

#### DESCRIPTION

**U**pright Metallurgical Microscope ACUMM-U3 reflected and transmitted microscope is suitable to observe surfaces of non-transparent object or transparent object. This metallurgical microscope not only have good optical system, but also combine optical microscope, photoelectric conversion technology and computer image processing technology to easily observe metallurgical image and analyze and rate metallurgical maps. In addition to observing metal surface, metallurgical microscope plays an important role in metal heat treatment and cold processing.



#### Modes:

- Bright Field
- Polarization

It is the ideal instrument for research work in biology, metallography, mineralogy, precision engineering, electronics, etc. It can be used in scientific research & universities for metallography, mineralogy, precision engineering etc.

It is no longer limited to metal research, as it is also widely applied in other opaque and translucent objects, including fibers, soils, minerals, crystals, ceramics, surface treatments, integrated circuits, LCD screens and other industries.

#### FEATURES

- Equipped with vertical illuminator, plan achromatic objectives with long working distance (no cover glass),
- Wide-field eyepieces provides clear pictures and wide view field.
- It provides clear and high-contrast image, beautiful sculpt, convenient control, etc.
- Coaxial coarse/fine focus system, with tensional adjustable and up stop, minimum division of fine focusing: 2 $\mu$ m.
- LED Illumination with adjustable brightness.
- Trinocular, can switch to observe normally or to observe the polarize, can send 100% of light to the binocular eyepieces or to the top port.

#### TECHNICAL SPECIFICATION

##### Main Body

- Upright Modular Frame Configuration , Built-in Ergonomic Design, One piece metal housing for high stability & precision, Sturdy & Highly rigid, Non Hinged type, vibration free Aluminum alloy casting, with transmitted light LED power supply & Brightness Control integrated in the base. Robust mechanics combined with improved optical performance.
- Handle on the rear side for simple, secure storage of the instrument
- All optical parts including objectives, eyepieces, and prisms should have an anti-reflective coating which also gives an anti-fungal property.
- All metallic parts are corrosion-proof, acid proof, and stain-proof.

---

##### Optical System : Plan Finite

---

##### Observation Head

- Side n top Binocular/Trinocular Observation head 30° inclined, 360° rotatable.
- Analyzer with field diaphragm to switch.
- $\pm 5$  Diopter adjustment Facility on left Eyepiece.
- High quality Prisms to ensure highly accurate collimation for stain free observation.
- Inter-pupillary distance from 53mm to 75mm.

---

##### Eyepiece : Compensating Wide field 10X (paired) F.O.V. 20mm, Antifungal Coated.

---

##### Nose Piece

- Ball Bearing loaded, interchangeable, Inward Quintuple type, Precise & Positive click stops for centered alignment to hold 05 objectives.
- Ribbed grip for easy rotation mounted on a precision ball bearing mechanism for smooth and accurate alignment so that object at the center of the field should not appear displaced by more than 0.02 mm in the object plane in any direction.

**Objectives: Plan Achromatic, , Interchangeable & Par focal, Uniformly Centred.**

- PL L5X/0.12, PL L10X/0.25, PL L20X/0.40, PL L50X /0.70
- PL L100X/0.85 DRY (SP) or PL 100X/1.25 OIL
- Objectives have Suitable prominent marking for easy identification : Color coded ring, magnification, NA and nature of objective mentioned

**Magnification : 50x-1000x**

#### **Mechanical Stage**

- Graduated uniformly horizontal Mechanical Rectangular Stage. Cross-stage with integrated XY attachable mechanical stage for samples up to 30 mm height
- Mechanical Stage 210x150mm with fine Vernier graduation, adjustment for slide manipulation allows smooth travel in transverse directions through X/Y 75 x 50 mm
- Stages available for left- and right-hand operation Integrated coaxial drive for X/Y movement. Vernier for X/Y coordinates – Movement 5 Microns.
- Ball Bearing Loaded with Coaxial Control.
- Ceramic coated surface for scratch resistance.
- Double Layer Mechanical with **Glass Insert**
- cross stage for reflected and transmitted light Illumination

**Condenser :** Centerable Sub Stage Abbe Condenser NA 1.25 oil with Aspheric Lens, Rack & pinion focusable.

#### **Focusing Control :**

- Two stage Co axial Coarse and Fine focusing Mechanism for smooth operations on both sides, with maximum height lockable clip(upper limit focus stopper preventing contact between objective and specimen in higher magnification), Ergonomically designed for easy grip.

#### **Illumination :**

- Transmitted White LED
- Reflecting: White LED.
- Vertical illumination With field diaphragm ,aperture diaphragm and polarizer,(Y,B,G)filter and Ground glass

**Electronics :** Universal Input 100-265 V AC, 50/60 Hz.

**Standard Accessories :** Operating Manual, Dust Cover, Guarantee Card and Thermocole Molded packing & outer corrugated box.

**Optional Accessories :** High Resolution Microscopy Camera, Eyepieces, Objectives.