Series	B311					
Lens	No Lens	77	88	88M	93	158
1080p Resolution	1.4 / Ø 4.9	3.5 / Ø 4.9	4.9 / Ø 4.9	4.2 / Ø 4.9	5.2 / Ø 5.2	6.4 / Ø 6.5
	Coming Soon	Coming Soon	Coming Soon	Coming Soon	Coming Soon	Coming Soon

Feature

- 1080p or 720p High Resolution.
- High Performance.
- Mini Size.
- Outstanding Quality.

Series	B209			B164A		B164B	
Lens	No Lens	76	128	140	No Lens	120	No Lens	120
720p Resolution	1.4 / Ø 3.2	3.6 / Ø 3.5	4.3 / Ø 3.5	6.7 / Ø 3.6	1.1 / Ø 3.0	4 / Ø 3.0	1.1 / Ø 3.3	3.6 / Ø 3.3

Specification

Series	B311	B209	B164A	B164B
Dimension (mm)	Ø 4.9	Ø 3.2	Ø 3.0	Ø 3.24
Image Sensor	1/6" CMOS Color	1/9" CMOS Color	1/11" CMOS Color	1/11" CMOS Color
Pixel Size (μm)	1.4 x 1.4	1.4 x 1.4	1.116 x 1.116	1.12 x 1.12
Image Area (mm)	2.7288 x 1.5498	1.819 x 1.033	1.446 × 0.91	1.43 x 0.81
Sensitivity	553 mV / (Lux-sec)	585 mV / (Lux-sec)	4500 e- / (Lux-sec)	TBD
Dynamic Range	73.3 dB @ 15.5x gain	68.4 dB @ 16x gain	72.2 dB @ 16x gain	TBD
Frame Rate (Max.)	1920 x 1080 @ 30fps	1280 x 720 @ 30fps		
Power Source	DC 5V			
Power Current	160 mA			
Storage Temperature	-30 to 60 Degree C			
Working Temperature	-10 to 45 Degree C			
Interface	USB 2.0			
Scan Mode	progressive			
UVC Format	MJPEG / YUV			
Operating System	Windows XP, Windows Vista, Window 7, Windows 8, Windows 10, Linux, MAC OSX			
Camera Parameter Setting On Smartphone	Support (MISUMI app)			
Audio Output (Optional)	N/A (3.25 MHz, S/N more than 62 dB // External)			

Articulation Borescope Application

Short camera size perfect for medical endoscopes, borescopes or other small diameter inspection devices.

Excellent Image Quality

Tiny size and high performance and outstanding quality.

Low Temperature

Low temperature (no LED) is perfect for medical equipment!

High Brightness LED & Dimmer

With high-brightness LED, the camera can capture clear images in a completely dark environment.
Camera is equipped with dimmer function to control LED brightness for micro focal distance or long focal distance, to prevent exposure in micro focal distance. (IR 940nm & IR 850nm - specify when ordering)

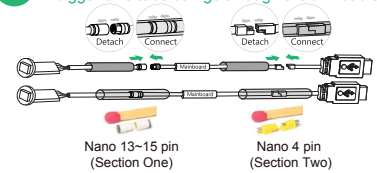
Section One (Max. 15 Pin)

OD (mm)	Length (cm)	Series B311	B209	B164A	B164B
1.5 AWG#38 EN-13C	10~250		●	●	●
1.7 AWG#36 EN-13C	10~200			●	●
	10~250		●		
1.9 AWG#36 EN-15C	10~250	●			
	10~400		●	●	●
2.8 AWG#32 EN-15C	10~400			●	●
	10~500	●	●		

Section Two (Max. 7 Pin)

OD (mm)	Length (cm)	Series B311	B209	B164A	B164B
0.35 Enameled Wires	10~150	All Series			
0.9 AWG#42 EN-9C	10~200				
1.4 AWG#28 EN-4C	10~1000				
1.4 AWG#30 EN-4C	10~600				
1.6 AWG#28 EN-4C	10~1000				
1.7 AWG#36 EN-9C	10~200				
2.8 AWG#30 EN-7C	10~400				
3.6 AWG#28 EN-7C	10~1000				
5.0 AWG#24 EN-9C	10~1500				

With detachable Nano connectors
A bigger size tube can go through the thin cable from halfway.

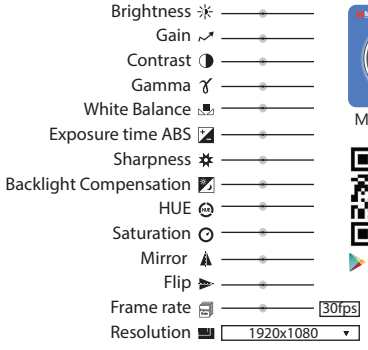


Nano 13~15 pin (Section One)
Nano 4 pin (Section Two)

Without detachable Nano connectors
Camera head cannot go through the bigger tube.

Camera Parameter Adjustable (MISUMI APP)

Camera parameter can be adjusted on the smartphone via the Misumi app and PC viewer software AMCAP.



MISUMI APP

MISUMI (Android)
ANDROID APP ON Google Play

NOTE for MISUMI APP:
UVC Camera does not support Android 10

All MISUMI UVC Camera are Compatible With MP-WF580KP (WiFi DVR)

For example:
Our extremely lightweight 1920 x1080 (1080p) 1/6" CMOS UVC glasses camera is compatible with MP-WF580KP (WiFi DVR).

Supports H.264 video format input, loop recording, snapshot functions.
Supports max memory 128 GB (micro SD).

Users can view live streaming video via a smartphone.

Omni-Viewer (Android) (iOS) (Wi-Fi)

Omni-Viewer
Android
iOS

MP-WF580KP

About MP-WF580KP:
It deliver the best 1080p live streaming performance when using H.264 camera.
When using MJPEG cameras, it can only live stream at resolutions of 720p and below.
MJPEG cameras delivers the best live streaming performance at 640 x 480 resolution.

KD-B31105LH-77

SERIES	CONNECTOR	CAMERA BODY
K Short Camera Head	**UVC Signal** D USB 2.0 Type A M USB 2.0 Micro Type B (OTG) T USB 2.0 Type C I USB 2.0 Mini Type B **Connector Information** USB Type A USB Micro Type B USB Type C USB Mini Type B	B Board Type VB Board Type + Dimmer T Tube Type V Tube Type + Dimmer

DISPLAY	LED	LENS
1080p 31105 Color **720p** 20903 Color 164A03 Color 164B03 Color	LH High-Intensity White LED L8 IR 850 nm LED L9 IR 940 nm LED	**31105** 22 8.0 mm / F 2.5 (22°) 29 6.0 mm / F 4.5 (29°) 34 5.0 mm / F 3.5 (34°) 39 4.4 mm / F 4.8 (39°) 49 3.4 mm / F 2.8 (49°) 3.4 mm / F 6.0 (49°) 65 2.46 mm / F 2.0 (65°) 67 2.34 mm / F 2.2 (67°) 77 1.83 mm / F 2.0 (77°) 1.83 mm / F 5.0 (77°) 1.83 mm / F 8.0 (77°) 88 1.55 mm / F 5.7 (88°) 1.55 mm / F 8.0 (88°) 88M 1.86 mm / F 4.0 (88°) 1.86 mm / F 5.0 (88°) 1.86 mm / F 6.0 (88°) 93 1.5 mm / F 4.0 (93°) 1.5 mm / F 5.7 (93°) 120 1.06 mm / F 4.5 (120°) 158 1.523 mm / F 4.8 (158°) 1.523 mm / F 6.0 (158°) 1.523 mm / F 8.0 (158°) **20904** 76 1.32 mm / F 2.0 (76°) 1.32 mm / F 3.5 (76°) 128 1.00 mm / F 4.8 (128°) 140 0.92 mm / F 4.5 (140°) **164A03 / 164B03** 63 1.33 mm / F 2.0 1.33 mm / F 4.0 1.32 mm / F 2.0 65 1.32 mm / F 3.5 1.32 mm / F 4.0 109 0.92 mm / F 4.5 120 0.878 mm / F 5.0

* IR 940nm or IR 850nm LED is suggested to choose B/W camera type.
* Camera with LED light source is suggested to use larger number of F-stop.