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## ZM0756H1080PA All-in-one Zoom Monocular HDMI Digital Microscope



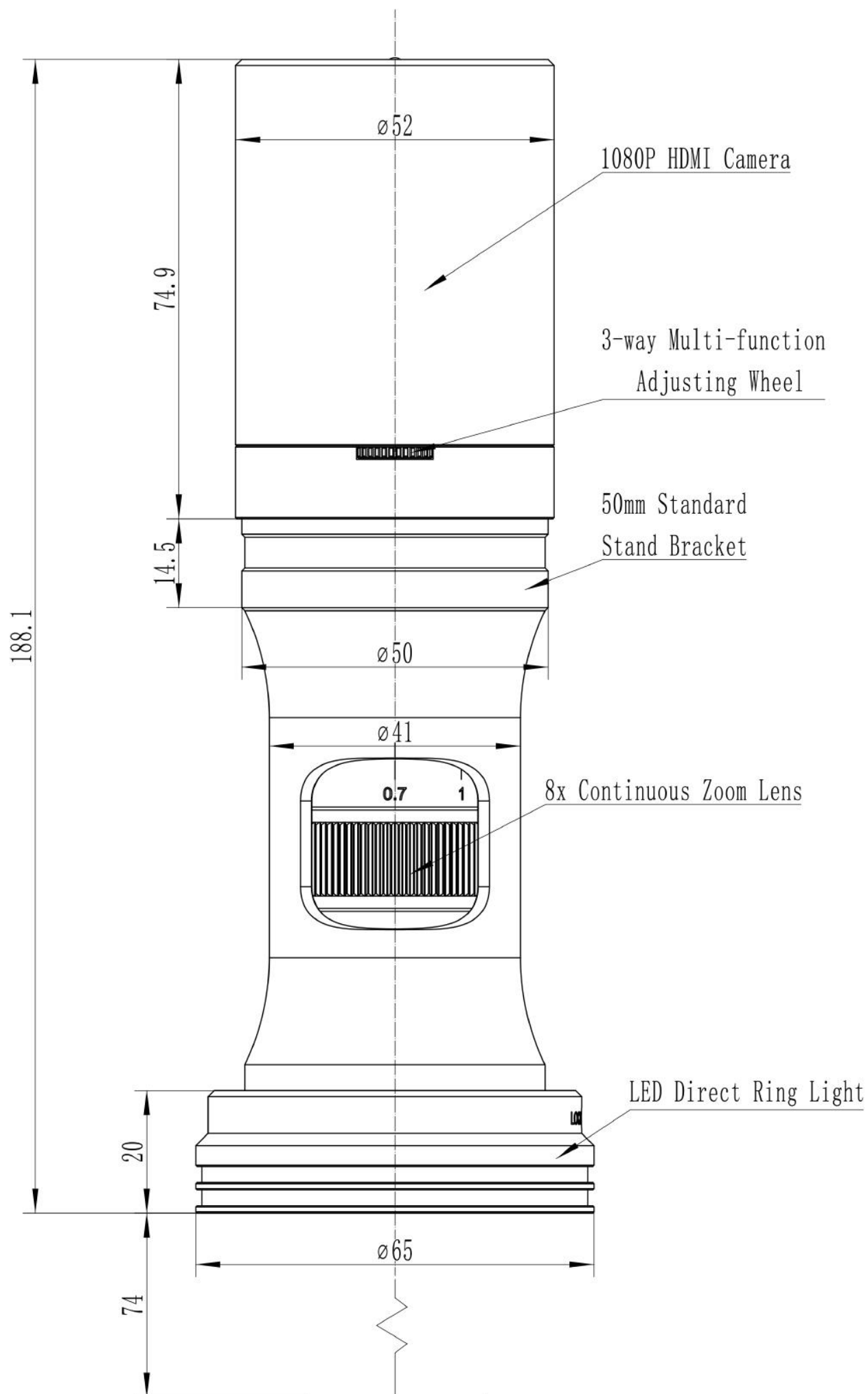
- ☐ Lens, camera and light source all in one
- ☐ 0.7X-5.6X continuous zoom lens
- ☐ Multiple objectives available
- ☐ Magnetic adjustable wireless light source
- ☐ Sony back-illuminated high-sensitivity sensor
- ☐ Real-time 1080P@60FPS HDMI output
- ☐ Record 1080P@60FPS HD video
- ☐ XCAMView software for easy control and measurement

## ZM0756H1080PA All-in-one Zoom Monocular HDMI Digital Microscope

ZM0756H1080PA all-in-one zoom monocular HDMI digital microscope is shown in figure as below. It has 8x continuous zoom lens ZM0756-W100-TV050, 1080p HDMI camera H1080PA and LED ring light source.

The H1080PA module can directly complete the video and image acquisition without a computer, and the LED ring light source module is directly connected to the H1080PA module through the main body of the optical continuous zoom lens with no need of the external power supply.

ZM0756H1080PA meets the digital imaging observation, inspection and measurement in the fields of modern electronic equipment, semiconductor, laser, led, LCD, industrial on-line detection and biology.





## The ZM0756H1080PA's Main Zoom Body TZM0756-W100-TV050's Characteristics

### Optical Parameters

Zoom Lens	TZM0756-W100-TV050 zoom lens, 0.7X-5.6X zoom range
Working Distance	37.5mm-160mm (Determined by the auxiliary objective)
NA	0.018-0.092 (With W100, 1x auxiliary objective)
Resolution	18.6um-3.65um (With W100, 1x auxiliary objective)
Field	0.99mm-34.28mm
Optional Objective	0.50x, 0.75x, 1.00x, 1.50x, 2.00x (Optional)
Other Optional Objective	Infinite microscope objective (Both biological microscope objective and metallographic microscope objective can be used)
Dimensions	188mm x 52mm
Bracket Interface	Standard 50mm

## The Optional Objective Wxxx for TZM0756-Wxxx-TV50

Auxiliary Objective	Specification	TV Lens TV050 for 1/3" Sensor	
		Low	High
W100, 1.0X(80mm WD)	PMAG	0.35X~2.80X	
	FOV	17.14mm	2.14mm
	NA	0.018	0.092
W050, 0.5X(160mm WD)	PMAG	0.18X~1.40X	
	FOV	34.28mm	4.28mm
	NA	0.009	0.046
W075, 0.75X(105mm WD)	PMAG	0.26X~2.10X	
	FOV	20.81mm	2.86mm
	NA	0.013	0.069
W150, 1.5X(51.5mm WD)	PMAG	0.53X~4.20X	
	FOV	11.43mm	1.43mm
	NA	0.026	0.138
W200, 2.0X(37.5mm WD)	PMAG	0.70X~5.60X	
	FOV	8.57mm	1.07mm
	NA	0.035	0.182
Remarks	When using coaxial lighting, low magnification may produce vignetting. When using infinity objectives as Auxiliary Lens Module (adapter available), the PMAG、FOV and NA of the TZM0756 depends on the parameters of the objectives.		

WD: Working Distance ;

NA: Numerical Aperture ;

PMAG: Primary Magnification;

FOV: Field of View in the object side;

Note: Infinity corrected objectives limit system's usable zoom range due to uneven illumination. The maximum sensor format is 2/3".

## ZM0756H1080PA's HDMI Camera H1080PA Specification

### HDMI Interface Digital Camera Modular

Interface and Button	Function Description
HDMI	Comply with HDMI1.4 standard. 1080P format video output for standard FHD monitor

LED	LED status indicator
USB Mouse	Connect USB mouse for easy operation with embedded XCamView software
DC12V	Power adapter connection (12V/1A) ;
SD	Comply with SDIO3.0 standard and SD card could be inserted for video and images storage ;
Camera Hardware	Function Description
HDMI 1080P Camera	Comply with HDMI1.4 standard; 60fps@1080P
Sensor	Sony IMX307(C), 1/2.8"(5.57x3.13), Pixel size 2.9x2.9um
G Sensitivity /Dark Signal /Dynamic Range /SNR	1300mv with 1/30s/NA/NA/NA
FPS/Resolution	60@1920*1080(HDMI)
Exposure Time	0.01~1000ms
<b>XCAMView Software Ctrl</b>	<b>Function Description</b>
Video Saving	Video format : 2M(1920*1080) H264 encoded MP4 file ; Video saving frame rate : 50~60fps (related with SD card performance);
Image Capture	2M (1920*1080) JPEG image in SD card
Measurement Saving	Measurement information saved in different layer with image content; Measurement information is saved together with image content in burn in mode.
ISP Function	Exposure(Automatic / Manual Exposure) / Gain, White Balance(Manual / Automatic / ROI Mode), Sharpening, 3D Denoise, Saturation Adjustment, Contrast Adjustment, Brightness Adjustment, Gamma Adjustment, Color to Gray, 50HZ/60HZ Anti-flicker Function
Image Operations	Zoom In/Zoom Out, Mirror/Flip, Freeze, Cross Line, Overlay, Embedded Files Browser, Video Playback, Measurement Function
Restore Factory Settings	Restore camera parameters to its factory status
Multiple Language Support	English / Simplified Chinese / Traditional Chinese / Korean / Thai / French / German / Japanese / Italian / Russian
<b>Lighting Module</b>	
LED Ring Light	LED direct ring light with adjustable brightness(No power cable), ( ZM0756DRL-NPC)
LED Ring Polarization Light	LED direct ring polarization light with adjustable brightness(No power cable), ZM0756DRPL-NPC)
Coaxial Light Module	LED Coaxial Light Module with adjustable brightness(No power cable), (TZM0756CL_NPC)
Power Supply	Integrated power supply, no power cable winding trouble, sample observation more freely
Installation Method	Express second-level suction type installation, convenient and simple
Brightness Control	Through the 3-way multi-function adjusting wheel or software GUI, both the hardware and software can adjust the light intensity synchronously with no hassle

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