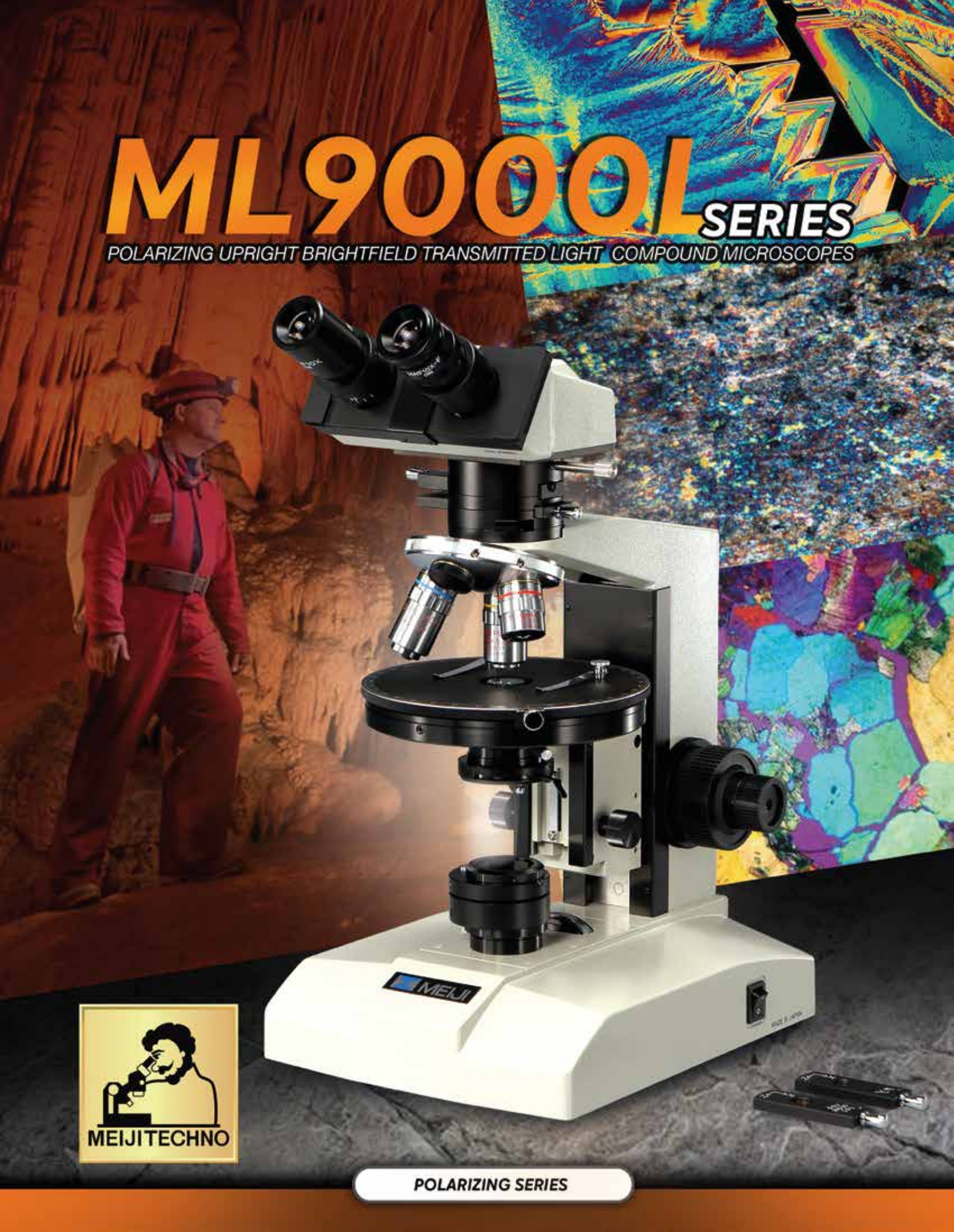
ML9000L SERIES

POLARIZING UPRIGHT BRIGHTFIELD TRANSMITTED LIGHT COMPOUND MICROSCOPES



MEIJITECHNO

POLARIZING SERIES

ML9000L SERIES

POLARIZING MICROSCOPES
WITH STRAIN-FREE SM PLAN OBJECTIVES

MEIJI TECHNO

The Meiji Techno ML9000L Series Polarizing Microscopes set a high standard for transmitted-light microscopy, combining precision optics with durable engineering for research, education, and industrial applications.

Featuring a brightfield and polarization-capable finite optical system (F=160 mm) with built-in Köhler LED illumination, the ML9000L Series delivers crisp, high-contrast images ideal for mineralogy, geology, materials science, and forensic analysis. Strain-free SM Plan objectives, a centerable quadruple nosepiece, and a fully rotatable 360° stage ensure accurate and repeatable observations, while integrated polarizer and analyzer components with wave plates and a Bertrand lens enable detailed crystal and birefringence studies.

Designed for both laboratory and classroom use, the ML9000L Series offers professional-grade performance with intuitive operation. Standard features include high-quality DIN eyepieces, coaxial coarse and fine focus with safety stops, and a strain-free Abbe polarizing condenser with iris diaphragm and blue filter for excellent image clarity. Available in binocular (ML9200L) and trinocular (ML9300L) configurations, these microscopes include essential polarization accessories out of the box, delivering a complete, reliable solution for demanding polarized light microscopy applications.

ML9300L
(FRONTAL VIEW)

ML9300L
(REAR VIEW)

AUTOMATIC VOLTAGE SENSING
POWER SUPPLY
110V-240V

BRIGHTFIELD & POLARIZATION TRANSMITTED LIGHT MODELS - QUADRUPLE NOSEPIECE

MODEL	BODY	ILLUMINATOR	EYEPIECES	OBJECTIVES	STAGE	CONDENSER
ML9200L	Binocular	BUILT-IN KOEHLER LED ILLUMINATOR WITH LIGHT INTENSITY CONTROL	DIN STANDARD EYEPIECE HWF10X AND DIN FOCUSING HWF10XF EYEPIECE WITH CROSS-LINE RETICLE	SM PLAN STRAIN FREE OBJECTIVES 4X, 10X, 40X(S) (MAGNIFICATION FACTOR 1.5X)	ROTATABLE STAGE WITH GRADUATION 360°, WITH VERNIER AND STAGE CLIPS	STRAIN FREE ACHROMATIC POLARIZING CONDENSER N.A. 1.25 WITH IRIS DIAPHRAGM AND FILTER TRAY
ML9300L	Trinocular					

Units come with a standard auto-voltage sensing switching adapter UL plug. Customers need to obtain proper conversion adapter from UL to CE plug or UL to Oceanian plug.

IDEAL FOR ADVANCED RESEARCH AND PRECISION INSPECTION IN GEOLOGY, MINERALOGY, PETROLOGY, AND RELATED FIELDS

for FOR DETAILED IMAGING OF CRYSTALLINE AND ANISOTROPIC SPECIMENS.

VIEWING HEAD
Binocular 30° inclined tube or or Trinocular Viewing Head 30° inclined

ATTACHABLE DIGITAL CAMERA
23.2mm PHOTO PORT

EYEPIECE
KHW-10X Compensating eyepiece, F.N. 20 (Tube O.D. 23.2mm)

FOCUSING EYEPIECE
MA413CP
Super Widefield compensating KHW10X, focusing eyepiece with a cross-line reticle and guide pin

BEAM SPLITTER
80% light is directed to the camera and the remaining light 20% going to the eyepieces

BERTRAND LENS
Intermediate tube with built-in Bertrand lens analyzer and rotatable polarizer in a swing-out mount

COMPENSATOR SLOT
Holds optical plates to enhance polarization contrast

STRAIN FREE OBJECTIVES
Reverse facing centerable nosepiece with Infinity Corrected Plan 4X, 10X, 40X, 180mm tube length

STAGE
Ceramic coated, 175mm diameter, ball bearing, circular rotating stage graduated 360°and stage clips

STRAIN FREE CONDENSER
Strain free Abbe condenser, N.A. 1.25 with iris diaphragm and dovetail mount

SWING IN & OUT POLARIZER ANALYZER
Swing in/out mount provides both orthoscopic and conoscopic observations

FIELD DIAPHRAGM
Improves contrast by blocking excess light.

NEW MODULAR DESIGN facilitates ATTACHMENT OF A VARIETY OF ACCESSORIES

FOCUSING ADJUSTMENT
Coaxial coarse and 200 μm fine adjustments, 2 μm precision, Friction adjustment. "Slip-clutch" system protects against over-focusing

SUBSTAGE COARSE KNOB

LED ILLUMINATOR
Paired HWF 10X//20mm F.O.V. 30.0mm with diopter adjustment

ON/OFF SWITCH
Main power control for the light source

COMPENSATING PLATE
First order red and *1/4 Wave-length test plate

MT9300L

HDMI-USB 2.0 CAMERAS WITH 11.8" MONITOR

Requires 0.3 "C"-Mount Adapter Model MA151/35/03

HD1000-LITE-M	Affordable Color HD 5MP CMOS 15FPS/ HDMI/ USB 2.0 Camera/Annotation & Measurement Software with 11.8IN HDMI monitor.
HD1500T-M	Color HD 6MP CMOS 60FPS/ HDMI/ USB 2.0 Camera/Annotation & Metric Measurement Software with 11.8IN HDMI monitor.
HD1500MET-M	Color HD 6MP CMOS 60FPS/ HDMI/ USB 2.0 Camera/Annotation & Metric Measurement Software with 11.8IN HDMI monitor.
HD1500MET-AF-M	Autofocus HD 6MP CMOS 60FPS/ HDMI/ USB 2.0 Camera/Annotation & Metric Measurement Software with 11.8IN HDMI monitor.

35mm PHOTOMICROSCOPY

Following three accessories are required for mounting a 35mm SLR camera body

1. The appropriate T-2 adapter ring for your SLR camera body

T2-1	Canon	**T2-6**	Olympus
T2-2	Minolta	**T2-7**	Contax, Yashika
T2-3	Pentax K	**T2-8**	Konica
T2-4	Pentax S	**T2-9**	Canon Eos
T2-5	Nikon	**T2-10**	Minolta Alpha / Maxim 2000

These adapter rings attach directly to your camera body's lens mount.

2. A photo eyepiece, available in the following magnifications:

MA512 2.5X magnification

MA500 3.3X magnification (with reticle mount)

MA508 5X magnification

The photo eyepiece performs the same function as a standard 35mm camera lens (i.e. focusing the image at the plane of the film).

3· One of two MA150 series camera attachments:

MA150/50 Straight-tube camera attachment

MA150/60 Camera attachment with built-in focusing eyepiece

These attachments are used to mount the camera with T2 adapter ring to the photo tube.

HD1500MET-AF CAMERA

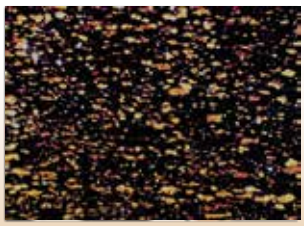
ML9300L + HD1500T-M + MA151/35/03

11.8IN HDMI MONITOR

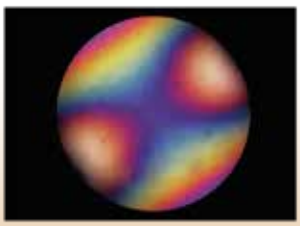
EQUIPPED WITH USB 2.0, SDHC CARD

MA151/35/03 "C" MOUNT ADAPTER

GEOLOGIST EXAMINES DARK COAL SEAM ON ROCKY SLOPE



BOGHEAD COAL



BIAXIAL INTERFERENE FIGURES

An upright brightfield polarizing microscope is used to examine transparent and semi-transparent materials by observing how polarized light passes through and interacts with the specimen, revealing crystal structure, optical properties, and internal stress that cannot be seen with standard brightfield microscopy. It is commonly used in geology, materials science, forensics, and chemical research for identifying minerals, analyzing polymers and fibers, and studying crystalline substances using standard slides and thin sections.

COMPONENTS AND ACCESSORIES FOR ML9000L SERIES

The Items marked with a Star (★) are included

VIEWING HEAD (without eyepieces)

MA647 ★Binocular head, 30° inclination, one eyetube slotted for orientation of cross-line eyepiece, non-erect image (Included with ML9200L)

MA648 ★Trinocular head, 30° inclination, one eyetube slotted for orientation of cross-line eyepiece, but with 80/20 beam splitter and vertical phototube, non-erect image (Included with ML9300L)

MA649 ★Monocular head, 30° inclination, eyetube slotted for orientation of cross-line eyepiece, non-erect image (Included in ML9100)

EYEPIECES

MA406 ★*DIN HWF10X eyepiece, F.N. 18mm (each)

MA413CP ★DIN focusing HWF10X eyepiece with cross-line and guide pin (each)

POL OBJECTIVES

MA641 ★SM Plan strain free objective 4X/N.A. 0.10 (Included)

MA642 ★SM Plan strain free objective 10X/N.A. 0.25 (Included)

MA642D SM Plan dispersion staining objective 10X/N.A. 0.25

MA643 SM Plan strain free objective 20XS/N.A. 0.40 (Optional)

MA644 ★SM Plan strain free objective 40XS/N.A. 0.65 (Included)

MA645 SM Plan strain free objective 60XS/N.A. 0.85 (Optional)

MA646 SM Plan strain free objective 100XS/N.A. 1.25 oil (Optional)

CONDENSER

MA954 ★Strain free achromatic polarizing condenser N.A. 1.25 with iris diaphragm and filter tray for ML9000L Series polarizing microscopes (Included)

STAGES

MA479 ★Rotatable stage with clamp, reading to 1° rotation, 150mm diameter, for ML9000L Series (Included)

MA299 Attachable mechanical stage for ML9000L Series (Optional)

WAVE PLATES AND COMPENSATORS

MA469 ★1/4 wave-length test plate in sliding mount (20mm x 6mm x 80mm) (Included)

MA654 Quartz wedge 6 order (20mm x 6mm x 130mm)

MA654N ★Quartz wedge 6 order graduated (20mm x 6mm x 80mm)

MA470 ★First order red compensating plate in sliding mount

MA471 ★Analyzer in sliding mount (26m x 6mm x 80mm) (Included)

MA477 ★Replacement Bertrand lens in sliding mount for ML9000L and ML9700 Series 20mm x 6mm x 80mm) (Included)

MA901 Graduated rotatable analyzer for ML9000L Series (26mm x 6mm, 0 – 360°)

MA904 Senarmont Compensator (20mm x 6mm x 99mm)

REPLACEMENT BULBS & FUSES (LED MODELS

LED/SP-1 ★3W LED, 5500K color temperature

MA929 Spare Fuse 0.5A for ML9000L series LED Illuminator

MA929 Spare Fuse 0.5A for LED illuminator

MA326 Halogen bulb, 6V 30W

MA327 Fuse 3A, replacement

STORAGE

MT-PEL Pelican case with foam insert 21 ½ (L) x 16 ½ (W) x 12 ½ (D) for ML/MT/EM models with portable pullout handle and wheels for protection against vibration and shock (Optional)

MISCELLANEOUS

MA808/10 ★AC adapter for ML2000L, ML5000L, ML6100L, ML6500L, and ML9000L series. AC Input: 100V~240V, DC Output: 5V 2.5A

MA494/PT#1 ★Nosepiece centering screws (each) (Included qty#2)

MA673 19mm depolarizer in mount to fit MA647, MA648 and MA603/05

MA712 Dust cover for ML9000L, ML9700 and ML9400 Series (Included)

MA905 Interference color chart

MA299 MECHANICAL STAGE (OPTIONAL)

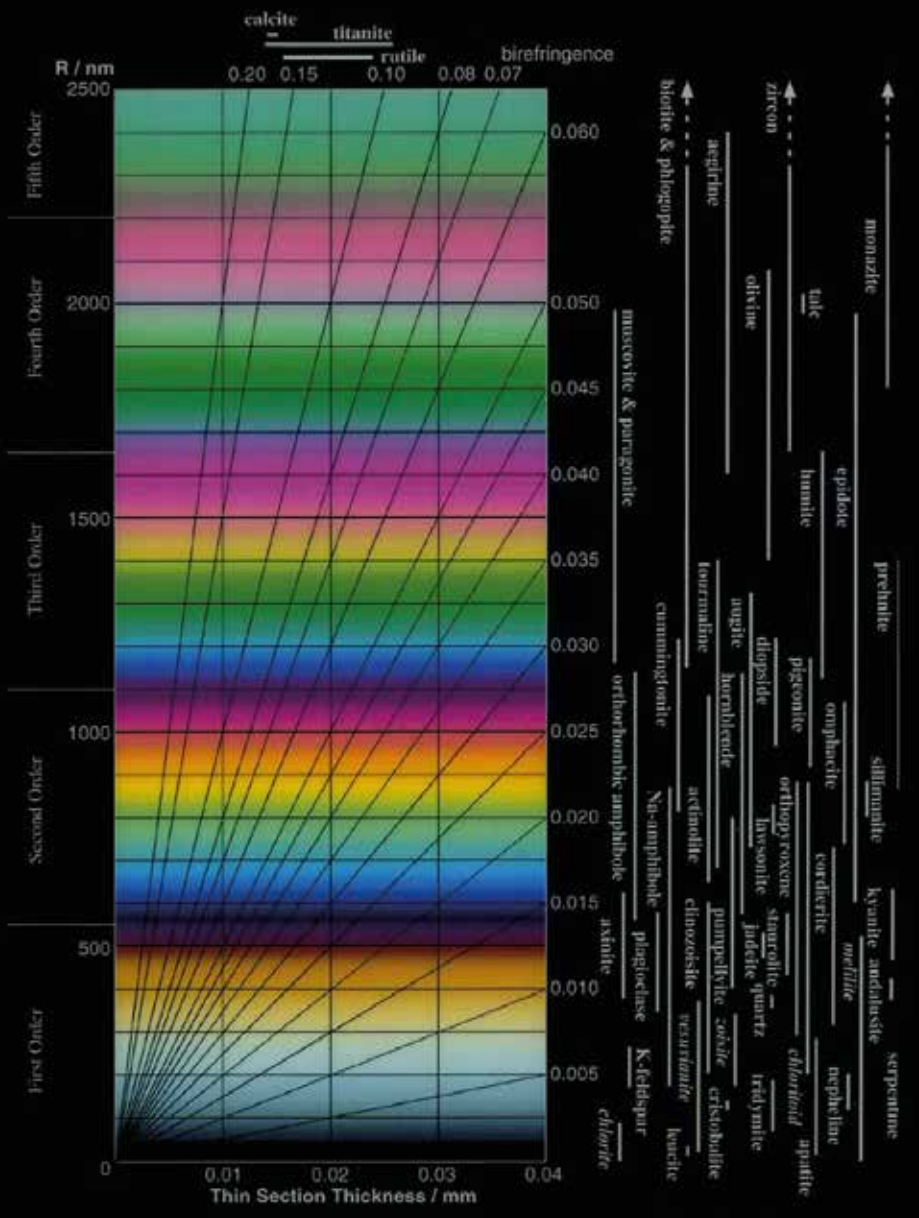
MA945 SM PLAN STRAIN FREE OBJECTIVE 100XS (OPTIONAL)

MA479 ROTATABLE STAGE (INCLUDED)

MA901 GRADUATED ROTATABLE ANALYZER (OPTIONAL)

MT-PEL PELICAN CASE WITH FOAM INSERT 21 ½ (L) X 16 ½ (W) X 12 ½ (D) (OPTIONAL)

INTERFERENCE COLOR CHART



For further information about the MT9000 Series, scan this QR code.

Product Information:

- ***Manufactured:*** *100% MADE IN JAPAN*
- ***Warranty:*** *LIMITED LIFETIME WARRANTY*
- ***Customer Support:*** *1-(800) 832-0060 (U.S.A Based)*

Package Information:

- ***Weight:*** *33 lbs (9.06 kg)*
- ***Box Size:*** *16 x 14 x 21 inches*
- ***Footprint:*** *263mm (D) x 176mm (W)*

- ***Binocular head type:***

263 mm(D) x 456mm (H) x 212mm(W) (9.06kg)(33.0 lbs.)

- ***Trinocular head type:***

263 mm(D) x 510mm(H) x 212mm(W) (9.75Kg)(35.0 lbs.)

Specifications and design subject to change without notice for improvements

Agent:

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