ( $\lambda$ =550nm)
Analog gain	1x, 2x and 4x
Power supply	1.8V and 3.3V
Power consumption	<1.5W
Package type	241-pin $\mu$ PGA
Chroma	Monochrome and Bayer RGB
Input clock rate	34MHz

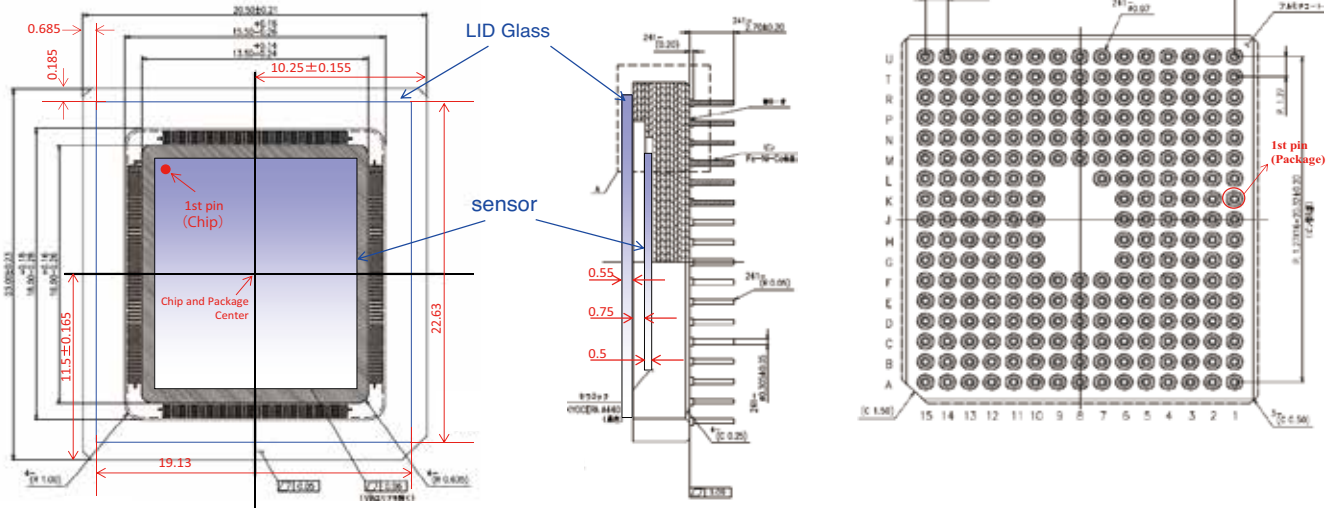
## Q.E. Curve



## Block Diagram



## Sensor Package



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