

2.3MP USB3 Vision Camera CMOS Global Shutter

NEW

High Performance 2.3 MP CMOS

STC-MBS231U3V 【Mono】

STC-MCS231U3V 【Color】

Sentech has released the STC-MB(C)S231U3V (41 fps) USB3 Vision Camera. This high performance camera is available at an outstanding price. Thanks to Global Shutter, this camera is capable of capturing moving objects with no problem. With the simplicity of USB 3.0, this camera allows any user to integrate this camera with ease.



Pregius



Features

- 1920 (H) x 1200 (V)
- 5.86 μm x 5.86 μm
- 41.6 fps
- 1/1.2" Sensor
- USB3 Vision Compliant
- Global Shutter
- USB 3.0 MicroB Connector
- 28 x 28 x 40 mm (excluding connectors)

Specifications

Item	Specification
Product Name	STC-MB5231U3V (Color)
Imager	MCS231U3V (1/3")
Shutter Type	Global Shutter
Effective Pixels	11920 (H) x 1200 (V)
Cell Size	5.56 μm x 5.86 μm
Scanning Method	Progressive
Scan Mode	Full Scan
Frame Rate	41.6fps (RAW8, 10bit) / 32.4fps (RAW12bit)
Video Output	8/10/12 bit Raw Data
S/N Ratio	3 digit Low Noise (Gain 0dB)
Sensitivity (min)	1160 Lux (Color) / 570 Lux (Mono)
Auto Mode	Auto Shutter / Auto Gain / Manual
Electronic Shutter	Exposure Time 18.6 μsec ~ 20sec (Full Scan, RAW8bit) Exposure Time 23.4 μsec ~ 40sec (Full Scan, RAW10,12bit)
Analog Gain	0dB ~ 24 dB

Spectral Response

MCS231U3V

Red Green Blue

Wavelength nm

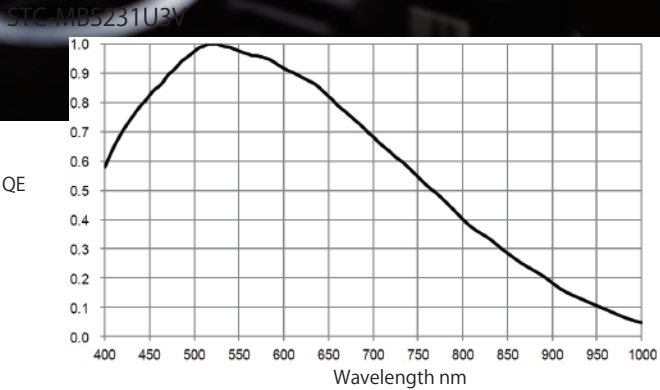
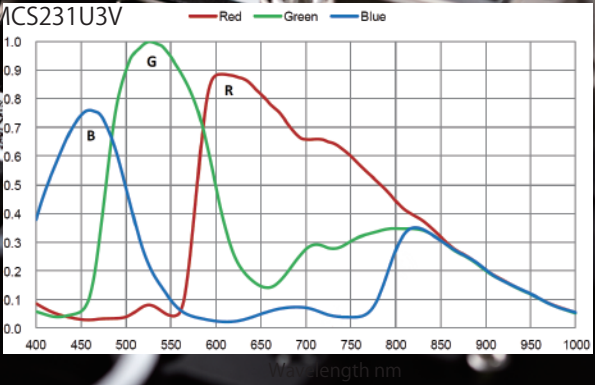
STC-MB5231U3V

Digital Gain	: 0 dB ~ 6 dB	QE
Offset	: 0 ~ 511 digit (RAW12bit)、0 ~ 127 digit (RAW10bit) 0 ~ 31 digit (RAW8bit)	
ROI	: Supported	
Binning	: Supported (Mono only, Horizontal & Vertical x 2)	
Decimation	: Supported	
Mirror Image	: Mirror / Upside Down / Left & Right Reversal	
Pixels Defect	: Supported (Max. 64 pixels)	
Correction		
Whit Balance	: Auto / Push to Set / Manual (Color only)	
Operating Mode	: Free-Run / Edge Preset Trigger / Pulse Width Trigger / Start-Stop Trigger (Software trigger only)	
Interface	: USB3.0 Super speed	
IO (Input / Output)	: 3 GPIO / 1 Hardware Reset	
Input Voltage	: +5V (typ.) (USB standard)	
Consumption	: TBD	
Dimensions	: 28 (W) x 28 (H) x 40 (D) mm (excluding connector)	
Optical Filter	: IR Cut Filter (Color only)	
Lens Mount	: C Mount	
USB Connector	: USB 3.0 MicroB Connector	
I/O Connector	: HR10A-7R-6PB (Hirose) or equivalent	
Compliance	: RoHS Compliant	

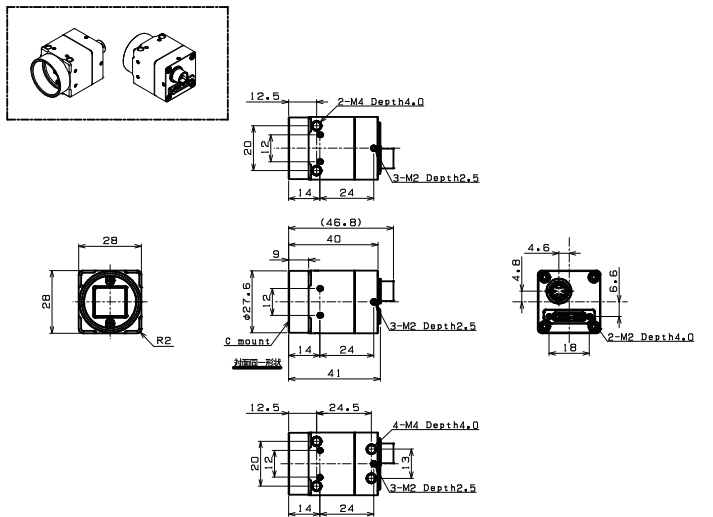
Spectral Response

The graph displays the spectral response of the STC-MB5231U3V sensor. The x-axis represents wavelength in nanometers (nm), ranging from 400 to 1000. The y-axis represents relative response, ranging from 0.0 to 1.0. Three curves are plotted: Red (Red), Green (Green), and Blue (Blue). The Blue curve peaks at approximately 460 nm. The Green curve peaks at approximately 520 nm. The Red curve peaks at approximately 600 nm. The curves show a secondary peak around 820 nm for the Blue and Green channels, and a broad response extending to 1000 nm for the Red channel.

Wavelength (nm)	Red Response	Green Response	Blue Response
400	0.05	0.05	0.40
450	0.05	0.10	0.75
500	0.05	0.95	0.30
550	0.05	0.90	0.10
600	0.85	0.15	0.05
650	0.80	0.10	0.05
700	0.65	0.30	0.05
750	0.60	0.25	0.05
800	0.45	0.35	0.35
850	0.30	0.25	0.30
900	0.15	0.10	0.15
950	0.05	0.05	0.05
1000	0.05	0.05	0.05



Drawings



※ Pregius is a trademark of Sony Corporation.

※Specifications are subject to change without notice.