Metallurgical Microscope - Trinocular Reflected and Transmitted Light Microscope - 5X-50X LWD, FN 22

Model **MSMSC-M31JSWISS** | Brand **Master Science**





The Master Science Metallurgical Microscope is an upright materials microscope with both an epi-illumination system and transmitted illumination, so opaque and transparent specimens can be examined on the same stand. Long working distance plan objectives from 5X to 50X leave generous clearance above the sample.

KEY HIGHLIGHTS

- Opaque and transparent samples
- Room to work under the lens
- Clear detail
- Comfortable viewing
- Extra contrast option

Request a Quotation
Contact us for pricing, configuration options and delivery details.

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Overview

It is mainly used in manufacturing fields such as semiconductors, flat panel displays, circuit boards, metallic materials and precision tools, and it also suits teaching and research. The Master Science Metallurgical Microscope supports polarizing observation and gives a flat, comfortable view through FN 22 widefield eyepieces.

Key Benefits

Opaque and transparent samples
: the Master Science Metallurgical Microscope has reflected and transmitted light.

Room to work under the lens
: long working distance objectives.

Clear detail
: high-resolution, high-contrast imaging.

Comfortable viewing
: FN 22 widefield eyepieces with a flat field.

Extra contrast option
: polarizing observation supported.

For more metallographic options, see the Master Science metallurgical microscope range.

Technical Specifications

GENERAL

General	Specifications of the Master Science Metallurgical Microscope are given below.
Brand	Master Science
Model Number	MSMSC-M31JSWISS
SKU	MSMSC-M31JSWISS
Observation Tube	Tilting trinocular, interpupillary distance 55-75 mm
Viewing Head	Siedentopf head, inclined at 30°
Eyepiece	Wide field WF10X / F.N. 22 mm
Objective 5X	Long working distance plan, L Plan 5X/0.12, W.D. 23.6 mm
Objective 10X	Long working distance plan, L Plan 10X/0.25, W.D. 17.7 mm
Objective 20X	Long working distance plan, L Plan 20X/0.40, W.D. 10.4 mm
Objective 50X	Long working distance plan, L Plan 50X/0.55, W.D. 7 mm
Objective 100X (optional)	Long working distance plan, L Plan 100X/0.8, W.D. 3.2 mm
Nosepiece	Inward-facing quadruple nosepiece
Stage	Double-layer mechanical stage, 210 x 140 mm; moving range 75 x 50 mm
Condenser	Abbe N.A. 1.25 with iris diaphragm, height adjustable
Focusing	Coaxial coarse and fine adjustment with locking and limit device; fine division 2 µm; coarse stroke 40 mm per rotation; fine stroke 0.2 mm per rotation; focusing range 24 mm
Epi-illumination System	Kohler illumination with green, blue, yellow and ground glass filters
Transmitted Illumination	Abbe condenser N.A. 1.25; white LED with adjustable brightness
Optics	Infinity optical system

COMMON PROBLEMS THIS MICROSCOPE SOLVES

Common Problems This Microscope Solves	Inspecting solid parts under a microscope raises its own difficulties.
Opaque samples cannot be lit from below	: the epi-illumination system lights them from above.
Objectives touch tall or uneven parts	: long working distances keep the lens clear.
Glare hides surface detail	: Kohler illumination and filters control the light.
Focus lost between similar samples	: the locking and limit device holds the position.

Applications

The Master Science Metallurgical Microscope is primarily used for: Semiconductor inspection Flat panel display (FPD) and circuit board inspection Metallic materials and precision tools Teaching and research

Optics

- Supports polarizing observation
- Long working distance plan objectives
- High-resolution and high-contrast imaging
- Widefield eyepieces with F.N. 22 mm for a flat and comfortable view

Stand

- Epi-illumination with Kohler design and colour filters
- Transmitted LED illumination with Abbe condenser
- Siedentopf trinocular head inclined at 30°
- Coaxial focusing with locking and limit device

Optional Accessories

- L Plan 100X/0.8 objective