



## HAMPO-USB-0580-V1.0

8MP Sony IMX179 M6.5 Fixed Focus USB2.0 Camera Module



Hampo 0767 is designed for video conferencing, education and document scanning.

This camera module adopt a high quality sensor 1/3.2" Sony IMX 179, show you an excellent video image. Meanwhile, using a higher speed connector USB3.0, saving time during the data transmission.

Compatible with most IOS and popular Apps: Win XP/ Vista /Win7/Win8 Linux with UVC.

### Key Features

- More than HD: This camera adopts 8MP IMX179 sensor for sharp image and accurate color reproduction.
- Capture Video with Audio: High frame rates, MJPG 15fps@3264 x 2448, 30fps@1080P; YUY2 30fps@640x 480.
- High Quality of Image/Video: The camera with high definition 3264\*2448P and lower color reproduction deviation produce sharp image and accurate information.
- FF/AF could be optioned focusing lens: Customers could option fixed focus or auto focus lens as need.
- Applications: This tiny 62mm x 9mm camera board can be installed in most hidden and narrow position for document scanner, LED large screen display, advertisement machine, all-in-one camera, POS equipment, ATM or other machine vision application.



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### 8MP Sony IMX179 M6.5 Fixed Focus USB2.0 Camera Module

Camera Module No.	<b>HAMPO-USB-0580-V1.0</b>
Resolution	8MP
Image Sensor	IMX179
Sensor Type	1/3.2"
Pixel Size	1.4um x 1.4um
Wide Angle	
F.NO	2.0
Pixel	3264*2448
View Angle	75°(DFOV) 63.2°(HFOV)49°(VFOV)
Lens TTL	4.649mm
Module Type	Fixed Focus
Lens Model	HAMPO-LENS-40-50016A1-01
Interface	USB 2.0
Output Format	MJPEG / YUV2
Auto Control	Saturation, Contrast, Acutance White Balance, Exposure
Audio	High quality digital MIC, single channel
Input Voltage	DC 5V
Working Current	Max 300mA
PCB Size	62mm x 9mm
System Compatibility	Windows XP (SP2, SP3), Vista, 7, 8, 10, 11 Android, Mac OS, Linux or OS with UVC Driver Raspberry Pi by USB Port
Software for USB Camera	AMCAP, Webcam Viewer, V4L2 Controls Contacam, VLC Player, MotionEye OS iSpy, ZoneMider, Yawcam
Lens Type	None
Operating Temperature	-20°C to +70°C
USB Cable	USB-Cable-U015

Wide Compatibility with Windows, Android, Mac OS, Linux, or Raspberry Pi



Raspberry Pi



# **HAMPO-USB-0580-V1.0**

## **8MP Sony IMX179 M6.5 Fixed Focus USB2.0 Camera Module**



Top View



Side View



Bottom View



Mating Connector

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FORMAT	RESOLUTION	FRAME RATE
		USB 2.0
MJPEG	640 x 480 (VGA)	30 FPS
	1280 x 720 (720P)	30 FPS
	1920x 1080 (1080P)	30 FPS
	3264 x 2448(8MP)	15 FPS
YUV2	640 x 480 (VGA)	30 FPS

Lens parameter:5E+IR

EFL:3.79mm

F.NO:4.649

View Angle:D75° H63.2° V49°

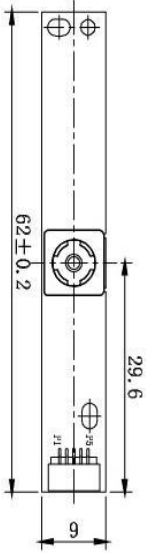
Distortion:<0.1%

Chip Type:IMX179

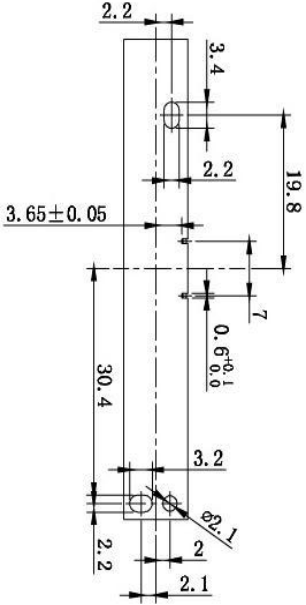
Array Size:3288x2512

Lens Size:1/3.2”

TOP VIEW



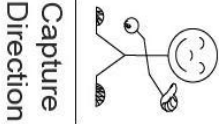
BOTTOM VIEW



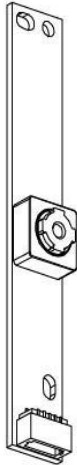
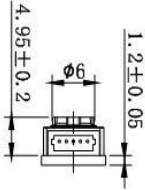
PH1 0. Side entry type, 5PIN

DGND	DGND	DP	DM	USB5V
PIN5	PIN4	PIN3	PIN2	PIN1

SIDE VIEW



Capture  
Direction



NOTE

1. The unmarked tolerance of linear dimension is ±0.1mm
2. Sensor :13M-1/3.1” CMOS

UNSPECIFIED TOL.			SIGNATURE		DATE		R & D Center		DONGGUAN HAMPO ELECTRONIC TECHNOLOGY CO.,LTD	
.XXX	±	0.005	DWN.BY	MIKE	2022.04.27		PART NAME	USB Camera		
.XX	±	0.05	CHK.BY				DWG NO	2.03.0580-0211	PCBA	
.X	±	0.1	APP.BY				SCALE	UNIT	SHEET	PART NO.
			MATERIAL	/			1:1	mm	1/1	A4

RHS

$$FB=4.43\pm0.1(AIR,INFINITY)$$
$$=4.5 \pm 0.1 (\text{INFINITY, WITH } 0.21 \text{ mm IR FILTER})$$
$$=4.649 \pm 0.1 (\Delta T \ 0.1 \text{ m, WITH } 0.21 \text{ mm IR FILTER})$$

FNO=2±5% (INFINITE)

VERTICAL: 49.0° ( $\gamma' = 1.747$ )

HORIZONTAL:  $63.2^\circ (\gamma' = 2.356)$

DIAGONAL:  $75^\circ (\gamma' = 2.934)$

$$\text{TV-DISTORTION}(\text{Traditional} \times 2) < 1\% \quad \Delta \Delta$$

RELATIVE ILLUMINANCE = 36.1% (@ $\gamma' = 2.934$ ) (Ref.)

CHIEF RAY ANGLE < 32°

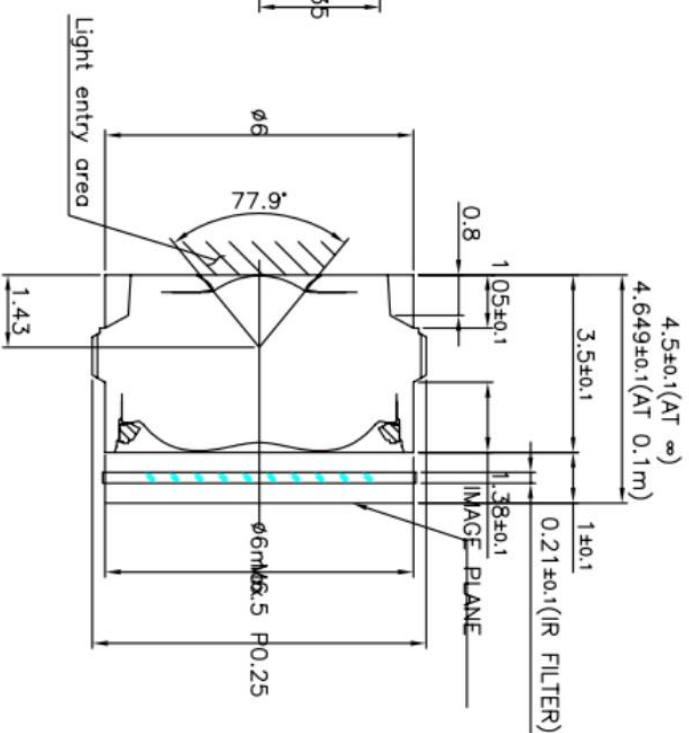
MAXIMUM IMAGE CIRCLE: Ø6.17

IR-CUT COATING FILTER:NONE

BARREL MATERIAL:PC(BLACK)

VCM TYPE:ALPS 501A &amp; 508A

PATENT NO.:US8284291,US8233224,US8179614



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				M <sup>o</sup> T.L.	DRAWN		
				TREAT	CHECKED		
				SCALE	DATE	APPROVED	
				NO.			
				NAME			
TV-DISTORTION TO CHANGE	Jerry		101013	PS	10/1	06/25/21	50016A1
REVISION DESCRIPTION	INSCN	APPD	DATE				

## [Product Brief]

Ver.1.0

# IMX179

### Diagonal 5.7mm (Type 1/3.2) CMOS Image Sensor with Square Pixel for Color Cameras

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#### Description

The IMX179 is a diagonal 5.7 mm (Type 1/3.2) CMOS active pixel type image sensor with a square pixel array and 8.08M effective pixels. This chip operates with three power supplies, analogue 2.7 V, digital 1.2 V, and IF 1.8 V, and has low power consumption. High sensitivity, low dark current, and no smear are achieved through the adoption of R,G, and B primary color pigment mosaic filters. This chip features an electronic shutter with variable charge-storage time.

In addition, this product is designed for use in cellular phone and tablet PC. When using this for another application, Sony does not guarantee the quality and reliability of product.

Therefore, don't use this for applications other than cellular phone and tablet PC. Consult your Sony sales representative if you have any questions.

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#### Functions and Features

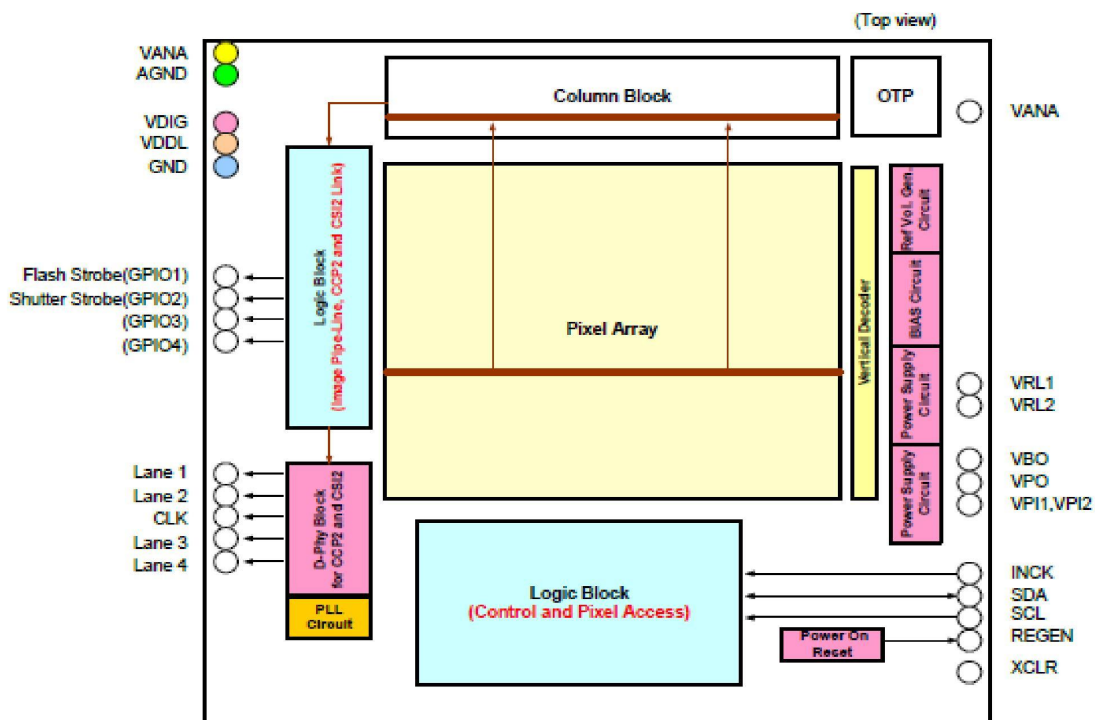
- ◆ CMOS active pixel type dots
- ◆ 2-wire serial communication circuit on chip
- ◆ CSI2 serial data output
- ◆ Timing generator, H and V driver circuits on chip
- ◆ CDS/PGA on chip
- ◆ 10-bit A/D converter on chip
- ◆ Automatic optical black (OB) clamp circuit on chip
- ◆ PLL on chip (rectangular wave/sine wave)
- ◆ High sensitivity, low dark current, no smear
- ◆ Excellent anti-blooming characteristics
- ◆ Variable-speed shutter function (1H units)
- ◆ R, G, B primary color pigment mosaic filters on chip
- ◆ Max. 30 frame/s in all-pixel scan mode
- ◆ Pixel rate: >260 MHz (>30 frame/s at All-pixel mode)



## Device Structure

◆ CMOS image sensor	
◆ Image size	: Diagonal 5.7 mm (Type 1/3.2)
◆ Total number of pixels	: 3288 (H) × 2512 (V) approx. 8.26M pixels
◆ Number of effective pixels	: 3280 (H) × 2464 (V) approx. 8.08M pixels
◆ Chip size	: 6.18 mm (H) × 5.85 mm (V)
◆ Unit cell size	: 1.4μm (H) × 1.4μm (V)
◆ Substrate material	: Silicon

## Block Diagram



## Exmor R

\* Exmor R is a trademark of Sony Corporation. The Exmor R is a Sony's CMOS image sensor with significantly enhanced imaging characteristics including sensitivity and low noise by changing fundamental structure of Exmor™ pixel adopted column parallel A/D converter to back-illuminated type.

Sony reserves the right to change products and specifications without prior notice.

This information does not convey any license by any implication or otherwise under any patents or other right.

Application circuits shown, if any, are typical examples illustrating the operation of the devices. Sony cannot assume responsibility for any problems arising out of the use of these circuits.





## Camera Reliability Test

Reliability Inspection Item			Testing Method	Acceptance Criteria
Category		Item		
Environmental	Storage Temperature	High 60°C 96 Hours	Temperature Chamber	No Abnormal Situation
		Low -20°C 96 Hours	Temperature Chamber	No Abnormal Situation
	Operation Temperature	High 60°C 24 Hours	Temperature Chamber	No Abnormal Situation
		Low -20°C 24 Hours	Temperature Chamber	No Abnormal Situation
	Humidity	60°C 80% 24 Hours	Temperature Chamber	No Abnormal Situation
	Thermal Shock	High 60°C 0.5 Hours Low -20°C 0.5 Hours Cycling in 24 Hours	Temperature Chamber	No Abnormal Situation
Physical	Drop Test (Free Falling)	Without Package 60cm	10 Times on Wood Floor	Electrically Functional
		With Package 60cm	10 Times on Wood Floor	Electrically Functional
	Vibration Test	50Hz X-Axis 2mm 30min	Vibration Table	Electrically Functional
		50Hz Y-Axis 2mm 30min	Vibration Table	Electrically Functional
		50Hz Z-Axis 2mm 30min	Vibration Table	Electrically Functional
	Cable Tensile Strength Test	Loading Weight 4 kg 60 Seconds Cycling in 24 Hours	Tensile Testing Machine	Electrically Functional
Electrical	ESD Test	Contact Discharge 2 KV	ESD Testing Machine	Electrically Functional
		Air Discharge 4 KV	ESD Testing Machine	Electrically Functional
	Aging Test	On/Off 30 Seconds Cycling in 24 Hours	Power Switch	Electrically Functional
	USB Connector	On/Off 250 Times	Plug and Unplug	Electrically Functional





## Camera Inspection Standard

Inspection Item		Inspection Method	Standard of Inspection
Category	Item		
Appearance	FPC/ PCB	Color	Major Difference is Not Allowed.
		Be Torn/Chopped	Copper Crack Exposure is Not Allowed.
		Marking	Clear, Recognizable (Within 30cm Distance)
	Holder	Scratches	The Inside Crack Exposure is Not Allowed
		Gap	Meet the Height Standard
		Screw	Make Sure Screws Are Presented (If Any)
		Damage	The Inside Crack Exposure is Not Allowed
	Lens	Scratch	No Effect On Resolution Standard
		Contamination	No Effect On Resolution Standard
		Oil Film	No Effect On Resolution Standard
		Cover Tape	No Issue On Appearance.
Function	Image	No Communication	Test Board Not Allowed
		Bright Pixel	Black Board Not Allowed In the Image Center
		Dark Pixel	White board Not Allowed In the Image Center
		Blurry	The Naked Eye Not Allowed
		No Image	The Naked Eye Not Allowed
		Vertical Line	The Naked Eye Not Allowed
		Horizontal Line	The Naked Eye Not Allowed
		Light Leakage	The Naked Eye Not Allowed
		Blinking Image	The Naked Eye Not Allowed
		Bruise	Inspection Jig Not Allowed
		Resolution	Chart Follows Outgoing Inspection Chart Standard
		Color	The Naked Eye No Issue
		Noise	The Naked Eye Not Allowed
		Corner Dark	The Naked Eye Less Than 100px By 100px
		Color Resolution	The Naked Eye No Issue
Dimension		Height	The Naked Eye Follows Approval Data Sheet
		Width	The Naked Eye Follows Approval Data Sheet
		Length	The Naked Eye Follows Approval Data Sheet
		Overall	The Naked Eye Follows Approval Data Sheet

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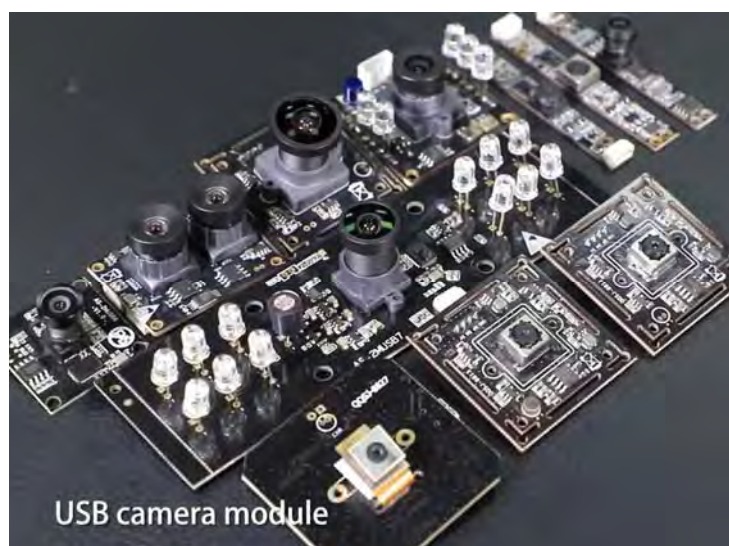


## Company HAMPO

Dongguan Hampo Electronic Technology Co., Ltd. was established in 2015, a next-generation technology driven manufacturer specialized in research, design, and produce of audio and video products. Hampo is occupying 150,000 square feet automated plants with 500 employees of annual throughput 180,000,000 units cameras.

Hampo provides OEM, ODM design, contract manufacturing, and builds the camera products. You may provide the requirements to us, even with a hand draft, our sales and engineering work together to meet your needs. We consider ourselves your last-term partner in developing practical and innovative solutions.

Our team covers everything from initial concept development to mass produced product. Hampo specializes in customized camera design, raw material, electronic engineering, firmware/software development, product testing, and packing design. Our experienced strategic supply systems offer a robust and dependable manufacturing capacity for orders of various sizes.



## Limited Warranty

Hampo provides the following limited warranty if you purchased the Product(s) directly from Hampo company or from Hampo's website, [www.hampotech.com](http://www.hampotech.com). Product(s) purchased from other sellers or sources are not covered by this Limited Warranty. Hampo guarantees that the Product(s) will be free from defects in materials and workmanship under normal use for a period of one (1) year from the date you receive the product ("Warranty Period").

For all Product(s) that contain or develop material defects in materials or workmanship during the Warranty Period, Hampo will, at its sole option, either: (i) repair the Product(s); (ii) replace the Product(s) with a new or refurbished Product(s) (replacement Product(s) being of identical model or functional equivalent); or (iii) provide you a refund of the price you paid for the Product(s).

This Limited Warranty of Hampo is solely limited to repair and/or replacement on the terms set forth above. Hampo is not reliable or responsible for any subsequent events.

