

FS70 Microscope Unit

Series 378 - Microscope Unit for Semiconductor Inspection

The optical system originally developed for the best-selling FS60 models was further enhanced for the FS70 models. It is ideal as the microscope unit of a probe station for semiconductors (all models CE marked).

Specifications

Focus adjustment	Method : With concentric coarse and fine focusing wheels (right and left) Range : 50 mm travel range, 0,1 mm/rev. for fine adjustment, 3,8 mm/rev. for coarse adjustment Erect image
Trinocular tube Image	
Interpupillary distance	Siedentopf type, adjustment range : 51-76mm
Field number	24
Tilt angle	0° - 20° (only - TH, - THS models)
Illumination system	Reflective illumination for bright field (Koehler illumination, with aperture diaphragm)
Light source	12 V / 100 W fibre-optic, non-stopped adjustment, light guide length 1.5m, power consumption 150W
Objectives lens (optional)	M Plan Apo, M Plan Apo SL, G Plan Apo

FS-70

- The FS70L supports three YAG laser wavelengths (1064 nm, 532 nm and 355 nm), while the FS70L4 supports two wavelengths (532 nm and 266 nm), thus expanding the scope of laser applications, allowing laser-cutting of thin-films used in semiconductors and liquid crystal substrates. However, Mitutoyo assumes no responsibility whatever for the performance and/or safety of the laser system used with Mitutoyo microscopes. A careful examination is recommended when selecting a laser-emission unit.

- Bright field, Differential Interference Contrast (DIC) and polarized observations are standard with the FS70Z. The FS70L and FS70L4 do not support the DIC method.

- By employing an inward-leaning turret, the long working distance objectives provide excellent operability.



Refer to the Microscope Units and objective lenses brochure



Model	FS70	FS70-TH	FS70Z	FS70Z-TH
No.	378-184-1	378-184-3*	378-185-1*	378-185-3*
Model short base	FS70-S	FS70-THS	FS70Z-S	FS70Z-THS
Order No. short base model	378-184-2	378-184-4	378-185-2	378-185-4
Optical pass ratio	50/50	100/0 or 0/100	50/50	100/0 or 0/100
Tube lens	1X	1X	1X, 2X zoom	1X, 2X zoom
Camera mount	C-mount (using optional adapter B)	C-mount (using optional adapter B)	C-mount (using optional adapter B)	C-mount (using optional adapter B)
Loading (*1)	14.5 kg	13.6 kg	14.1 kg	13.2 kg
Mass (main unit)	6.1 kg	7.1 kg	6.6 kg	7.5 kg

(*1) Loading on optical tube excluding weight of objective lenses and eyepieces.

Model	FS70L	FS70L-TH	FS70L4	FS70L4-TH
No.	378-186-1*	378-186-3*	378-187-1*	378-187-3*
Model short base	FS70L-S	FS70L-THS	FS70L4-S	FS70L4-THS
Order No. short base model	378-186-2	378-186-4	378-187-2	378-187-4
Optical pass ratio	100/0 or 0/100	100/0 or 0/100	100/0 or 0/100	100/0 or 0/100
Protective filter	Built-in laser beam filter	Built-in laser beam filter	Built-in laser beam filter	Built-in laser beam filter
Tube lens	1X	1X	1X	1X
Applicable laser	1064/532/355 nm	1064/532/355 nm	532/266 nm	532/266 nm
Camera mount	Use a laser with TV port.	Use a laser with TV port.	C-mount receptacle (with green filter switch)	C-mount receptacle (with green filter switch)
Objective, optional (for laser-cutting)	M/LCD Plan NIR M/LCD Plan NUV	M/LCD Plan NIR M/LCD Plan NUV	M Plan UV	M Plan UV
Loading (*1)	14.2 kg	13.5 kg	13.9 kg	13.1 kg
Mass (main unit)	6.4 kg	7.2 kg	6.7 kg	7.5 kg

(*1) Loading on optical tube excluding weight of objective lenses and eyepieces.