# 11 Optical Microscopy

## Meiji Compound Microscopes ML 2000 series

Japanese research standard high-performance microscopes. Modular design with built-in Köhler illuminator for transmitted light applications, flat-bed mechanical stage with drop-down coaxial controls, rack and pinion focusing and centring substage condenser carrier. Condenser achromatic 1.25NA with iris and 30mm filter tray. Standard 30° binocular head with with 2 focusing eyetubes and provision to accept a range of other viewing heads. Coaxial course and fine focusing controls. Standard quintuple nosepiece, built-in 6V 30W tungsten halogen illuminator with field iris and variable brightness control. A vertical illuminator is available for materials research.



## **Bright-field Transmitted Light Outfits**

**M089** ML2200 **Binocular** microscope stand with features as above and objectives SM Plan 4x, 10x, 40x, 100x oil. Pair of KHW10x/20 eyepieces with 21mm graticule mounts, dust-cover.

**M090** ML2300 **Trinocular** microscope as M099 but with vertical phototube Ø 25mm. Sliding prism 100% to eyepieces or 20% to eyepieces 80% to phototube, dust-cover.

## Phase-contrast Transmitted Light Outfits

**M243** ML2850 **Binocular** microscope as M099 but with achromatic condenser 1.25NA with phase slider, iris diaphragm and 30mm filter tray. Objectives SM Plan 4x and SM Plan Phase 10x, 40x, 100x oil. Eyepieces pair KHW10x/20 with 21mm graticule mount. Green filter, dust-cover.

**M244** ML2950 **Trinocular** microscope as M243 but with vertical phototube Ø 25mm. Sliding prism 100%to eyepieces or 20% to eyepieces 80% to phototube, dust-cover.

## **Metallurgical Outfits**

**M536** ML8000 metallurgical microscope, binocular head, KWH10X eyepieces, quintuple nosepiece with S Plan M4X, M10X,M20X, M40X infinity corrected optics, 6v 30w vertical halogen Koehler illuminator with built-in transformer, mechanical stage with low positioned controls, coaxial course and fine focusing knobs. Supplied with polystyrene case and dust cover.

M537 ML8100 as above but with trinocular head for photo/video



## **Optical Microscopy**

#### Incident Light/Transmitted Light Outfits

**M245** ML8520 **Universal binocular** microscope features as for transmitted light but with vertical illuminator with polariser and rotatable analyser having its own separate 6V 30W power supply. Includes filters in drop-in mounts. Infinity corrected optics giving magnification factor 1x, Objectives S Plan MET infinity 4x, 10x, 20x, 40x. Pair KHW10x/20 eyepieces with 21mm graticule mount. Daylight blue filter 30mm, dust cover.

**M246** ML8530 **Universal trinocular** microscope as M245 but with vertical phototube 25mm Ø to accept camera attachment, photoeyepiece and T2 mount which are essential for 35mm cameras.

#### Polarising Sheet and $\lambda/4$ 1<sup>st</sup> order red filters

M217 Polaroid plastic sheet high extinction 50mm x 50mm

M218 1/4 waveplate plastic sheet 50mm x 50mm

#### Photographic accessories for Meiji ML 2000 series

MA150/50	Camera attachment for trinocular heads 25mm Ø.
MA512	Photoeyepiece 2.5x to match FOV of 10x eyepieces
MA508	Photoeyepiece 5x to match FOV of 20x eyepieces
MA171	Framing graticule 19mm Ø to fit focusing eyepiece
T2 Adapter rings for 35mm as in the Stereo Zoom listing.	
MA151/10/20	CCTV 'C' mount adapter to fit TV camera to trinoc. head. Built-in
0.7x lens. External mount to take 19mm Ø graticule to project into camera	

## Optics for ML2000 Microscopes

#### Eyepieces

MA406 Eyepiece single HWF10x/18 (19mm micrometer) MA407 Eyepiece single KHW10x/20 (21mm micrometer) MA408 Eyepiece single HWF 12.5x/15 (19mm micrometer) MA408 Eyepiece single HWF15x/12.2 MA409 Eyepiece single HWF20x/9 MA413 Eyepiece HWF focusing. 18mm FOV. Detachable mount for 19mm micrometer. Matches with MA406.

#### **Objectives Phase Contrast Bright-field**

MA618 SM Plan 10x/0.25 DIN Phase MA619 SM Plan 20x/0.4 DIN Phase MA620 SM Plan 40x/0.65 DIN Phase MA621 SM Plan 100x/1.25 oil DIN Phase

Objectives Semiflat - Bright-field achros with flattened field

MA482 Semiflat achromat 4x/0.10 DIN MA483 Semiflat achromat 10x/0.25 DIN MA484 Semiflat achromat 20x/0.40 DIN MA495 Semiflat achromat 40x/0.65 DIN MA194 Achromat 60x/0.85 DIN MA421 Achromat 100x/1.25 oil DIN





Spare bulb for ML2000 series

MA326 6V 30W

#### **Objectives Plan and SM Plan Bright-field**

High performance Achromats with flattened field as fitted to ML2000 outfits.

MA432 Planachromat 2.5x/0.08 DIN MA622 Planachromat 4x/0.10 DIN MA623 Planachromat 10x/0.25 DIN MA625 Planachromat 40x/0.65 DIN MA627 Planachromat 100x/1.25 DIN MA611 SM plan 4x/0.10 DIN MA612 SM Plan 5x/0.10 DIN MA613 SM Plan 5x/0.10 DIN MA613 SM Plan 20x/0.4 DIN MA614 SM Plan 20x/0.4 DIN MA615 SM Plan 40x/0.65 DIN MA616 SM Plan 60x/0.80 DIN MA617 SM Plan 100x/1.25 DIN

#### Objectives MET S Plan Infinity corrected.

 MA336 S Plan MET  $\infty$  4x/0.10 (WD 20mm)

 MA330 S Plan MET  $\infty$  5x/0.10 (WD 20mm)

 MA337 S plan MET  $\infty$  10x/0.25 (WD 7.5mm)

 MA338 S Plan MET  $\infty$  20x/0.40 (WD 5.3mm)

 MA339 S Plan MET  $\infty$  40X/0.65 (WD 0.8mm)

 MA349 S Plan MET  $\infty$  50x/0.50 (LWD 6mm)

 MA328 S Plan MET  $\infty$  100x/0.70 dry (WD 0.27mm)

