

SUSWOX
OPTIK



MET Series

Metallurgical Microscope





How Does a Metallurgical Microscope Work?

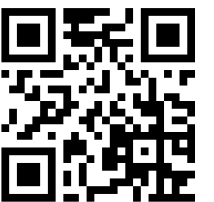
- Illuminate the sample surface using reflected light (epi-illumination) or transmitted light when needed.
- Use infinity-corrected objectives to deliver high-resolution, flat-field images of polished or etched materials.
- Combine with polarizers, filters, and digital cameras for enhanced contrast and image analysis.

Purpose

MET Series metallographic microscope is mainly applicable to the industries of electronics, metallurgy, chemicals, instruments and apparatus and is used to observe transparent, translucent or non-transparent objects and objects with illumination of transmitted light and reflected light, such as air springs, integrated blocks, printed circuit boards, liquid crystal boards, thin films, fibres, textiles, plating coatings, paint thickness and other non-metallic materials. A metallographic microscope is also used for observation and analysis by medicine, agriculture and forestry, schools and scientific research department.

Main Technical Parameters

- Objective lens (infinity flat-field achromatism non-stress metallographic objective lens):
 - 5 X , 0.12 N.A. & 23.6 mm W.D.
 - 10 X , 0.25 N.A. & 17.7 mm W.D.
 - 20 X , 0.40 N.A. & 10.4 mm W.D.
 - 50 X , 0.55 N.A. & 7 mm W.D.
 - 100 X , 0.8 N.A. & 3.2 mm W.D.
- Objective table: 140mmX120mm double-deck movable platform
- Ocular Lens : Flat Field with magnification rate of 10 X and a linear field of view of 22 mm.
- Moving range of objective table: 80mmX50mm
- Focusing: Coaxial focusing of coarse and micro movement adopts the gearwheel and spline transmission mechanism, with the microgrid value of 0.002mm.
- Condenser: N.A.1.25 swing-type Abbe condenser, with variable diaphragm
- Lagging-board color filter (green, blue and neutral) polarizer
- Lighting source: (1) Upper lighting: 5W LED lamp, DC12V2A, adjustable brightness
(2) Lower lighting: 5W LED lamp, DC12V2A, adjustable brightness
- Collector: High-brightness fixed lighting is equipped with adjustable



Spacious Mechanical Stage

- Large XY-stage with fine movement allows quick sample positioning.
- Designed for comfort and efficient inspection in routine or complex workflows.
- Accommodates various sample sizes for lab and industrial use.



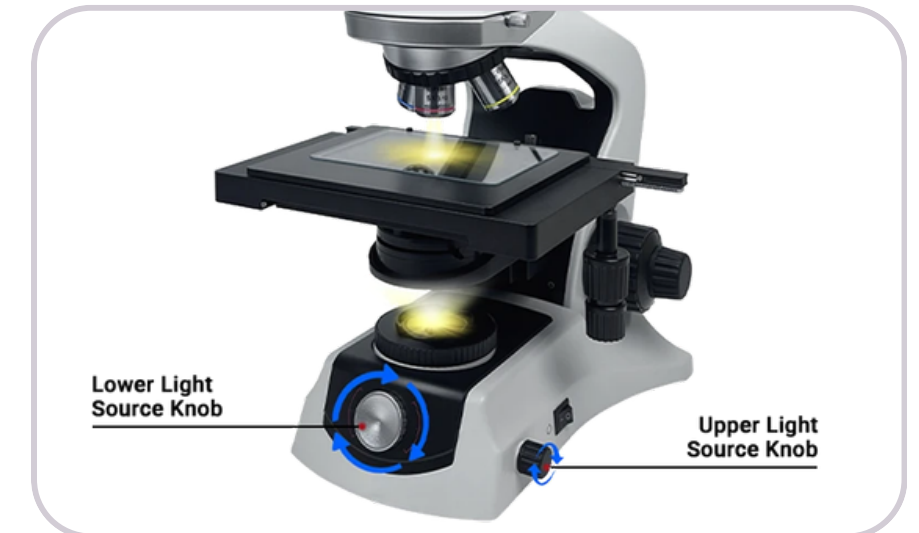
Modular System for Lab, QA, or Teaching Use

- Configurable for different environments—from clean labs to factory floors.
- Ideal for teaching materials science, performing failure analysis, or certifying metallographic samples.
- Modular C-mount design integrates easily with software or camera upgrades.



Dual Independent Illumination

- Support both reflected and transmitted LED illumination with fast switching—perfect for viewing both opaque materials and transparent samples.
- Increase flexibility in observing mounted cross-sections, metals, and films.
- Adjustable brightness ensures optimal image clarity for different materials.



Infinity Flat-Field Achromatic Objectives

- High-resolution, laboratory-grade lenses ensure excellent color correction and field flatness across all magnifications.
- Provide outstanding macro-to-micro observation for metallography, electronics, and surface research.
- Minimize image distortion at the periphery for a consistently sharp field of view.



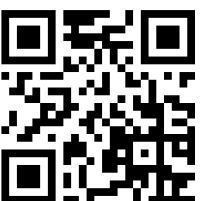
Flat field high eye point eyepieces

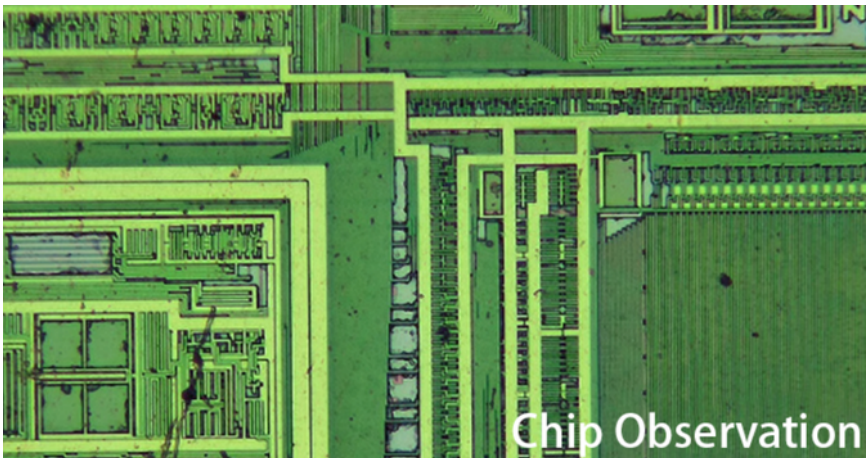
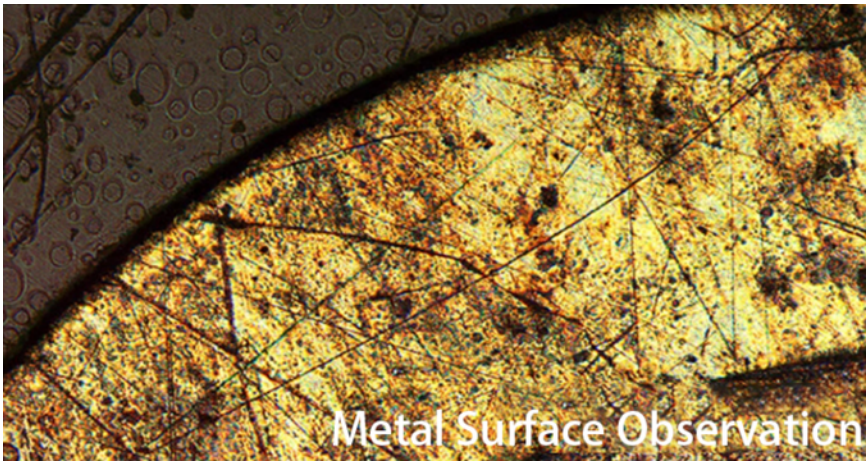
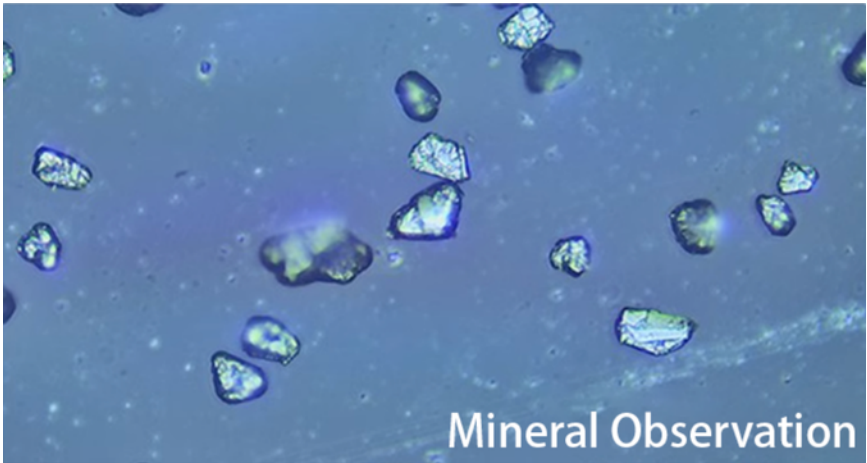
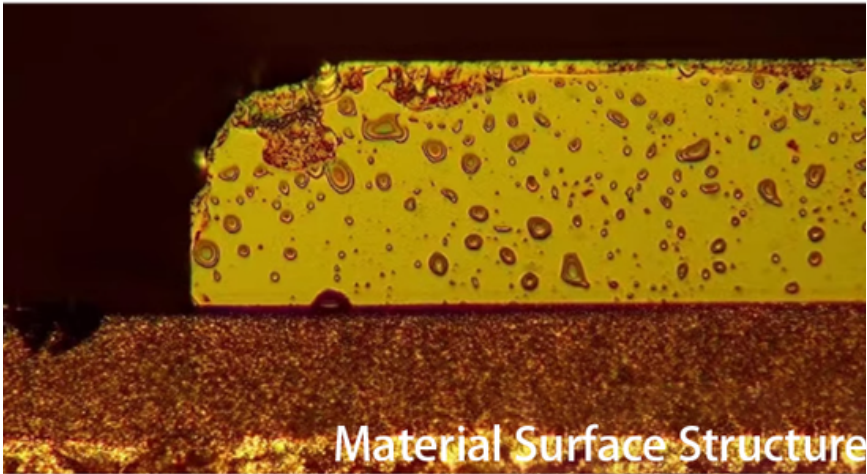
- Diopter adjustable from -8 to +5 degrees
- 10X wide angle eyepieces
- 22mm field of view



Camera Integration & Measurement Software

- Compatible with MCscope cameras featuring built-in measurement, comparison view, photo capture, and video recording—all through HDMI or USB.
- Supports calibration, cross-line overlays, and image annotation.
- Enables real-time documentation and analysis during QA inspections.





Datasheet

Title	Specification	Standard configuration	Optional
Microscope subject	Mirror frame	O	
	Objective table	O	
	Base	O	
Observation system	Three-way lens tube	O	
Condenser	NA=1.25 Abbe condenser	O	
Converter	Four holes	O	
Light sources	LED lamp	O	
Ocular lens	PL WF10X22	O	
Objective lens	5X、10X、20X、50X、100X	O	
	(four kinds of objective lens are optional)		
Adapter	DC12V2A	O	
Dust cover		O	
Operating Manual		O	
Inspection Certificate		O	
Drying agent		O	
Color filter			O
Polaroid			O
CTV	0.45X	O	
	0.3X		O
Spanner	Hexagon key wrench 1.5	O	
	Hexagon key wrench 2.5	O	

