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ZM0756U Series All-in-one Zoom Monocular USB 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
- ☐ USB camera module with different resolution
- ☐ ToupView/ToupLite software for easy control and measurement

ZM0756U Series All-in-one Zoom Monocular USB Digital Microscope(2)

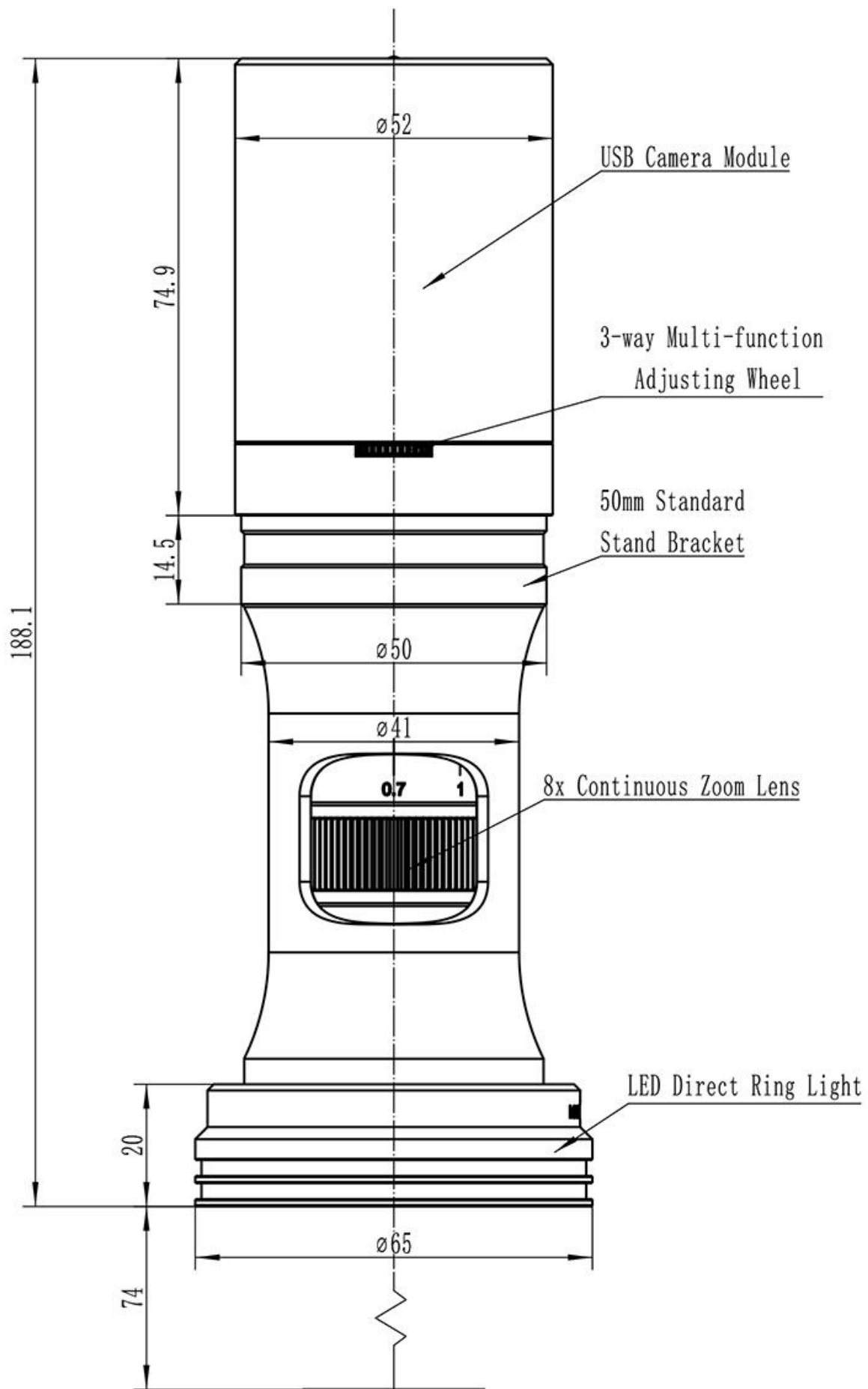
ZM0756U series all-in-one zoom monocular USB digital microscope is shown in Figure. It has 8x continuous zoom lens ZM0756-W100-TV050, USB camera module with different resolution and LED ring light source TZM0756DRL-NPC..

The USB camera module can directly complete the video and image acquisition with a computer, and the LED ring light source module is directly connected to the USB camera module through the main body of the optical continuous zoom lens with no need of the external power supply.

ZM0756U series 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 current models of ZM0756U series all-in-one zoom monocular USB digital microscope are shown in the table below:

Order Code	The Main Zoom body	Camera Module	Illumination Module
ZM0756U830A	TZM0756-W100-TV050	U830A	LED Direct Ring Light with NPC (TZM0756DRL-NPC)
ZM0756U510A	TZM0756-W100-TV050	U510A	LED Direct Ring Polarization Light with NPC (TZM0756DRPL-NPC) Coaxial Light Module with NPC (TZM0756CL-NPC)





The Specification of ZM0756-W100-TV50 Mani Body

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 ZM0756-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 ;

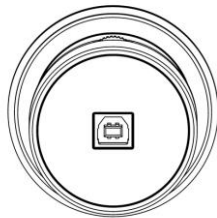
NA: Numerical Aperture ;

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".

The Specification of ZM0756U Series USB Digital Camera



Order Code	Sensor & Size(mm)	Pixel(μm)	G Sensitivity Dark Signal	FPS/Resolution	Binning	Exposure
U830A	8.3M/IMX415(C) 1/2.8" (5.57x3.13)	1.45x1.45	300mV 70dB 44dB	30@3840x2160 30@1920x1080 30@1280x720 30@960x540	1x1 1x1 1x1 1x1	0.1~2000ms
U510A	5.1M/IMX335(C) 1/2.8"(5.18x3.89)	2.0x2.0	505mV 73dB 43dB	26@2592x1944 26@1280x960 26@640x480	1x1 1x1 1x1	0.1~2000ms

Hardware Configurations

Spectral Range	380-650nm (with IR-cut Filter)
White Balance	Auto/ROI/Manual White Balance (New Model), Auto (Products before 2020)
Color Technique	Ultra-Fine Color Engine/NA for Monochromatic Sensor
Capture/Control SDK	Windows/Linux/macOS/Android Multiple Platform SDK(Native C/C++, C#/VB.NET, Python, Java, DirectShow, Twain, etc)
Recording System	Still Picture and Movie
Cooling System*	Natural

Operating Environment

Operating Temperature(in Centidegree)	-10~ 50
Storage Temperature(in Centidegree)	-20~ 60
Operating Humidity	30~80%RH
Storage Humidity	10~60%RH
Power Supply	USB DC 5V/1A Adapter

Software Environment

Operating System	Microsoft® Windows® XP / Vista / 7 / 8 /10 (32 & 64 bit) OSx(Mac OS X) Linux
PC Requirements	CPU: Equal to Intel Core2 2.8GHz or Higher Memory:2GB or More WiFi Adaptor: Support 802.11 b/g/n Display:17" or Larger CD-ROM

Lighting Module

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), (ZM0756CL_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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