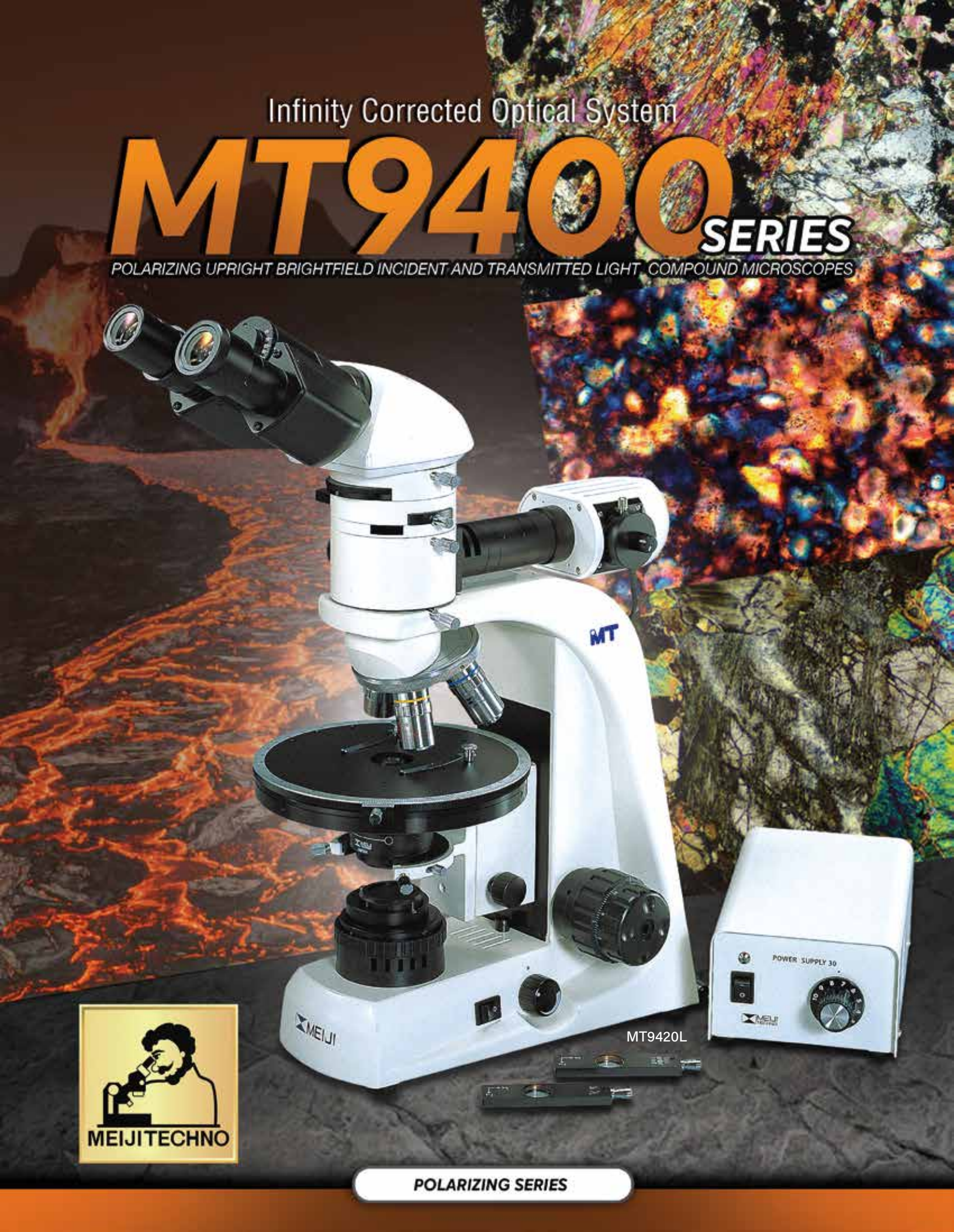
Infinity Corrected Optical System

MT9400 SERIES

POLARIZING UPRIGHT BRIGHTFIELD INCIDENT AND TRANSMITTED LIGHT COMPOUND MICROSCOPES



MT9420L

MEIJITECHNO

POLARIZING SERIES

MT9400 SERIES

POLARIZING MICROSCOPES

WITH INFINITY CORRECTED OPTICAL SYSTEM FOR INCIDENT AND TRANSMITTED LIGHT USE

MEIJI TECHNO

The Meiji Techno America MT9400 Series Polarizing Microscopes deliver precise incident and transmitted light polarized imaging with strain-free, infinity-corrected optics. Ideal for geology, mineralogy, materials science, and research.

The Meiji Techno MT9400 Series Polarizing Microscopes are advanced brightfield upright microscopes engineered for both incident and transmitted light polarizing microscopy, designed to meet the needs of scientific research, education, and industrial laboratories. At the core of the MT9400 Series is an Infinity Corrected Optical System (ICOS) with precision strain-free objectives that deliver exceptionally clear, high-contrast images of isotropic and anisotropic materials. Ergonomically placed controls, a smooth-operating ball-bearing nosepiece, and a rotatable stage with vernier scale ensure efficient and comfortable operation even during extended observation sessions. Standard features include built-in Bertrand lens for conoscopic viewing, sliding analyzer, compensating plates, and a fully rotatable polarizer, making these instruments ideal for mineralogical analysis, crystallography, materials science, and forensic investigations.

Built to be versatile and reliable, the MT9400 Series supports a wide range of microscopy applications—from studying crystal structures and interference figures to conducting quality control in environmental and industrial settings. The series includes both binocular and trinocular viewing head options, with choices of halogen or LED illumination to suit different laboratory environments and preferences. With precision optics, comprehensive polarization accessories, and robust mechanical design, the MT9400 microscopes provide researchers and technicians with the performance and flexibility needed for detailed polarizing light microscopy.

MT9420H (FRONTAL VIEW)

LED OR **HALOGEN ILLUMINATION**

AUTOMATIC VOLTAGE SENSING **POWER SUPPLY 110V-240V**

BRIGHTFIELD & POLARIZATION TRANSMITTED LIGHT MODELS - QUADRUPLE NOSEPIECE

MODEL	BODY	ILLUMINATOR	EYEPIECES	OBJECTIVES	CONDENSER	STAGE
MT9420H	Binocular	TRANSMITTED AND INCIDENT KOEHLER ILLUMINATOR 6V, 30W HALOGEN	KHW-10X COMPENSATING FOCUSING WITH GUIDE PIN AND CROSSLINE RETICLE KHW 10X F.N. 20 (O.D. 23.2MM)	INFINITY CORRECTED SYSTEM F=200MM STAIN FREE PLAN OBJECTIVE 4X PLAN OBJECTIVE 10X PLAN OBJECTIVE 40X	STRAIN FREE ABBE CONDENSER N.A. 0.90 WITH SWING OUT TOP LENS	ROTATABLE WITH 360° GRADUATION WITH VERNIER 175MM DIAMETER
MT9430H	Trinocular					
MT9420L	Binocular	TRANSMITTED AND INCIDENT KOEHLER LED ILLUMINATOR				
MT9430L	Trinocular					

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

All MT9400 Series models are supplied with Auto voltage sensing (110V - 240V), a centerable quadruple nosepiece, 175mm diameter ceramic coated, rotatable stage with vernier and 360° graduation, Mica 1/4 wave plate, First order Red Plate, stage lock, strain free objectives, centerable Bertrand lens, crossline reticle, dust cover and operations manual.

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

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

MA407CP

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

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

ANALYZER IN SLIDING 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.

BEAM SPLITTER
Beam splitter 80/20 split ratio, 80% light is directed to the camera and the remaining light 20% going to the eyepieces

LAMPHOUSE CENTERING CONTROL

SUBSTAGE COARSE KNOB
quickly raises or lowers the condenser to properly focus and control the light reaching the specimen.

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

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

POWER SUPPLY

ILLUMINATION ADJUSTMENT
Variable Intesity knob increases or decreases the intensity of the light source.

ON/OFF SWITCH
Main power control for the light source

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

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.

HD1500MET-AF CAMERA

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.

MT9430H + HD1500-M + MA151/35/03

11.8IN HDMI MONITOR

EQUIPPED WITH USB 2.0, SD CARD

MA151/35/03 "C" MOUNT ADAPTER

COMPONENTS AND ACCESSORIES FOR MT9400 SERIES

The Items marked with a Star (★) are included

VIEWING HEAD (without eyepieces)

MA952 ★Binocular head - Siedentopf type, inclined at 30° with reticle angle compensation, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube. (23.2mm I.D. eyetube). (Included in models MT9200 and MT9200L)

MA953 ★Trinocular head - Siedentopf type, inclined at 30° with reticle angle compensation, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube (23.2mm I.D. eyetube). (Included in models MT9300 and MT9300L)

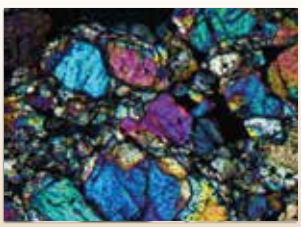
EYEPIECES

MA407CP ★Super Widefield Compensating KHW10X, focusing eyepiece with crossline and guide pin, F.N. 20 are standard with 21mm reticle mount (Tube O.D. 23.2mm)

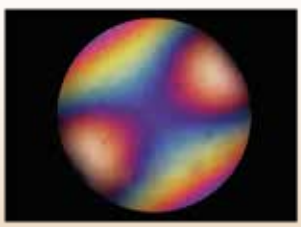
MA407 ★KHW-10X Compensating eyepiece, F.N. 20 (each) (Tube O.D. 23.2mm) (Included)

MA407/05 KHW-10X Compensating Focusing eyepiece, F.N. 20 (each) (Tube O.D. 23.2mm)

MA200 Eyeshields for MA407 KHW10X eyepiece (each)



QUARTZ SANDSTONE



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 MT9400 SERIES

The Items marked with a Star (★) are included

SEMI PLANACHROMAT POL OBJECTIVES FOR TRANSMITTED LIGHT WORK

MA935 ★Strain free Plan objective 4X/N.A.0.10, W.D. 25.89mm (Included)
MA936 ★Strain free Plan objective 10X/N.A.0.25, W.D. 7.3mm (Included)
MA937 Strain free Plan objective 20X/N.A.0.40, W.D. 7.29mm (Optional)
MA938 ★Strain free Plan objective 40XS/N.A.0.65, W.D. 0.72mm (Included)
MA939 Strain free Plan objective 60XS/N.A.0.85, W.D. 0.2mm (Optional)
MA940 Strain free Plan objective 100XS/N.A.1.25 oil, W.D. 0.14mm (Optional)

PLAN ACHROMAT POL OBJECTIVES FOR USE WITHOUT COVER SLIP

MA947 Strain Free Plan objective 20X/N.A. 0.40, W.D. 5.2mm (Optional)
MA948 Strain Free Plan objective 40X/N.A. 0.65, W.D. 0.81mm (Optional)

CONDENSER

MA954 ★Strain free Abbe condenser, N.A. 1.25 with iris diaphragm and dovetail mount
MA976/05 Strain free Abbe condenser with swing out top lens, N.A. 0.90 with iris diaphragm and dovetail mount (Optional)

STAGE AND STAGE ACCESSORIES

MA299 Attachable mechanical stage for MT9000 Series (Optional)
MA945 Attachable mechanical stage for MT9000 Series with Point Counter with 0.1, 0.2, 0.5 replaceable knobs (Optional
MA945/05 Point Counter with 0.1, 0.2, 0.5 replaceable knobs for Olympus polarizing microscopes (on selected models)
MA945/10 Point Counter with 0.1, 0.2, 0.5 replaceable knobs for Nikon polarizing microscopes (on selected models)
MA946 ★Stage Clips (2 pcs) (Included)

WAVE PLATES AND COMPENSATORS

MA469/05 ★1/4 Wave-length test plate (Mica 147.3nm) for MT9000 Series (20mm x 6mm x 80mm) (Included)
MA654N/05 Quartz Wedge, 6 order, graduated for MT9000 Series (20mm x 6mm x 130mm)
MA470/05 ★First order red compensating plate for MT9000 Series (20mm x 6mm x 80mm) (530nm, also called Gypsum or Sensitive Tint Plate) (Included)
MA471/05 ★Analyzer in sliding mount for MT9000 Series (26mm x 6mm x 80mm) (Included)
MA904/05 Senarmont compensator - A highly accurate 1/4 wave plate used to measure retardation, for use with MA956 rotating analyzer (Optional)
MA956 Rotatable analyzer with 360° graduations (34mm x 6mm x 156mm) (For use with MT9200 and MT9300) (Optional)

FILTERS

MA289/05 ★Blue clear filter, 29.8mm diameter, unmounted, for transmitted light (Included)
MA475/05 Blue clear filter, 19.5mm diameter in metal mount, fits 25mm filter slot (Optional)
MA198 ND13 neutral density filter, 19.5mm in diameter in metal mount, fits 25mm filter slot (Optional)

COMPONENTS FOR REFLECTED LIGHT MICROSCOPY

MA955 ★Vertical illuminator Attachment, 6V 30W Halogen Koehler (Halogen Models)
MA927/05 ★Vertical illuminator table-top transformer (in case) (Input voltage 100V – 240V) (Included in Halogen models)
MA955LED ★LED Vertical Koehler illuminator (Included in LED models)
MA927/05/LED ★LED Vertical Koehler illuminator (Included in LED models)
MA679 ★ Polarizer in mount for vertical illuminator (Included)
MA475/05 Blue clear filter, 20mm diameter in metal mount, fits 25mm filter slot (Optional)
MA198 ND13 neutral density filter, 19.5mm in diameter in metal mount, fits 25mm filter slot

POWER CORDS

MA809/10 ★Removable AC Electric cord with plug for 115V models (Included in all 115V models)
MA809/20 ★Removable AC Electric cord with plug for 220V models (Included in all 220V models)

REPLACEMENT BULBS & FUSES (HALOGEN MODELS

MA326 ★Spare bulb, 6V 30W Halogen
MA327 ★Spare 3A fuse

REPLACEMENT BULBS & FUSES (LED MODELS

LED/SP-1 ★3W LED, 5500K color temperature
MA929 ★Spare Fuse 0.5A for LED illuminator

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

MA494/PT#1 ★Nosepieces centering screws (each) (Included qty# 2)
MA711 ★Dust cover for MT9000 Series (Included in all series)
MA905 ★Interference Color Chart

MA299 MECHANICAL STAGE (OPTIONAL)

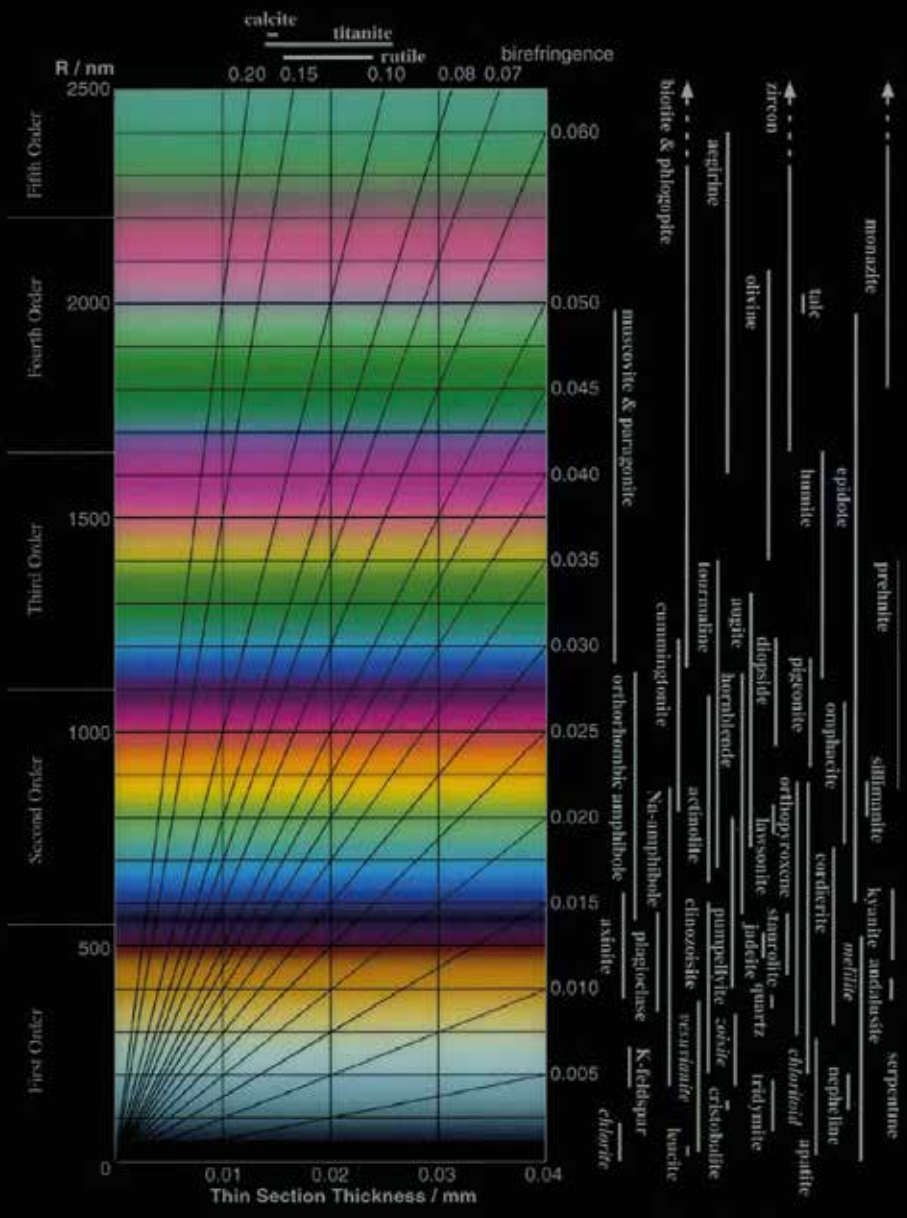
MA945 POINT COUNTER (OPTIONAL)

OPTIONAL MA654/05 QUARTZ WEDGE
MA904/05 SENARMONT COMPENSATOR

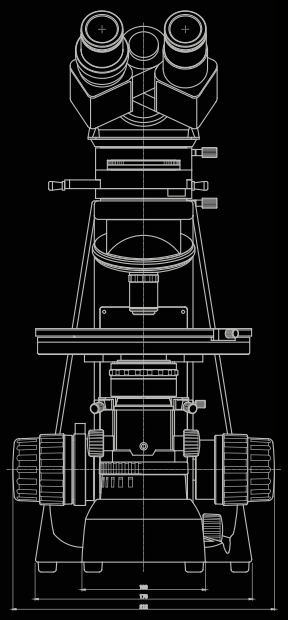
MA956 ROTATABLE ANALYZER (OPTIONAL)

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 MT9400 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:*** *34lbs (15.4kg)*
- ***Box Size:*** *16 x 14 x 21 inches*
- ***Footprint:*** *263mm (D) x 176mm (W)*

- ***Binocular head type:***

297 mm(D) x 504mm (H) x 212mm(W) (11.4kg) (41.33 lbs.)

- ***Trinocular head type:***

297 mm(D) x 558mm(H) x 212mm(W) (12.2Kg)(44.0 lbs.)

Specifications and design subject to change without notice for improvements

Agent:

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