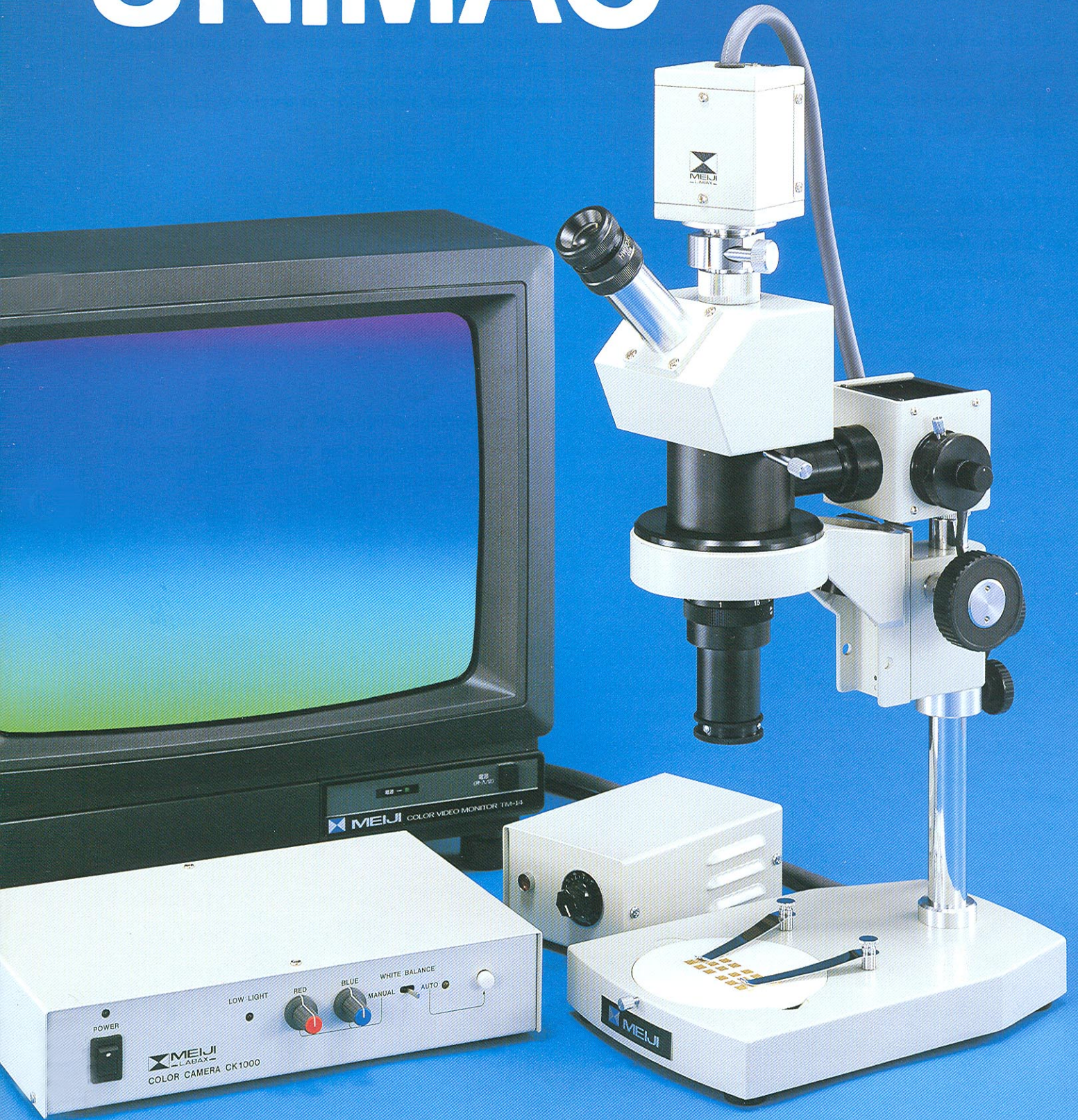


MEIJI TECHNO **ZOOM MACROSCOPE**

UNIMAC



MEIJI TECHNO UNIMAC ZOOM MACROSCOPE

At last, a fully Modular Universal Zoom Macroscope that lends itself to all applications including Closed Circuit Television display. Photomicrography with 35mm SLR and Polaroid Cameras.

A visual magnification range from 3.5X to 135X (with optional lenses) shows the exceptional clarity and depth of field of the Meiji Techno Unimac.

FEATURES

- Zoom Macroscopes of the compound type are being used in more and more research and industrial applications.
These instruments are uniquely capable where low magnification ranges and extraordinary depth of field are required. These characteristics make them most useful in the examination of whole devices and the study and control of mini-manufacturing processes.
- The MEIJI TECHNO version of the Zoom Macroscope offers important advantages to the user. It is fully modular in concept and in construction. A universal range of the techniques can be quickly applied and all modes of observation – visual, photographic and television can be employed.
- Basic Zoom Macroscope magnification range goes from 0.7X to 4.5X, but this can be modified and extended by the four optional auxiliary lenses. In addition to ordinary illumination, true coaxial illumination is available and this is a special feature of the MEIJI TECHNO instrument. A large field metallurgical illuminator gives coaxial illuminated images.
- Also offered for use with this is a 1/4 wave plate in rotatable mount which permits inspections in polarized light. This is especially useful when examining “overlay” circuits – in one orientation of the 1/4 wave plate, one of the circuits can be observed – and another overlaid circuit will be visible when the 1/4 wave plate is rotated 90°.

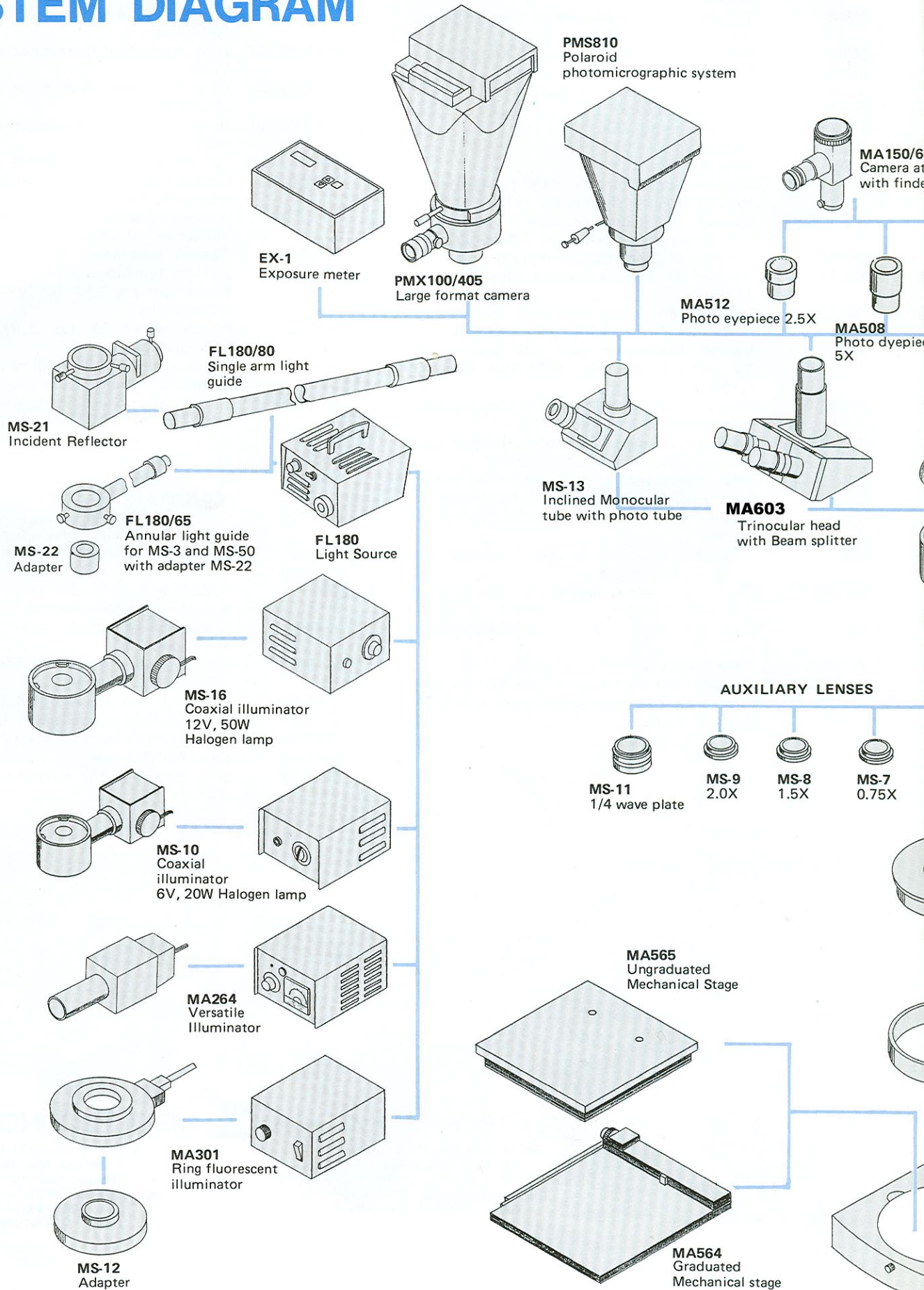
OPTICAL DATA

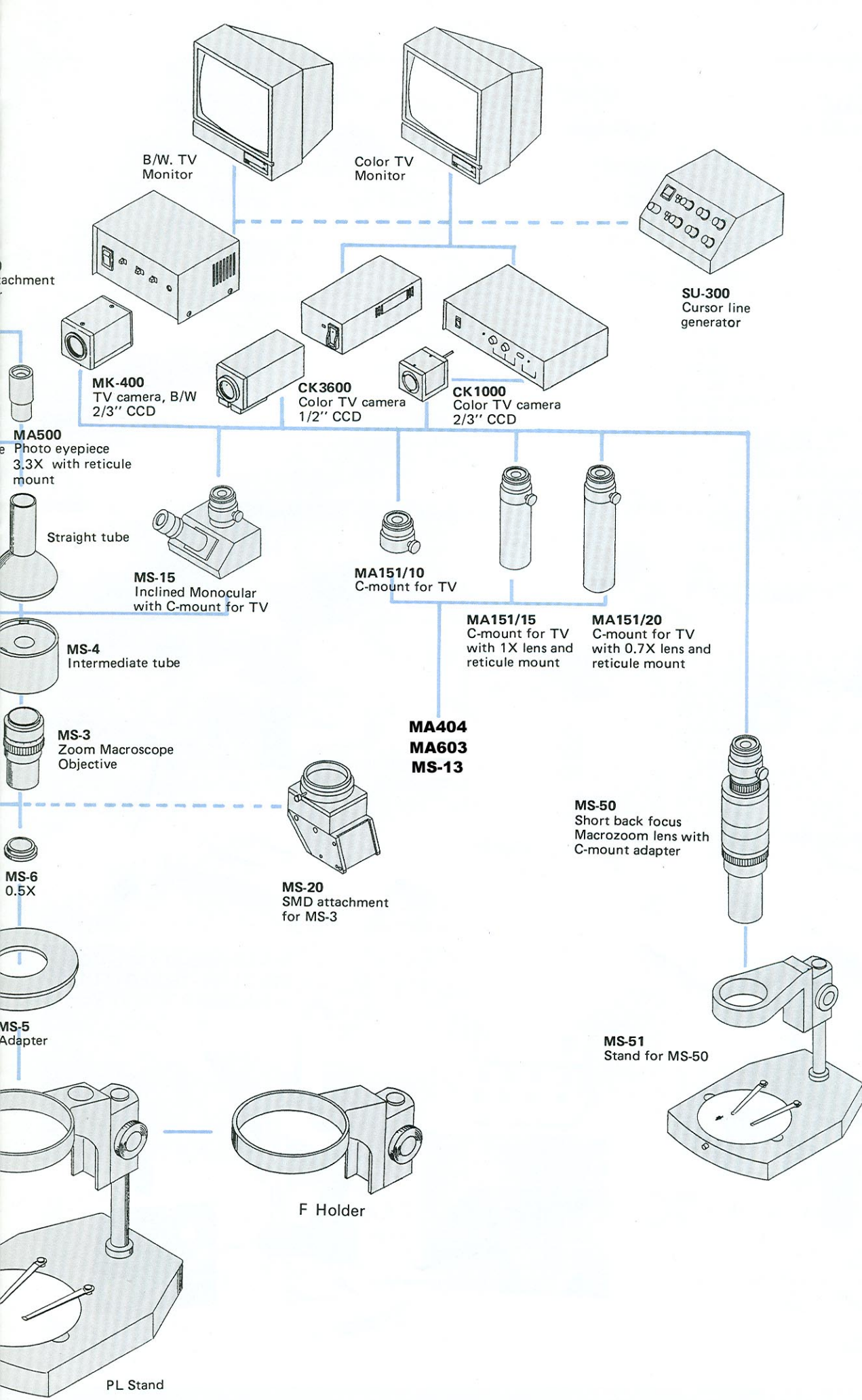
| Objective (Zoom) | Auxiliary Lens | Magnification w/HWF10X eyepiece | Field of View (mm) | Working Distance (mm) | Magnification on 14" TV Monitor screen using 2/3" CCD TV Camera |
|------------------|----------------|---------------------------------|--------------------|-----------------------|-----------------------------------------------------------------|
| 0.7X – 4.5X | | 7X – 45X | 25.7 – 4.0 | 95 | 22.62X – 145.47X |
| | 0.5X | 3.5X – 22.5X | 51.4 – 8.0 | 183 | 8.16X – 72.73X |
| | 0.75X | 5.25X – 33.75X | 34.2 – 5.3 | 110 | 16.97X – 109.10X |
| | 1.5X | 10.5X – 67.5X | 17.1 – 2.6 | 44 | 33.94X – 218.20X |
| | 2.0X | 14X – 90X | 12.8 – 2.0 | 29 | 45.25X – 290.94X |

Calculation of Magn. on the TV Screen:

$$\frac{\text{Objective power}}{(\times \text{Auxiliary lens power})} \times \frac{\text{Diagonal length of TV screen (mm) in use}}{\text{Diagonal length of CCD of TV camera (mm) in use}} = \text{Magnification on the TV screen}$$

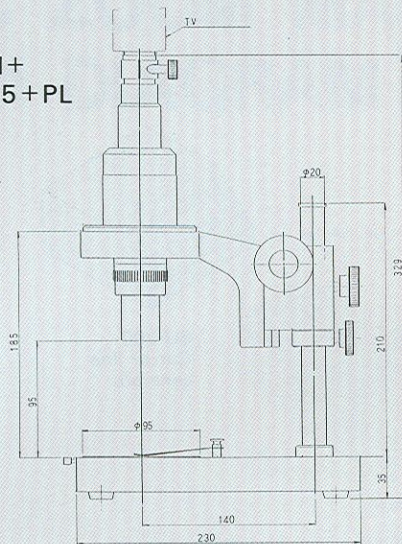
UNIMAC ZOOM MACROSCOPE SYSTEM DIAGRAM



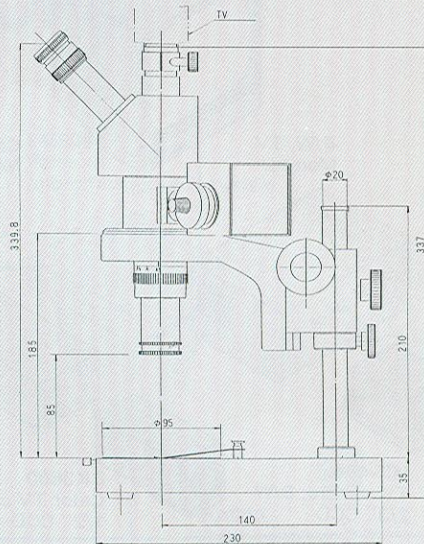


Dimension

MA-151/10+MS-1+
MS-3+MS-4+MS-5+PL



MS-15+MS-10+
MS-3+MS-5+
MS-11+PL



MODELS

MA-151/10+**MA404**+MS-3
+MS-4+MS-5+PL



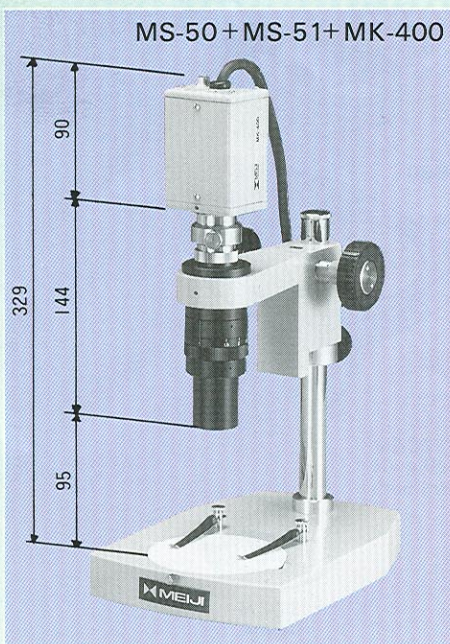
MS-15+MS-3+MS-4
+MS-5+PL



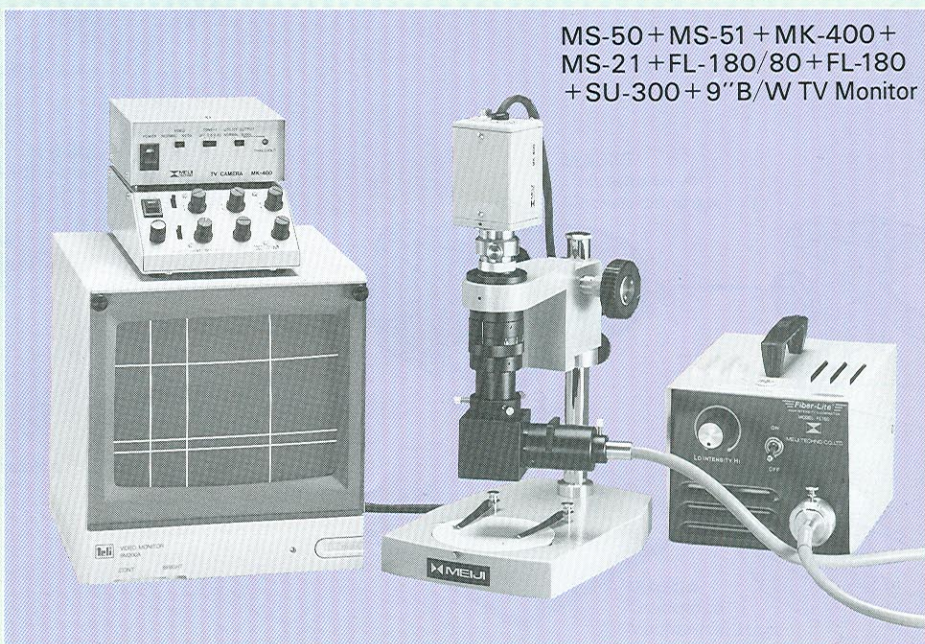
MA-151/10+**MA603**+MA-406+
MA-413C+MS-3+MS-5
+MS-10+MS-11+PL



MS-50+MS-51+MK-400



MS-50+MS-51+MK-400+
MS-21+FL-180/80+FL-180
+SU-300+9" B/W TV Monitor



CAT. NO. DESCRIPTION

| | | | |
|------------------|------------------------------------------------------------------------------------------|-------------------|-------------------------------------------------------------------------------------------|
| MA404 | Straight tube for photomicrography or CCTV camera | MA264/100 | Versatile Illuminator with transformer for 117V |
| MA603 | Trinocular head with vertical tube for photomicrography or CCTV camera | MA264/200 | Versatile Illuminator with transformer for 220/240V |
| MS-3 | Zoom Macroscope Objective 0.7X to 4.5X | MA305/100 | Ring fluorescent illuminator with starter for 110V |
| MS-4 | Intermediate tube | MA305/200 | Ring fluorescent illuminator with starter for 220/230V |
| MS-5 | Adapter for Stand or Holder | MA305/250 | Ring fluorescent illuminator with starter for 240V |
| MS-6 | Auxiliary lens 0.5X | MA151/10 | "C" mount for CCTV camera |
| MS-7 | Auxiliary lens 0.75X | MA151/15 | C-mount adapter with 1.0X lens and reticule mount for TV camera |
| MS-8 | Auxiliary lens 1.5X | MA151/20 | C-mount adapter with 0.7X lens and reticule mount for TV camera |
| MS-9 | Auxiliary lens 2.0X | M150/60 | Camera attachment with finder for 35mm SLR photomicrography |
| MS-10/100 | Coaxial Illuminator, 6V 200W Halogen lamp, with variable transformer for 117V | MA512 | Photo eyepiece 2.5X for 35mm SLR photomicrography |
| MS-10/200 | Coaxial Illuminator, 6V 20W Halogen lamp, with variable transformer for 220V - 240V | MA508 | Photoeyepiece 5X for 35mm SLR photomicrography |
| MS-11 | 1/4 wave plate in rotatable mount | MA500 | Photo eyepiece 3.3X with reticule mount for 35mm SLR photomicrography |
| MS-12 | Adapter for ring fluorescent illuminator for 117V | PMX100/405 | Large format photomicrographic camera with #405 Polaroid 3 1/4" x 4 1/4" pack film holder |
| MS-13 | Inclined Monocular tube with photo tube, (including HWF-10X Focusing eyepiece) | EX-1 | Exposure meter for use with PMX100 |
| MS-15 | Inclined Monocular tube with C-mount for TV camera (including HWF-10X Focusing eyepiece) | PMS810 | Polaroid photomicrographic system |
| MS-16 | Coaxial illuminator 12V, 50W Halogen lamp with variable transformer 117V | MK400 | TV Camera, B/W, 2/3" CCD, Resolution: 600 H lines (NTSC only) |
| MS-16/200 | Coaxial illuminator 12V, 50W Halogen lamp with variable transformer 220/240V | CK3600 | Color TV Camera, 1/2" CCD, Resolution: 420 H lines (NTSC only) |
| MS-20 | SMD attachment for MS-3 macrozoom lens | SU-300 | Cursor line generator (NTSC only) |
| MS-21 | Incident Reflector for use with FL180/80 | CK1000 | Color TV Camera, 2/3" CCD |
| | Single arm fiber light guide-flexible w/ adapter | PL | P Stand with illuminator port |
| MS-22 | Adapter for use with FL180/65 Annular light guide | F | F Holder with focusing slide block |
| MS-50 | Short back focus Macrozoom lens 0.7X to 4.5X with C-mount for TV camera | MA564 | Graduated mechanical stage, 50mm x 75mm X-Y movement |
| MS-51 | Stand and focus block for MS-50 Macrozoom lens | MA565 | Ungraduated mechanical stage, 100mm x 100mm X-Y movement |
| FL180 | Light Source for fiber light guide | MA406 | DIN HWF 10X eyepiece 10X, field No. 18 (ea) |
| FL/180/65 | Annular fiber light guide for MS-3 w/adapter | MA407 | DIN KHW10X eyepiece 10X, field No. 20 (ea) |
| FL/180/80 | Single arm fiber light guide for use with MS21 Incident Reflector | MA408 | DIN HWF15X eyepiece, field No. 12.2 (ea) |
| | | MA409 | DIN HWF20X eyepiece, field No. 9 (ea) |
| | | MA413C | DIN Focusing 10X eyepiece with cross-line (ea) |

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