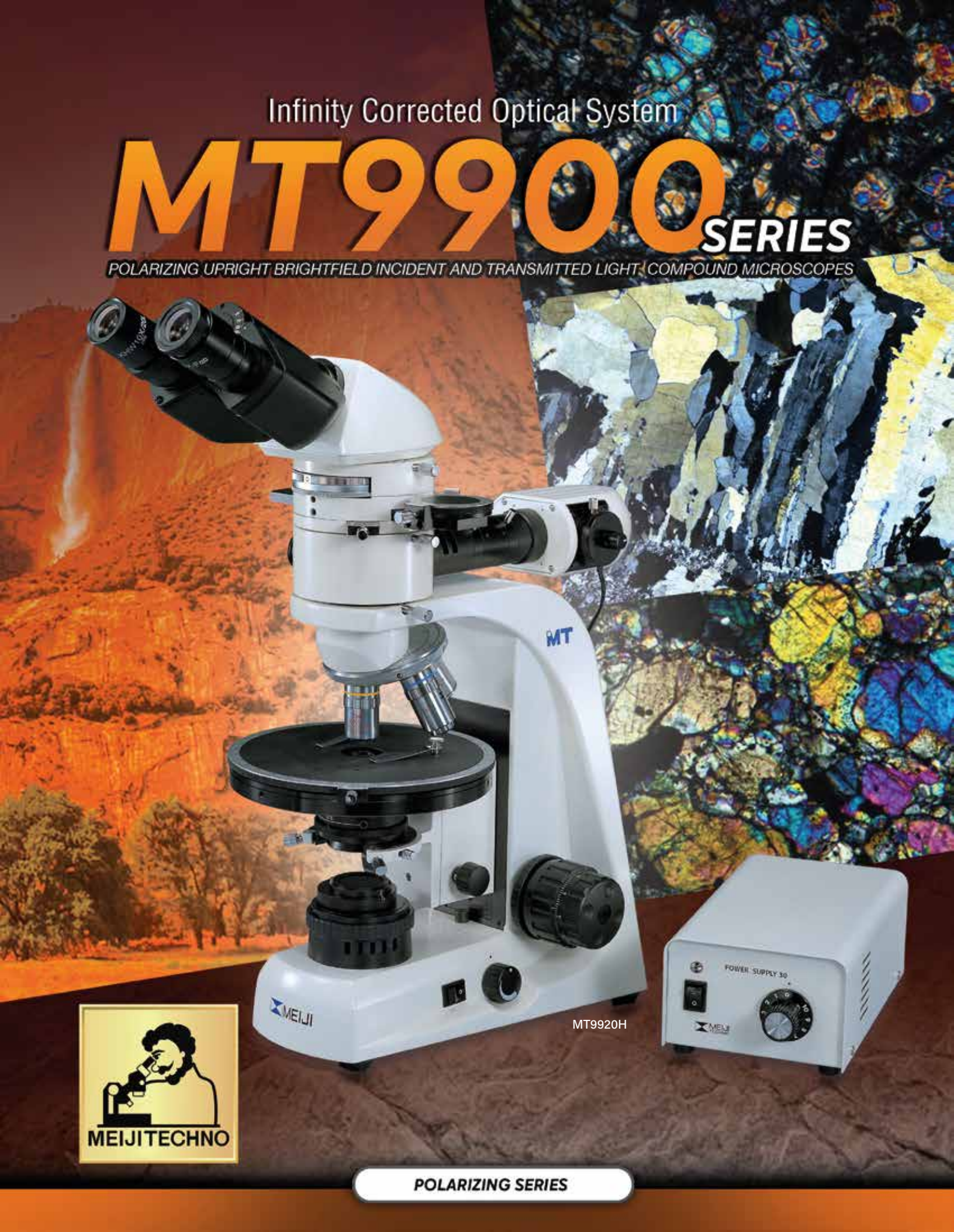
Infinity Corrected Optical System

MT9900 SERIES

POLARIZING UPRIGHT BRIGHTFIELD INCIDENT AND TRANSMITTED LIGHT COMPOUND MICROSCOPES



MT9920H

MEIJITECHNO

POLARIZING SERIES

MT9900 SERIES

POLARIZING MICROSCOPES

WITH INFINITY CORRECTED OPTICAL SYSTEM FOR INCIDENT AND TRANSMITTED LIGHT USE

MEIJI TECHNO

The Meiji Techno America MT9900 Series Polarizing Microscopes are high-performance incident and transmitted light systems designed for advanced polarized light analysis. Featuring infinity-corrected, strain-free optics, they deliver bright, high-contrast images with exceptional clarity. Ideal for geology, mineralogy, materials science, research, and industrial inspection applications..

The Meiji Techno MT9900 Series Polarizing Microscopes are advanced incident and transmitted light polarizing microscopes engineered for high-performance analysis of birefringent and anisotropic materials such as rocks, minerals, polymers, and crystalline samples. Equipped with a superior infinity-corrected optical system and strain-free Plan objectives, these microscopes deliver exceptionally bright, high-contrast imaging for detailed observation and research. The ergonomic design includes comfortable viewing heads (available in binocular or trinocular formats), smooth ball-bearing nosepieces, and powerful Koehler illumination, making the MT9900 Series ideal for university labs, geological studies, materials science, and industrial quality control.

The MT9900 Series also features integrated polarizing accessories—such as a rotatable analyzer, focusable Bertrand lens, and compensator plate options—enhancing its capability for both orthoscopic and conoscopic observation. A ceramic-coated, fully rotatable mechanical stage with vernier graduations supports precise sample manipulation, while robust mechanical and optical components ensure reliability in demanding microscopy tasks. Available with halogen or LED illumination and optional camera integration on trinocular models, this series offers flexibility and performance to support advanced polarizing applications in research, education, and industry.

BRIGHTFIELD & POLARIZATION INCIDENT & TRANSMITTED LIGHT MODELS - QUADRUPLE NOSEPIECE

LED
OR **HALOGEN**
ILLUMINATION

MT9920H (FRONTAL VIEW)

AUTOMATIC VOLTAGE SENSING
POWER SUPPLY 110V-240V

MODEL	BODY	ILLUMINATOR	EYEPIECES	OBJECTIVES	STAGE	CONDENSER
MT9920H	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	ROTATABLE WITH 360° GRADUATION WITH VERNIER 175MM DIAMETER	STRAIN FREE ABBE CONDENSER N.A. 0.90 WITH SWING OUT TOP LENS
MT9930H	Trinocular					
MT9920L	Binocular	TRANSMITTED AND INCIDENT KOEHLER LED ILLUMINATOR				
MT9930L	Trinocular					

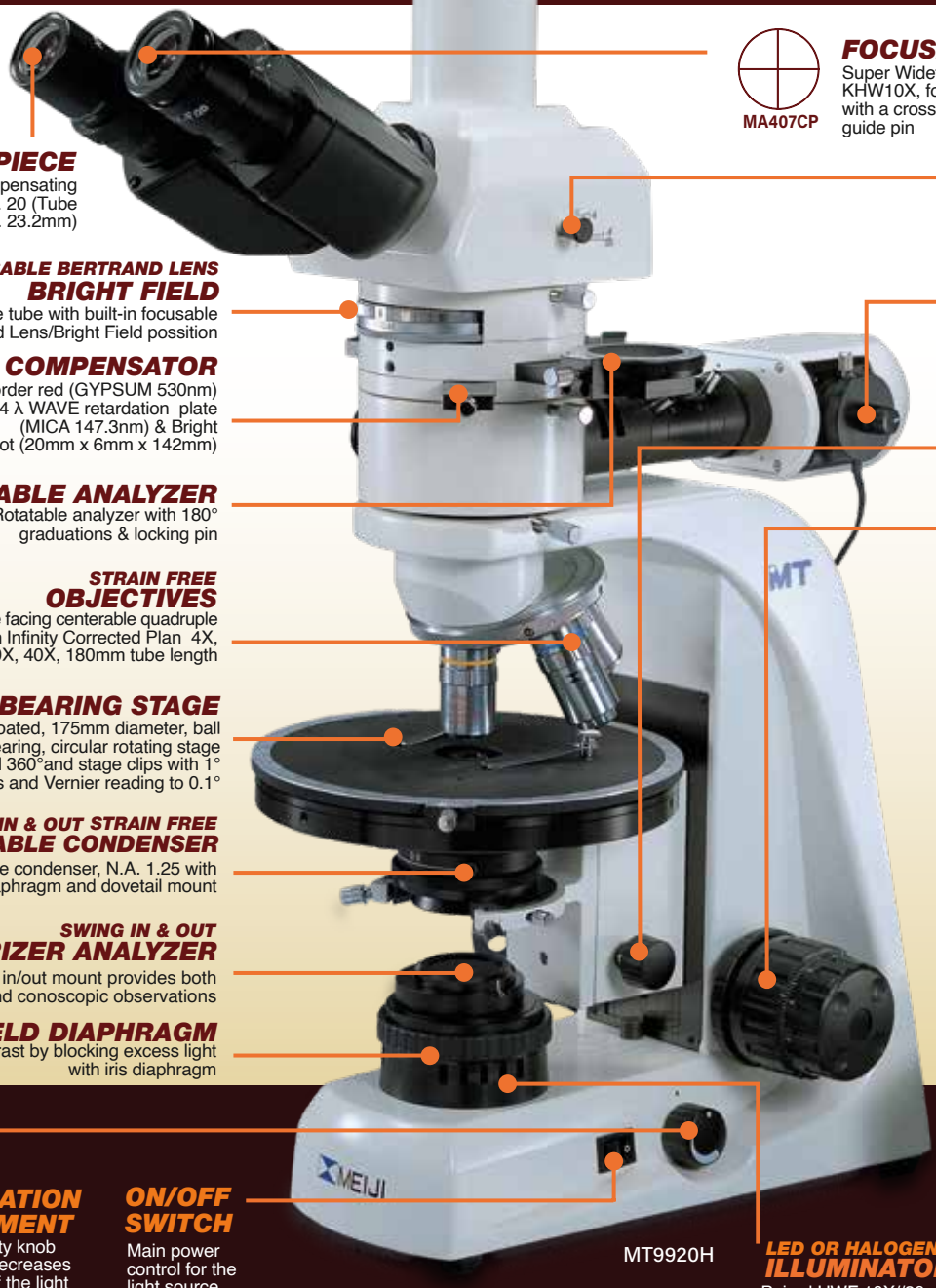
IDEAL FOR ADVANCED RESEARCH AND PRECISION INSPECTION IN GEOLOGY, MINERALOGY, PETROLOGY, AND FORENSICS

All MT9900 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, rotable analyzer, 1/4 wave 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
MA407CP

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

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

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

FOCUSABLE BERTRAND LENS BRIGHT FIELD
Intermediate tube with built-in focusable Bertrand Lens/Bright Field possition

LAMPHOUSE CENTERING CONTROL

COMPENSATOR
First order red (GYPSUM 530nm) 1/4 λ WAVE retardation plate (MICA 147.3nm) & Bright Field spot (20mm x 6mm x 142mm)

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

ROTABLE ANALYZER
Rotatable analyzer with 180° graduations & locking pin

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

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

BALL BEARING STAGE
Ceramic coated, 175mm diameter, ball bearing, circular rotating stage graduated 360°and stage clips with 1° increments and Vernier reading to 0.1°

INTEGRATED AUTOMATIC VOLTAGE SENSING POWER SUPPLY WITH LOCALIZED POWER CORDSET

SWING IN & OUT STRAIN FREE CENTERABLE 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 with iris diaphragm

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

ON/OFF SWITCH
Main power control for the light source

MT9920H

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

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.

MT9930H + 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 MT9900 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)

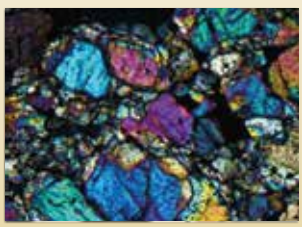
MA953 ★Trinocular head - Siedentopf type, inclined at 30° with reticle angle compensation, I.P. adjustment 53mm to 75mm, graduated diopter on left eyetube (23.2mm I.D. eyetube). (Included in models MT9300 and MT9300L)

EYEPIECES

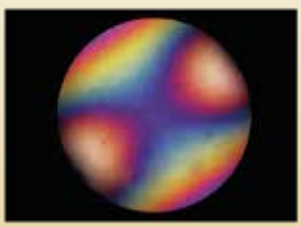
MA407CP ★Super Widefield Compensating KHW10X, focusing eyepiece with crossline and guide pin, F.N. 20 are standard with 21mm reticle mount (Tube O.D. 23.2mm)

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)



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 MT9900 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

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)
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

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

MA988 ★Combination First order red compensating plate and 1/4 Wave-length test plate and Brightfield spot, for use with MT9920 and MT9930
MA904/10 ★Senarmont compensator (highly accurate 1/4 wave plate for use with MA956/05 rotating analyzer - used to measure retardation)
MA956/05 ★Rotatable analyzer with 180° graduations (34mm x 6mm x 156mm) (For use with MT9920 and MT9930) (Included)
MA654N/10 Rotatable analyzer with 180° graduations (34mm x 6mm x 156mm) (For use with MT9920 and MT9930) (Included)

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)

FILTERS

MA289/05 ★Blue clear filter, 29.8mm diameter, unmounted, for transmitted light (Included)
MA679 ★ Polarizer in mount for vertical illuminator (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)

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

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)

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)

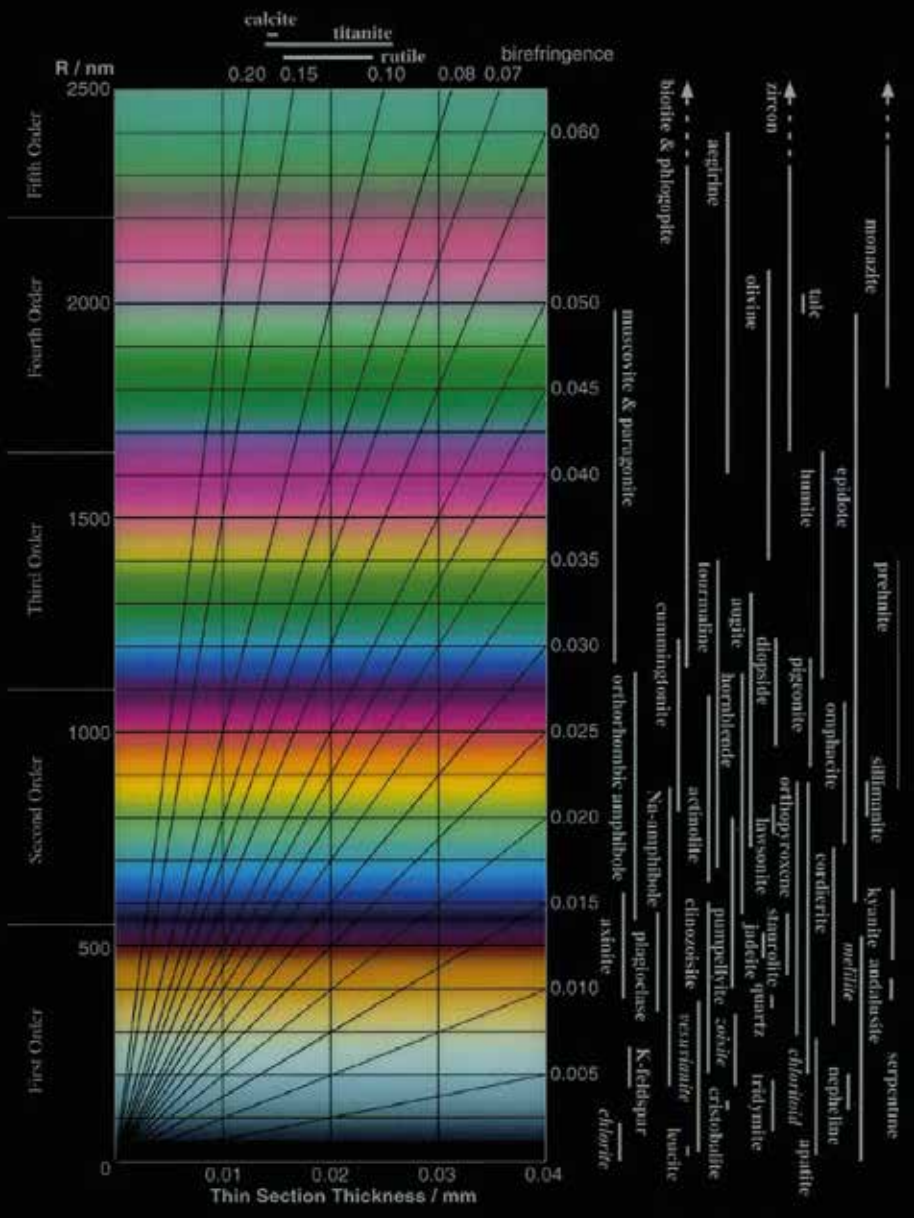
MA945 POINT COUNTER (OPTIONAL)

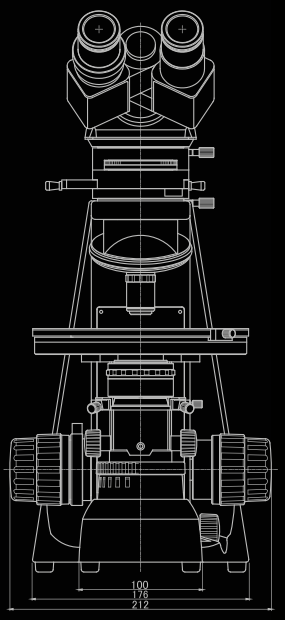
MA988 QUARTER-WAVE PLATE (INCLUDED)

MA904/10 SENARMONT COMPENSATOR **(INCLUDED)**

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 MT9900 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:

MEIJI TECHNO CO.,LTD.

322-1, Chikumazawa Miyoshi-machi,
Iruma-gun Saitama 354-0043, Japan
Tel : (0)49-259-0111 Fax : (0)49-259-0113
E-mail : meiji@meijitechno.co.jp
http://www.meijitechno.co.jp

MEIJI TECHNO AMERICA

591 Division St., Campbell CA 95008
Tel: **408-226-3454** Fax: **408-226-0900**
Toll free : 800-832-0060
Make your order at:
E-mail: **admin**@meijitechno.com
General Questions:
info@meijitechno.com
sales@meijitechno.com
http://www.meijitechno.com

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