

DESCRIPTION

Stereozoom microscopes are optical microscopes that give a three-dimensional (3-D) view of a sample and generally operate at low magnification. The 3-D image allows solid surfaces to be examined with greater clarity and permits the precise manipulation of samples during magnification.



What is Fusion Optics:

ACUCAL Plan Optics Stereo Zoom Microscope offers Fusion Optics technology which puts a high resolution image at the highest possible Numerical Aperture to the right eyepiece and a large depth of field image to the left. The result is Outstanding Richness of Details and Outstanding Depth of Field. In many industrial applications, Stereozoom Microscope with this technology provide new and better possibilities of examining and evaluating microstructures of material, components and products.

APPLICATION

- Stereozoom microscopes are used in food science, marine biology, embryology, environmental science, and forensic science. In pharmaceutical and biotechnology labs, stereozoom microscopes are commonly used for magnifying biological samples such as plant tissues and organ samples.
- In Biological studies & microsurgery, geology, Zoological research work, Forensic research work, Forensic research work (Biological specimen examination) & Life Science (Fisheries).
- In Polarising studies of thin Sections, polished Sections, microfossils, mineral grains, rock samples, drill cores, micromounts, fossils) with modular zoom head for configuration flexibility.
- Wider industry applications including the examination of circuit boards and microchips. Working & inspection of Printed Circuit Boards with uneven electronics & soldering surface.

TECHNICAL SPECIFICATION

1) Optical System

ACUSZM127OS	- Greenough Plan Optics Zoom based Stereo Microscope with fully Plan Apochromatic & Lead Free fusion optics providing plan field of view and large depth of field. - Specialized 10° Parfocal corrected optics that combines High Resolution for Ideal 3D Optical Images.
-------------	--

2) Observation Head

Inter-pupillary distance adjustment from 50mm to 76mm.	
ACUSZM127BOH Binocular	Observation Tube inclined at 35°, rotatable at 360°.
ACUSZM127TOH30 Trinocular	- Observation Tube inclined at 30°, rotatable at 360°. - Vertical phototube for micro photography with built – in C-mount 0.55 x magnification lens & 50%:50% beam splitter or 100%:0% beam splitter.
ACUSZM127TOH35 Trinocular	- Observation Tube inclined at 35°, rotatable at 360°. - Vertical phototube for micro photography with built – in/ interchangeable 60N C-mount 0.55 x magnification lens & 50%:50% beam splitter or 100%:0% beam splitter.
ACUSZM127TOH45 Trinocular	- Observation Tube inclined at 45°, rotatable at 360°. - Vertical phototube for micro photography with built – in C-mount 0.55 x magnification lens & 50%:50% beam splitter or 100%:0% beam splitter.

3) Eyepiece

- Diopter adjustment facility in both eyepieces suitable for both eyeglass and non eyeglass wearers. - Compensating, High Eye point, Distortion- free & adjustable with exchangeable eyecup. - Builtin Reticule Holder with 0.1mm least count, 24.5mm/26mm diameter (Optional)	
ACUSZM127EP10X22	Focusable Wide field 10X (paired) F.O.V.22mm, Field Number 22
ACUSZM127EP10X23	Focusable Extra Wide field 10X (paired) F.O.V.23mm, Field Number 23
ACUSZM127EP10X24	Focusable Super Extra Wide field 10X (paired) F.O.V.24mm, Field Number 24
ACUSZM127EP15X16	Focusable Extra Wide field 15X (paired) F.O.V.16mm, Field Number 16
ACUSZM127EP16X16	Focusable Extra Wide field 16X (paired) F.O.V.16mm, Field Number 16
ACUSZM127EP20X12	Focusable Extra Wide field 20X (paired) F.O.V.12mm, Field Number 12
ACUSZM127EP30X8	Focusable Extra Wide field 30X (paired) F.O.V.8mm, Field Number 8

4) Objectives: Apochromatic , Diameter 58 mm & M52 thread

ACUSZM127OBJ1X	Inbuilt & 1X Objective
ACUSZM127OBJ0.5X	0.5X Objective (Optional)
ACUSZM127OBJ0.63X	0.63X Objective (Optional)
ACUSZM127OBJ0.7X	0.7X Objective (Optional)
ACUSZM127OBJ1.5/1.6X	1.5X/1.6X Objective(Optional)
ACUSZM127OBJ2X	2X Objective(Optional)

5) Zooming Range & Ratio

ACUSZM127ZR	- Coded Clickstop Zoom 0.6 X to 5.5/5.6X with Optical Zoom ratio of 9:1,Manually operable. - Clickstops at 10x, 20x, 30x, 40x and 50x for easy operation.
ACUSZM127ZR1	- Click stop Zoom 0.6 X to 5.0X with Optical Zoom ratio of 8.3:1, Manually operable. - Clickstops at 10x, 20x, 30x, 40x and 50x for easy operation. - Clickstops at 0.65x, 0.8x, 1x, 1.25x, 1.6x, 2x, 2.5x, 3.2x, 4x, 5x for easy operation.
ACUSZM127ZR2	Zoom 0.6 X to 6.0X with Optical Zoom ratio of 10:1,Manually operable.

6) Optical Magnification Range

ACUSZM127M655	6X-55/56 X with 10X eyepiece pair and inbuilt 1X Objective. 1.8X to 440X with Combination of different eyepiece & objectives used. (Optional)
ACUSZM127M650	6X-50X with 10X eyepiece pair and inbuilt 1X Objective. 1.8X to 300X with Combination of different eyepiece & objectives used. (Optional)
ACUSZM127M60	6X-60 X with 10X eyepiece pair and inbuilt 1X Objective. 1.8X to 360X with Combination of different eyepiece & objectives used. (Optional)

7) Working Distance

ACUSZM127WD122	122 mm with 1X Objective
ACUSZM127WD115	110-120 mm with 1X Objective
ACUSZM127WD220	220 mm with 0.5X Objective
ACUSZM127WD50	50-55 mm with 1.5X/1.6X Objective
ACUSZM127WD35	35 mm with 2X Objective

8) Mechanical Body

ACUSZM127MB1	- Standard Stage Transmitted light bases having Plain Track stand with fan type big base & Clip for holding specimen. - Transmitted & Reflected LED Focusing Stand with glass plate & Black and white plate. - Large Focusing knobs on both sides with tension adjustable. - Stand with a ESD Protection features : Antistatic surface , grounding socket - RL Control – on/off/Dimming ,Integrated power socket for RL Black and white plate - Column 250mm/360mm with drive and handle, 76mm diameter interface, lifting range 145mm/190mm, Dimensions: W300 x D340 x H35mm, Working surface D195xW160mm or D255xW215mm - Observation & Contrast Methods: Bright field & Dark field
ACUSZM127MB2	- Plain Track stand with fan type big base & Clip for holding specimen. - Transmitted & Reflected LED Focusing Stand with glass plate & Black and white plate. - Coaxial Focusing knobs on both sides with tension adjustable. - Coarse total travel: 50mm, Fine total travel per single rotation: 0.2mm, Fine graduation: 100, Fine resolution: 2μ
ACUSZM127MB3	- Dual or single Arms Heavy & sturdy Base Boom Stand for better stability with 360° rotation. - Freely moveable Arm, grease-free run and can be adjusted to any location i.e 90° left and right, and Up and Down. Vertical Column length : 300-470mm/35mm, Vertical height adjustment range: 150-450 mm. Total Horizontal arm & bonder arm length: 600mm, Horizontal arm adjustment range: 220-400 mm, Base Dimensions: 300mm*250mm*45mm or customized, Base Weight: Minimum 10kg - Large Focusing knobs on both sides with tension adjustable. Mountable focus arm 76mm interface, pin diameter 15.8mm (5/8”), max. focus travel 51mm, max.6 kg load, for swing arm stands.
ACUSZM127MB4	- Diascopic White LED illumination stand suitable for brightfield, darkfield application & oblique illumination contrast by built in condenser and adjustable rotatable and slidable reflecting mirror for changing the light signal directions provides high relief observation for the colorless samples. - Transmitted light intensity and shutter controlled via external controller unit. Hand Rest Stand. RL Control – on/off/Dimming - Stand fitted with broad base Track stand with Integrated base with column with glass plate & Black and white plate. - Column 250 mm with drive and handle, lifting range 145 mm, easily accommodates Petri dish/Flask etc. Thread M49/50 Type Objective Mounting Screw for front optics or Analyzer. - Large Focusing unit on both sides with tension & friction adjustable. Mount D=76mm for stemi mount/mount S-Interfaces.

ACUSZM127MB5	- Flexible arm stand with table clamp for installing the mount on the work table. Counterbalance adj. weight range: 1.5 to 7 kg, Load range at 2.6 kg max, Table thickness: 100 mm, Max. extension: 995 mm (360° arc), Mountable focus Arm, 76 mm interface, pin dia 15.8 mm (5/8"), max. focus travel 51 mm, max. 6 kg load. - Tension adjustable focus drive: 75 mm height capable of focussing with a travel range of 50 mm OR Movable floor stand with the column and swing arm having facility of height adjustment by up / down and length adjustment for moving optics head.
--------------	--

9) Performance Parameters

Resolution ACUSZM127R	250lp/mm with 1X Objective - Maximum 500lp/mm
Depth of Field	10mm/12mm
Numerical Aperture	0.167
Field of View (Object field Diameter):	Maximum 40mm @ 10X eyepiece and 1x lens combination.
Focusing Range	105mm
Specific surface resistivity	$2 \times 10^{11} \Omega / \text{mm}^2$, discharge time less than 2 seconds from 1,000 V to 100 V

10) Illumination System (Diascopic & Episcopic)

ACUSZM127I1	- High Power Incident/Reflected and Transmitted Light Base light systems with white LED lamps having lifetime of more than 50000 hrs. - Regulated power supply for both lights with separate brightness controls & ON/OFF. - Additional Reflected multiple LED's based ring light illumination or Double Spot Illuminator, with high brightness 5600K, best contrast enhancement & color reproduction & Polarization contrast illumination (Optional) 65 mm illumination area - Integrated power unit 12V DC 24W/100...240V AC/50...60Hz
ACUSZM127I2	- Incident/Reflected and Encoded transmitted Light Base transmitted light systems with white LED lamps. - LED illumination having lifetime of more than 25000 hrs and suitable for bright field as well as one side Rottermann contrast or /equivalent contrast and dark field. - Additional Reflected multiple LED's based ring light illumination with switchable segments and integrated control panel. High performance diffusor to remove glares from reflected surface samples. - Double Spot Illuminator, with high brightness (Optional)
ACUSZM127I3	- Incident/Reflected and transmitted light systems with white LED lamps. - Regulated power supply for both lights with separate brightness controls. 04 Point segmented Ring Light illumination (360 degree rotating optical viewer) for Reflected illumination having Colour Temperature 5500K-6100K with service life of 50,000 hours & high brightness. 3-point arc light for oblique illumination. Transmitted light with centered LED 5500K-6100K for contrast enhancing. Gooseneck Co-axial Double Spot Illuminator, with high brightness. (Optional)
ACUSZM127I4	- Incident/Reflected light systems with 6100K LED lamps. - Regulated power supply for brightness controls. 04 Point segmented Ring Light illumination for Reflected illumination having Colour Temperature 6100K with service life of 50000 hours & high brightness. - Inbuilt programme to adjust the LED segments in full rotatable half and quarter ring segments. - Diffuser provided for homogeneous illumination, push button for operation modes and rotary button for continuous intensity adjustment. - Double Spot Illuminator, with high brightness (Optional)

11) Operating Conditions

- Temperature 10°C to 50°C and Humidity 10 to 100% RH
- Power supply- (100-240)AC $\pm$ 10%. Single Phase, Frequency – 50Hz $\pm$ 3% , Indian Electric Standards

12) Standard Accessories

- Operating user Manual, Antistatic Polymer Dust Cover, Guarantee Card and Styrofoam Molded pack.

FEATURES

- High quality optical components, providing sharp and striking contrast image and ensure flat image at big depth of field with Sharply focused over the whole magnification range.
- Ease the tiredness with ergonomic design. User interchangeable Apochromatic front optics
- Providing even illumination With LED light & Compatible with multiple types of illumination techniques.
- With complete eyepieces, objectives and accessories it is an ideal instrument for industry assembling, inspection and teaching field.
- Large Field of view and apochromatic correction with Extended Working distance
- Efficient stray light suppression for crisp three dimensional images.
- compatible for use in ISO7 or better Cleanroom.
- Double your resolution or enjoy large working distance without compromising optical quality.
- Flexible with different digital cameras.
- Designed for vibration free observation and heavy workloads, using durable and reliable mechanics.
- Continous variable zoom or in reproducible mode by activating click stops well balanced 3D impression
- Ergonomically user friendly than any other Greenough-type stereo microscope
- Antibacterial surface treatment for Anti fungus from preventing contamination from dust, oil and water.

OPTIONAL ACCESSORIES



Fibre Optics Illumination:
Halogen/LED



Ring Illuminator :
Halogen/LED



Polarizer/Analyzer



Dark Field Attachment



Micrometer Eye Piece



High Resolution
Microscopy Camera



XY Mechanical Stage



Dual Swing Arm
Boom Stand