1/3-inch CMOS FULL HD Digital Image Sensor

BG0803 Datasheet

（The contents of this Preliminary Datasheet are subject to change without notice）

General Descriptions

BG0803 is a high performance 1/3 inch Full HD CMOS digital image sensor with an active-pixel array of 1936H x 1096V. This chip features high sensitivity and high dynamic range 2.8um x 2.8um pixels. An external trigger mode is implemented. It is programmable through a simple two-wire serial interface.

Features

- High sensitivity and high dynamic range pixel.
- Single frame or video trigger mode.
- Programmable controls: gain, frame rate, frame size, exposure.
- Superior low light performance.
- Enhanced NIR performance.
- Auto black level calibration.
- Black sun cancellation.
- Defect pixel correction
- Maximum 30 frame per second.

Applications

- High-end surveillance
- Industrial vision

Key Parameter

Table 1 Key Specification

Parameter		Typical Value
Optical format		1/3 inch
Active pixel array		1936H x1096V
Pixel size		2.80um(H) x 2.80um(V)
Active pixel array Area		5420.8um x 3068.8um
Frame rate		30fps@full frame
Color filter array		Bayer RGB/BW
CRA		0°
Shutter Type		Electronic Rolling
Sensitivity@550nm		2.2V/lux.sec
Dark current@60℃①		10mV/s (preliminary)
SNR_{max}		41dB
Dynamic range		70dB
Output		12-bit
Power supply	Digital	1.35V~1.65V
	IO	1.7V~3.45V
	Analog	3.15V~3.45V
	Pixel	3.2V~3.4V
Power Consumption		300mW@30fps
Temperature range②		-30 ~70 ℃
Package Option		CSP

Note 1: junction temperature

Note 2: junction temperature