

Microscope Head FS70

SERIES 378 – Microscope Head for Semiconductor Inspection and Repair

- A versatile microscope head typically used as an OEM product suitable for fitting to specialist machines, such as those designed for inspection and repair of semiconductor wafers.
- Excellent operability is provided by the inwardly rotating turret and high quality, long working-distance objectives.
- Ideal as the microscope unit of a prober station for semiconductors.
- Ergonomic design with combined knob for coarse- and fine-focus adjustment.
- 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, please note that Mitutoyo assumes no responsibility whatever for the performance and/or safety of the laser system used with Mitutoyo microscopes. Careful examination and testing is recommended when selecting a laser source.
- Bright field, Differential Interference Contrast (DIC) and polarized observation capabilities are standard with the FS70Z. The FS70L and FS70L4 do not support the DIC method.



FS70Z



FS70L



FS70L4

Technical Data

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
Functions:	Light intensity adjustable, 100 steps brightness adjustment
Trinocular tube image:	Erect image
Interpupillary distance:	Siedentopf type, adjustment range: 51-76 mm
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:	12V / 100W fibre-optic, non-stopped adjustment, light guide length 1.5 m, power consumption 150W
Objective lenses:	M Plan Apo, M Plan Apo SL, G Plan Apo (optional accessories)

SPECIFICATIONS

Standard model	FS70	FS70-TH	FS70Z	FS70Z-TH
Code No.	378-184-1	378-184-3	378-185-1	378-185-3
Short-base model	FS70-S	FS70-THS	FS70Z-S	FS70Z-THS
Code No.	378-184-2	378-184-4	378-185-2	378-185-4
Optical pass ratio	50/50			
Tube lens	1X		1X, 2X zoom	
Camera mount	C-mount (using optional adapter B)			
Loading* ¹	14.5 kgf	13.6 kgf	14.1 kgf	13.2 kgf
Mass	6.1 kg	7.1 kg	6.6 kg	7.5 kg
Price	£POA	£POA	£POA	£POA

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

*¹ Allowable loading on optical tube excluding weight of objective lenses and eyepieces.