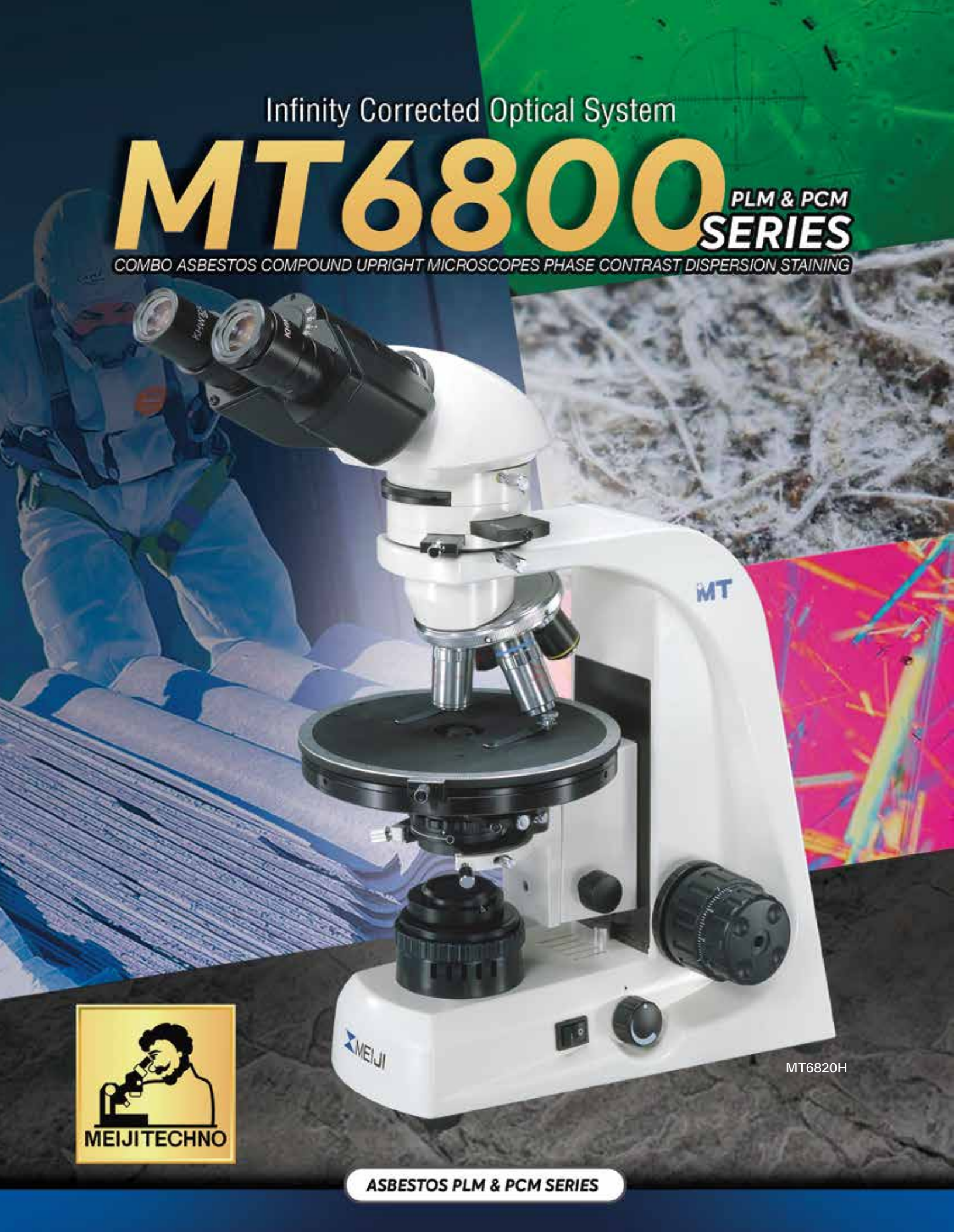
Infinity Corrected Optical System

MT6800 PLM & PCM SERIES

COMBO ASBESTOS COMPOUND UPRIGHT MICROSCOPES PHASE CONTRAST DISPERSION STAINING



MT6820H

MEIJITECHNO

ASBESTOS PLM & PCM SERIES

MT6800 SERIES

MEIJI TECHNO

PCM - FOR NIOSH 7400 AND OSHA ID 160 REFERENCE METHOD & PLM - FOR NIOSH 9002 BULK FIBER IDENTIFICATION

COMBO ASBESTOS PLM/PCM PHASE CONTRAST MICROSCOPES

The MT6800 PLM/PCM Series is a versatile microscope system designed for asbestos analysis. It combines Polarized Light and Phase Contrast Microscopy for precise fiber identification and counting. Built to meet industry standards, it delivers reliable performance, bright optics, and ergonomic comfort.

The Meiji Techno MT6800 PLM/PCM Series is a professional-grade combo asbestos microscope system engineered for precision bulk fiber identification and airborne fiber analysis. Designed to meet rigorous reference standards including NIOSH 7400, NIOSH 9002, and OSHA ID 160, this upright compound microscope integrates Polarized Light Microscopy (PLM) and Phase Contrast Microscopy (PCM) into a versatile, ergonomic platform. Its Infinity Corrected Optical System (ICOS) with strain-free objectives and high-performance optics delivers exceptionally bright, crisp imaging with superior color rendition and flat fields of view. The MT6800 Series includes a centerable quadruple nosepiece, rotatable stage with 360° vernier graduations, strain-free Abbe condenser with phase/dispersion staining capability, and robust 6V 30W Koehler halogen illumination — all packaged to support efficient operation in education, advanced research, or lab environments where space is at a premium.

Both the MT6820 (binocular) and MT6830 (trinocular) models offer flexible viewing options with Siedentopf-type heads, adjustable interpupillary settings, and standard DIN eyepieces with compensating and reticle options for enhanced measurement accuracy. Accessories such as first-order red compensating plates, polarizers/analyzers in sliding mounts, Green Interference and Blue Clear filters, centering telescope, and micrometer are included to support a range of analysis tasks straight out of the box. With ergonomic control placement and a modular design, the MT6800 Series enhances productivity and reduces operator fatigue while tackling demanding fiber identification and counting applications.

PLM & PCM PHASE CONTRAST - QUADRUPLE NOSEPIECE (HALOGEN & LED)

MT6820H
(FRONTAL VIEW)

LED
OR **HALOGEN**
ILLUMINATION

AUTOMATIC VOLTAGE SENSING
POWER SUPPLY 110V-240V

MODEL	BODY	ILLUMINATOR	EYEPIECES	OBJECTIVES	STAGE	CONDENSER
MT6820H	Binocular	TRANSMITTED 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 STRAIN FREE PLAN OBJECTIVE 10X, 20X, 40X DISPERSION STAINING 10X U PLAN 40X PHASE	ROTATABLE WITH 360° GRADUATION WITH VERNIER	STRAIN FREE ABBE CONDENSER N.A. 1.25, INCLUDES SLIDER FOR PHASE OBJECTIVES
MT6830H	Trinocular					
MT6820L	Binocular	TRANSMITTED KOEHLER LED ILLUMINATOR				
MT6830L	Trinocular					

COMBO
ASBESTO MICROSCOPES
PHASE CONTRAST MICROSCOPY
PCM & PLM
POLARIZED LIGHT MICROSCOPY

The MT6800 PLM/PCM Series is a professional asbestos analysis microscope that combines Polarized Light Microscopy and Phase Contrast Microscopy in a single, compact system. Designed to meet key industry reference methods, it delivers bright, high-contrast imaging with strain-free optics, precise mechanical control, and ergonomic operation. Ideal for laboratory, environmental, and industrial applications, the MT6800 Series provides reliable performance for accurate fiber identification and counting.

USED TO VISUALLY IDENTIFY AND CLASSIFY ASBESTOS FIBERS IN BUILDING MATERIALS USING POLARIZED LIGHT & PHASE CONTRAST MICROSCOPY, ENSURING ACCURATE TESTING AND REGULATORY COMPLIANCE.

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

ERGONOMICALLY DESIGNED
MANUFACTURED IN JAPAN

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)

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

ATTACHABLE
DIGITAL CAMERA
23.2mm PHOTO PORT

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

NEW MODULAR DESIGN
facilitates
ATTACHMENT OF A VARIETY
OF ACCESSORIES

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

SUBSTAGE COARSE KNOB

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

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

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

FIELD DIAPHRAGM
Improves contrast by blocking excess light.

ON/OFF SWITCH
Main power control for the light source

ILLUMINATION ADJUSTMENT

NOSEPIECE CENTERING SCREWS (PAIR)

BLUE & GREEN FILTER

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.

MT6830H + 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 MT6800 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)

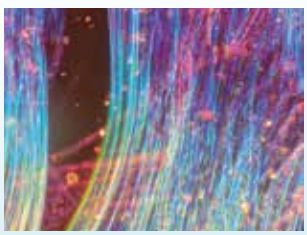
EYEPIECES

MA407W ★HW-10X Compensating Focusing eyepiece, F.N. 20 with Walton & Beckett reticle (each) (Eyetube O.D. 23.2mm) (Included)

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

EYEPIECE MICROMETER

MA254/05 ★Walton & Beckett reticle, 21mm diameter (Installed in MA407W)



PLM & PCM ASBESTOS DISPERSION STAINING SAMPLES

The Meiji Techno MT6800 Series PLM/PCM Microscope is designed for asbestos analysis and fiber identification in laboratory environments. It combines Polarized Light Microscopy (PLM) for identifying asbestos in bulk materials with Phase Contrast Microscopy (PCM) for counting airborne fibers, making it ideal for environmental testing, industrial hygiene, and regulatory compliance labs.With high-quality optics, strain-free components, and ergonomic controls, the MT6800 delivers accurate, repeatable results while supporting standardized methods such as NIOSH and OSHA for reliable asbestos evaluation.

COMPONENTS AND ACCESSORIES FOR MT6800 SERIES

The Items marked with a Star (★) are included

U. PLAN PHASE OBJECTIVES

MA839 U Plan Phase Contrast Objective 10X, N.A. 0.25, W.D. 10.67 mm, F.N. 24

MA839 ★U Plan Phase Contrast Objective 10X, N.A. 0.25, W.D. 10.67 mm, F.N. 24

SEMI PLANACHROMAT POL OBJECTIVES FOR TRANSMITTED LIGHT WORK

MA935 Strain free Plan objective 4X/N.A.0.10, W.D. 25.89mm (Optional)

MA936 ★Strain free Plan objective 10X/N.A.0.25, W.D. 7.3mm (Included)

MA936D ★Dispersion Staining objective 10X/N.A. 0.25, W.D. 10.6mm, D.S Annular halo design or MA936DC Central stop design. (Included)

MA937 ★Strain free Plan objective 20X/N.A. 0.40, W.D. 7.29mm (Included)

MA937D Dispersion Staining objective 20X/N.A. 0.40, W.D. 7.29mm, D.S. (Optional)

MA938 ★Strain free Plan objective 40XS/N.A. 0.65, W.D. 0.50mm (Included)

MA938D Dispersion Staining objective 40XS/N.A. 0.75, W.D. 0.50mm, D.S.(Optional)

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)

CONDENSER & CENTERING TELESCOPE

MA954/05 ★Strain free Abbe condenser N.A. 1.25, includes sliding mount with annulus for 10X, 20X, 40X phase or dispersion staining objectives, iris diaphragm, dovetail mount (Included)

MA458 ★Focusing Centering Telescope, 23.2mm O.D. (Included)

FILTERS

MA289/05 ★Blue clear filter, 29.8mm diameter, unmounted, for transmitted light (Included)

MA759 ★Green interference filter 546nm, 29.8mm diameter, unmounted (Fits in filter slot below swing-out polarizer) (Included)

STAGE AND STAGE ACCESSORIES

MA299 Attachable mechanical stage for MT9000 Series (Optional)

MA946 ★Stage Clips (2 pcs) (Included)

WAVE PLATES AND COMPENSATORS

MA470/05 ★First order red compensating plate, 530nm for MT6100 Series (20mm x 6mm x 80mm) (Included)

MA471/05 ★Analyzer (Sliding type) for MT6100 Series (26mm x 6mm x 80mm) (Included)

MA477/05 Bertrand lens (Sliding type) for MT6100 Series (Built-in to frame) (Included)

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

MA326 ★Spare bulb, 6V 30W Halogen

MA327 ★Spare 3A fuse

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

MA701 ★Dust cover for MT6100 Series (Included in all series)

MA701AS Anti-static and washable dust cover for MT4000, MT5000, MT7000, MT6100, MT6500, MT-50, MT-60, 22" x 21" size, blue color (Optional)

MA905 Interference Color Chart (Optional)

MT6800 Series models are supplied with a centerable quadruple nosepiece, 175mm diameterceramic coated, rotatable stage with vernier and 360° graduation, First order Red Plate, Strain free Plan 10X, 20X, 40X, Pol objectives, 10X Dispersion Staining objective, U Plan Phase 40X, MA285 Stage Micrometer, 29.8mm diameter GIF filter (546nm), 29.8mm blue clear daylight filter, dust cover and operations manual.

MA299 MECHANICAL STAGE (OPTIONAL)

MA407W (INCLUDED)

MA841 (INCLUDED)

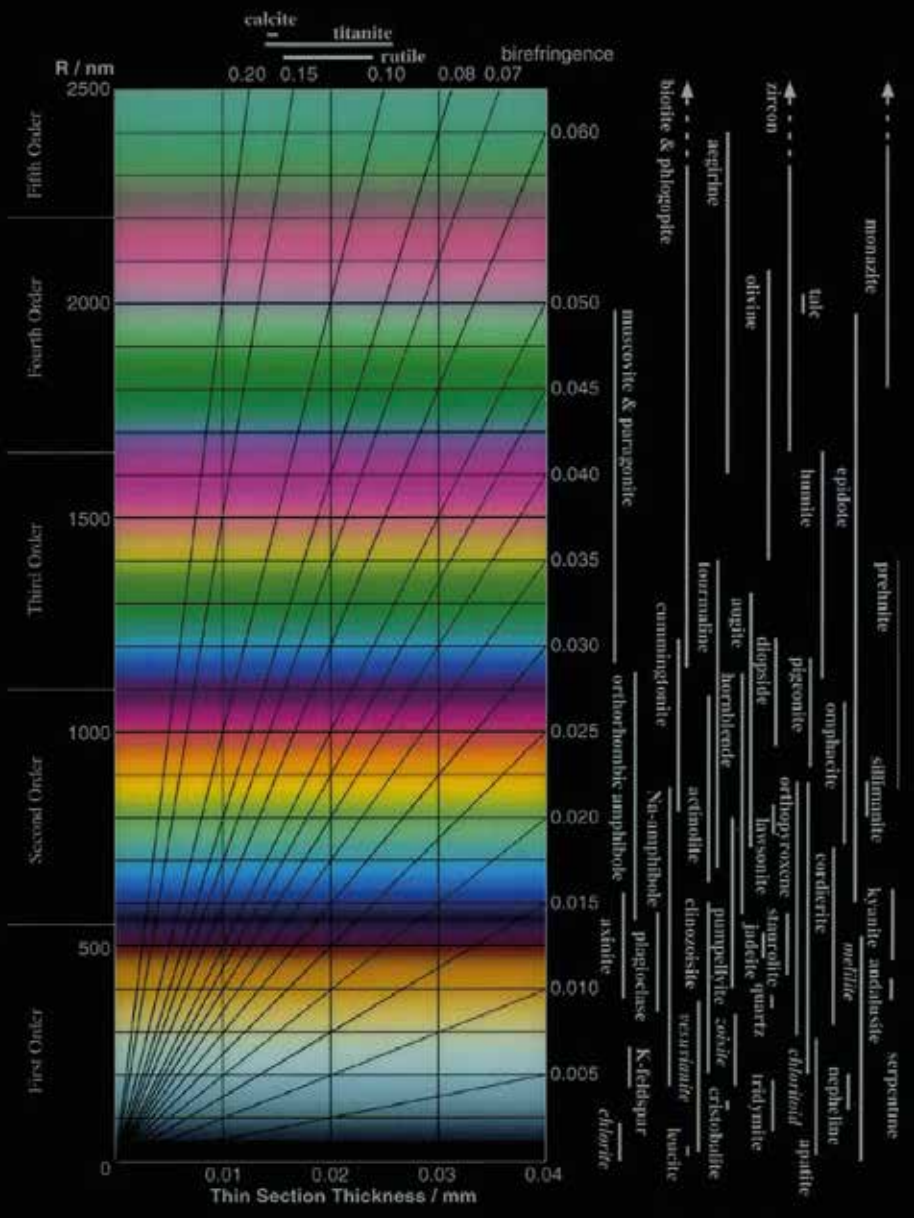
MA254/05 (INCLUDED)

MA861/05 GREEN INTERFERENCE FILTER 29.8MM DIAMETER UNMOUNTED (INCLUDED)

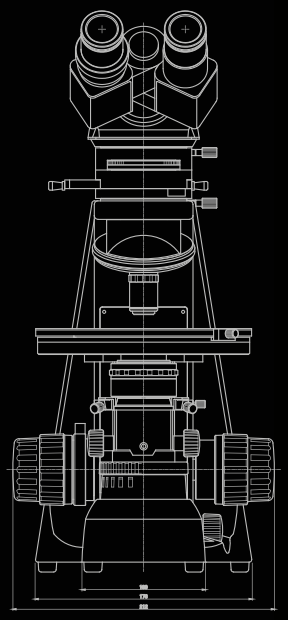
MA289/05 BLUE CLEAR FILTER 29.8MM DIAMETER UNMOUNTED FOR TRANSMITTED LIGHT (INCLUDED)

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 MT6800 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:** 29 lbs (8.00 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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