1/2.7-inch CMOS HD Digital Image Sensor

BG0703 Datasheet

General Descriptions

BG0703 is a high performance 1/2.7 inch HD CMOS digital image sensor with an active-pixel array 1288H x 728V. This chip features breakthrough high sensitivity and high dynamic range 4.5um x 4.5um pixels. Also multi-exposure mode and 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.
- Two exposure context switching to extend dynamic range.
- Programmable controls: gain, frame rate, frame size, exposure.
- Superior low light performance.
- Enhanced NIR performance.
- Auto black level calibration.
- Black sun cancellation.
- Maximum 60 frame per sec.

Applications

- High-end surveillance
- Industrial vision

Key Parameter

Table 1 Key Specification

Parameter		Typical Value
Optical format		1/2.7 inch
Active pixel array		1288H x 728V
Pixel size		4.50um(H) x 4.50um(V)
Active pixel array Area		5796 um x 3276 um
Frame rate		60fps@full frame
Color filter array		Bayer RGB/BW
CRA		0°
Shutter Type		Electronic Rolling
Sensitivity@550nm		5.8V /lux-sec
Dark current@60℃①		24mV /sec
SNR_{max}		43dB
Dynamic range		63dB(normal)
		100db(extend)
Output		12-bit
Power supply	Digital	1.4V~1.6C
	IO	3.0V~3.45V
	Analog	3.15V~3.45V
	Pixel	2.9V~3.1V
Power Consumption		300mW@50fps
Temperature range②		-30 ~70 ℃
Package Option		CSP

Note 1: junction temperature

Note 2: junction temperature

In the absence of confirmation by device specification sheets, BRIGATES takes no responsibility for any defects that may occur in equipment using any BRIGAGES device shown in catalogs, data book, etc. Contact BRIGATES in order to obtain the latest device specification before using any BRIGATES device.