



## Zoom Stereo Microscope



### SZ6745 / SZ6745T



SZ6745T is a trinocular tube model ideal of monitoring and photomicrography  
 SZ6745T is needed C-mount adapter (1X CTV etc.) separately for mounting digital camera.  
 SZ6745/6745T is needed LED illuminator (LED-56A etc.) separately for observing sample

<b>Magnification</b>	Standard spec. 6.7X~45X, optional eyepiece or auxiliary objective can make magnification to 3.35X~180X
<b>Objective</b>	Standard spec. 0.67X~4.5X zoom objective, zoom ratio 6.7:1, ensure parfocality
<b>Viewing head</b>	45°, 60° inclined, 360° Rotate, interpupillary distance: 54~76mm, diopter adjusting range ±5
	Articulated binocular(SZ6745) or trinocular(SZ6745T) head, 50%/50% spectral
<b>Adjustable eyepiece</b>	Standard spec. 10X/22mm, large sight, wide field, high point
<b>Optional eyepiece</b>	10X/22mm, 15X/16mm, 20X/12mm, 25X/9mm (object micrometer is available)
<b>Working distance</b>	Standard: 105mm, Auxiliary objective can make it to 26mm~177mm
<b>Auxiliary objective</b>	0.5X/177mm, 1.5X/47mm, 2X/26mm for option
<b>Focus arm</b>	Adjustable lift range: 50mm
<b>Illumination</b>	Super bright LED reflected illumination
<b>Video interface</b>	With special interface, connect to usual camera, digital camera, imitate CCD, digital CCD, VGA

## Zoom Stereo Microscope



# SZM7045 / SZM7045T



SZM7045T is a trinocular tube model ideal of monitoring and photomicrography  
 SZM7045T is needed C-mount adapter (1X CTV etc.) separately for mounting digital camera.  
 SZM7045/7045T is needed LED illuminator (LED-56A etc.) separately for observing sample

<b>Magnification</b>	Standard spec. 7X~45X, optional eyepiece or auxiliary objective can make magnification to 3.5X~180X
<b>Objective</b>	Standard spec. 0.7X~4.5X zoom objective, zoom ratio 6.4:1, ensure parfocality
<b>Viewing head</b>	45°, 60° inclined, 360° Rotate, interpupillary distance: 54~76mm, diopter adjusting range ±6
	Articulated binocular(SZM7045) or trinocular(SZM7045T) head, splitting ratio 20%/80%
<b>Adjustable eyepiece</b>	Standard spec. 10X/20mm, large sight, wide field, high point, 50%/50% spectral
<b>Optional eyepiece</b>	10X/20mm, 15X/15mm, 20X/10mm (object micrometer is available)
<b>Working distance</b>	Standard: 100mm, Auxiliary objective can make it to 30mm~165mm
<b>Auxiliary objective</b>	0.5X/165mm, 1.5X/45mm, 2X/30mm for option
<b>Focus arm</b>	Adjustable lift range: 50mm
<b>Illumination</b>	Super bright LED reflected illumination
<b>Video interface</b>	With special interface, connect to usual camera, digital camera, imitate CCD, digital CCD, VGA

## Zoom Stereo Microscope



# Stereoscope Accessories

### High Point Eyepiece



**SZ6745**

-WF10X/22mm  
-WF15X/16mm  
-WF20X/12mm  
-WF25X/9mm

**SZM7045**

-WF10X/20mm  
-WF15X/15mm  
-WF20X/10mm

### Auxiliary Objective



**SZ6745**

-XTAO2/26mm  
-XTAO1.5/47mm  
-XTAO0.5/177mm

**SZM7045**

-XTAO2/30mm  
-XTAO1.5/45mm  
-XTAO0.5/165mm

### Video C-mount



**SZ6745**

-1XCTV  
-1/2XCTV

**SZM7045**

-1XCTV  
-1/2XCTV  
-1/3XCTV

### LED Ring Illuminator



**LED-56A**

-56 LED Bulbs  
-6400K



**LED-108L3**

-3-Line, 108 LED Bulbs  
-6500K~7000K



**LED-72P4**

-4-Partial, 72 LED Bulbs  
-6000K

### Focus Arm



**A1**

**A3**

### Basic Stand



**J1**

-Base Size : 285\*238mm  
-Pillar High : 240mm



**J2**

-Base Size : 285\*238mm  
-Vertical Size : 300mm

### Transmitted Stand



**B9L**

-Reflected & Transmitted LED  
-Base Size : 205\*275mm

### Large Stand



**B5**

-Base Size : 380\*260mm  
-Vertical Size : 300mm



**B3HL**

-Base Size : 400\*350mm  
-Pillar High : 350mm

### Universal Stand



**STL1(with A1)**

-Single Arm  
-Horizontal Moving : 235mm



**STL2(with A1)**

-Double Arm  
-Horizontal Moving : 235mm

## Monocular Video Microscope



### HK-XLB45 *Economic version*



<b>Magnification</b>	0.7X~4.5X zoom objective, zoom ratio 1:6.4
<b>Standard Set</b>	0.35X~2.25X (with 0.5XCCD Adaptor)
<b>Field of View Coverage</b>	17.6~2.7mm (with 0.5X CCD Adaptor, 1/3" Sensor Camera)
<b>Adjustable range</b>	Vertical Pillar Height: 340mm, Base size: 380*260*20mm
<b>Focus arm</b>	Adjustable lift range: 50mm, Draw tube size : $\Phi$ 50mm to $\Phi$ 25mm
<b>Working distance</b>	96mm(1X objective)

#### ■ LED Ring Lamp



#### LED 90

- 90 LED bulbs
- LED connecting dia. inner 50mm, outer 58mm, center hole dia. 34mm
- Power: 9W, Output: DC 12V, Input: AC90-260V / 47-63Mz

#### ■ Application






<HK-XLB45-B3 + XCAM1080 + LED Monitor>

## Monocular Video Microscope



# MZDH0850 / 0670 / MZDV0640



Model	MZDH0850 Series	MZDH0670 Series	MZDV0640 Series
			
Standard Mag.	0.75X~5.0X	0.58X~7.0X	0.6X~4.0X
Zoom Ratio	6.7:1	12:1	6.7:1
Standard WD	82mm	82mm	82mm
Standard F.O.V	4.8X6.4 ~ 0.72X0.96mm	6.2X8.3 ~ 0.51X0.69mm	6X8 ~ 0.9X1.2mm
Illumination	LED coaxial illumination or LED ring illumination		
Mounting holder dimension	Ø45mm	Ø45mm	Ø35mm
Mount	Standard CS-mount		
CCD adapters (Standard: 1X)	0.3X, 0.4X, 0.5X, 0.67, 1X, 1.5X, 2X	0.4X, 0.5X, 0.67X, 1X, 1.5X, 2X	0.5X, 1X, 1.5X, 2X
Objective (Standard: 1X)	0.3X, 0.5X, 0.75X, 1X, 1.5X, 2X		

*Monocular Video Microscope*



**MZDH0850 / 0670 / MZDV0640**

■ **General & Detent Type**

(D: Pre-set stops at integer magnification with detent)



**MZDH0850-D**  
-0.75~5.0X



**MZDH0670-D**  
-0.58~7.0X



**MZDV0640-D**  
-0.6~4.0X

■ **Coaxial & Detent Type**

(C: Coaxial illumination)



**MZDH0850C-D**  
-0.75~5.0X



**MZDH0670C-D**  
-0.58~7.0X

■ **Coaxial & Fine Type**

(MA: With fine-adjustable device)



**MZDH0850C-MA**  
-0.75~5.0X

■ **Stand & Holder**



**SD10J-D**  
-Pole Type  
-Coarse-Fine focus  
-Base Size  
: 400\*300mm



**SD1J-D**  
-Pole Type  
-Coarse-Fine focus  
-High 250mm



**SD3J-D**  
-Track Type  
-Coarse-Fine focus  
-High 212mm

■ **Illuminator & Mechanical Stage**



**MLC1000**  
-Coaxial LED (1W)



**MLC3000**  
-Coaxial LED (3W)



**MLR25**  
-Ring LED



**S7665**  
-Glass Type  
-Stroke: 76\*65mm



**S10086**  
-Metal Type  
-Stroke: 100\*86mm

## Digital Camera for microscope



# HK Series

### ■ CMOS Type (USB2.0)



#### HK3.1

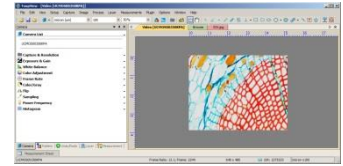
- 3.1M 1/2" CMOS Camera
- Aptina MT9T001 CMOS(Color)
- 8fps @2048 x 1536
- 22fps @1024 x 768
- 43fps @680 x 510



#### HK14

- 14.0M 1/2.3" CMOS Camera
- APTINA MT9F002 CMOS(Color)
- 1.8fps @4096 x 3288
- 10fps @2048 x 1644
- 27fps @1024 x 822

### ■ Imaging Software



#### HK BASIC

- Image Analyzing Software
- Live Capture & Measuring tools etc.
- Included in HK camera set

### ■ CMOS Type (USB3.0)



#### HK3.1U3

- 3.1M 1/3" CMOS Camera
- APTINA AR0330 CMOS(Color)
- 27.4fps @2048 x 1534
- 53.3fps @1024 x 770



#### HK5U3

- 5.0M 1/2.5" CMOS Camera
- APTINA MT9P006 CMOS(Color)
- 14.5fps @2560 x 1922
- 39fps @1280 x 960
- 101fps @640 X 480

### ■ CMOS Monitor Type



#### HK-XCAM720H

- 1/2.5" CMOS HDMI Camera
- MICRON MT9P031 CMOS(Color)
- 30fps @1280 x 720
- Stream video to HDMI monitor
- Save Image to SD card
- Remote Switch

### ■ CCD Type



#### HK5CCD

- 5.1M 1/1.8" UHCCD Camera
- SONY ICX452AQ CCD(Color)
- 4fps @2592 x 1944
- 35fps @300 x 200



#### HK5CCD-S

- 5.0M 2/3" UHCCD Camera
- SONY ICX282AQ CCD(Color)
- 4.5fps @2560 x 1920
- 9fps @1280 x 960

### ■ Cooled CCD Type



#### HK1.4Cool-CCD

- 1.4M 2/3" USB2.0 SCCCD Camera
- SONY ICX285AQ CCD(Color)
- 15fps @1360 x 1024

### ■ Camera Accessories



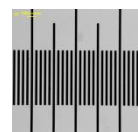
#### U-TV0.5XC-3

- 0.5XC C-mount Adapter for Olympus



#### AMA050

- Eyepiece Adapter
- 0.50X magnification
- Manually focusable
- C-mount to Dia.23.2mm eye tube



#### Micrometer

- Calibration Slide
- 1mm/100div.
- Glass Type



**2D/3D Vision Measurement Instrument**



**Measuring Instruments**

■ **2D Measurement**



**SMART2010**

- 측정범위: X:200mm / Y:100mm
- 분해능: 0.5  $\mu$ m
- CCD Camera: 1/3" Color CCD camera
- 줌(zoom): 0.7x ~ 4.5x (15x~80x)
- 정밀도: 3.0+L/150  $\mu$ m
- 구동방식: Manual
- 조명: Bottom light : LED / Top light : LED
- 최대측정중량: 10 kg
- 최대측정높이: 90 mm

■ **3D Measurement (OPTIV OLM Series)**

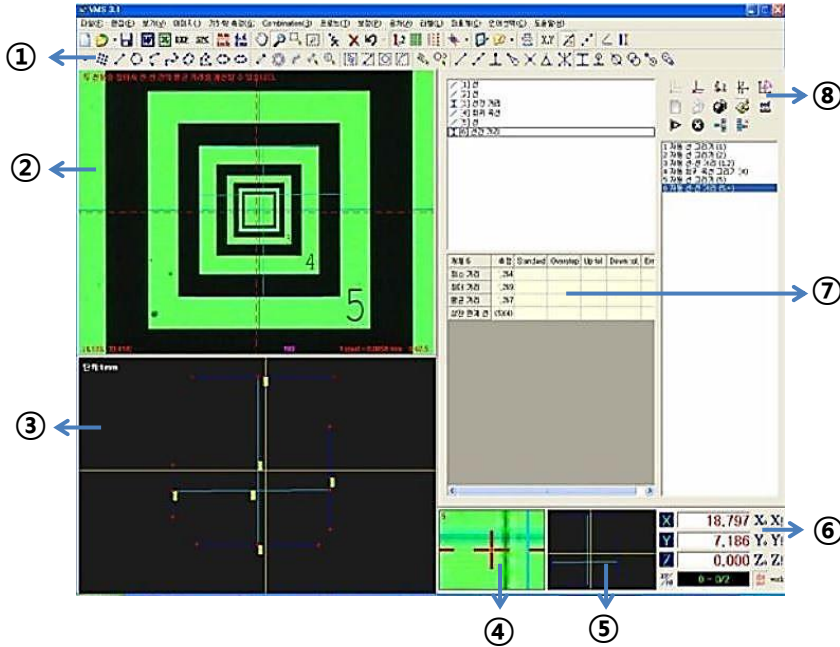


Models	OLM 2515	OLM 3020	OLM 4030
측정 범위	250x150x200 mm	300x200x200 mm	400x300x200mm
전체 치수	716x753x1015 mm	766x803x1015mm	866x903x1015mm
카메라	1/3" high resolution color CCD camera		
정확도 Exy	3.0 + L/150 $\mu$ m		
정확도 Ez	5.0 + L/150 $\mu$ m		
작업거리	90mm		
조명	LED stage light and LED ring light		
배율	Manual zoom ( 30x to 180x)		
분해능	1.0 $\mu$ m		
최대 측정물 허용중량	10kg		
소프트웨어	VMS 3.1		
선택사항	접촉식 프로브		
작업환경	20°C $\pm$ 2K		
습도	40% - 70% RL		

**2D/3D Vision Measurement Instrument**

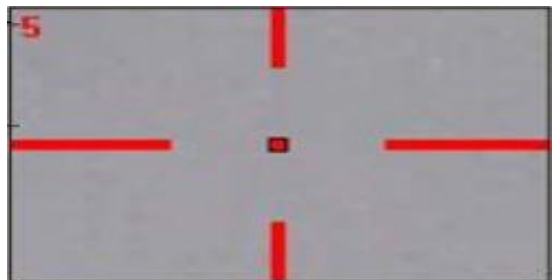


**VMS3.1 Measuring Software**



**사용하기 쉽고 편리한 인터페이스**

①툴바 ②Video 윈도우  
 ③CAD 윈도우(현재작업)  
 ④확대 윈도우 ⑤CAD 윈도우(전체작업)  
 ⑥좌표계 화면 ⑦측정값 리스트  
 ⑧프로그래밍 툴바



④ 확대 윈도우



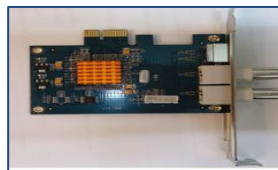
측정기 본체



전원/조명 컨트롤러  
(OPTIV: 본체내장)



엔코더 카드



비디오 캡처 카드



VMS 3.1 S/W CD



Software lock key

**컴퓨터 시스템 요구사항**

CPU	Pentium IV 2G or Higher	Monitor	19" or Larger
Main Board	PCI slot 1ea / PCI-E slot 1ea USB port 2ea	운영체제	WIN XP 32/64 bit WIN 7 32bit
RAM	1G or More	언어	한글/영어/중국어 지원
HDD	160GB or More		

\* 컴퓨터 별도 구매가능하나 반드시 요구사항에 충족되어야 합니다.

*Measuring Tool <MITUTOYO>*



**Mitutoyo Tool**

\* MITUTOYO 측정공구는 매우 다양한 Line-up 을 갖고 있으니 상세 모델은 한국광학 홈페이지(www.koptic.co.kr)를 참조하시길 바랍니다.

■ **Micrometers**

**High-Accuracy Digimatic Micrometer**



Range :0 - 25mm  
Resolution :0.0001mm / 0.0005mm  
Accuracy :±0.5 μm

**Quantu Mike**



Range :0-25mm ~ 75-100mm  
Resolution :0.001mm  
Accuracy :±1 μm / ±2 μm

**ABSOLUTE Digimatic Micrometer**



Range :0-15mm ~ 20-30mm  
Resolution :0.0001mm  
Accuracy :±2 μm

**Ratchet Thimble Micrometer**



Range :0-25mm ~ 25-50mm  
Resolution :0.01mm / 0.001mm  
Accuracy : ±2 μm

**Quick Mike**



Range :0-25mm ~ 75-105mm  
Resolution :0.0001mm  
Accuracy :±2 μm / ±3 μm

■ **Calipers**

**Vernier Caliper**



0 - 150mm

**Blade Type Caliper**



0 - 100mm  
0 - 150mm  
0 - 200mm  
0 - 300mm  
0 - 600mm  
0 - 1000mm

**Super Caliper**



0 - 150mm  
0 - 200mm

**ABSOLUTE Digimatic Caliper**



0 - 200mm  
0 - 300mm  
0 - 450mm  
0 - 600mm  
0 - 1000mm

**ABSOLUTE Coolant Proof Caliper**



0 - 150mm  
0 - 200mm  
0 - 300mm

**ABSOLUTE Solar Caliper**



0 - 100mm  
0 - 150mm  
0 - 200mm

**Point Caliper**



0 – 150mm

**Dial Caliper**



0 – 100mm  
0 – 150mm  
0 – 200mm  
0 – 300mm

**ABSOLUTE Low Force Caliper**



0 – 150mm

**ABSOLUTE Centerline Caliper**



10 – 200mm  
10 – 300mm

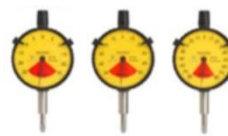
**Indicators**

**Solar-Powered Digimatic Indicator**



Resolution  
:0.001mm / 0.01mm  
Range  
:12.7mm  
Overall  
:0.003 / 0.02

**Dial Indicator**



Resolution  
:0.001mm / 0.01mm  
Range  
:0.08 / 0.8 / 1.6mm

\*Other Specifications

**Dial Test Indicator**



Resolution  
:0.001 / 0.01 / 0.002mm  
Range  
:0.2 / 0.5 / 0.8 / 1mm

\*Other Specifications

**ABSOLUTE Digimatic Indicator**



Resolution  
:0.001mm / 0.01mm  
Range  
:12.7 / 25.4 / 50.8mm  
Overall  
:0.003 / 0.005 / 0.02

**Height Gage**

**Digimatic Height Gage – Standard Type**



Range  
: 0-300/0-600/0-1000mm  
Resolution  
: 0.01mm(0.005mm)  
Repeatability  
: 0.01mm  
Max. Response Speed  
: 500mm/s

**ABSOLUTE Digimatic Height Gage**



Range  
: 0-300/0-600/0-1000mm  
Resolution  
: 0.01mm(0.005mm)  
Repeatability  
: 0.01mm  
Max. Response Speed  
: 500mm/s

**Gauge Blocks**

**Steel/CERA 1mm Block Sets**



**Steel/CERA 0.001mm Base Block Sets**



**Steel/CERA Long Block Sets**

