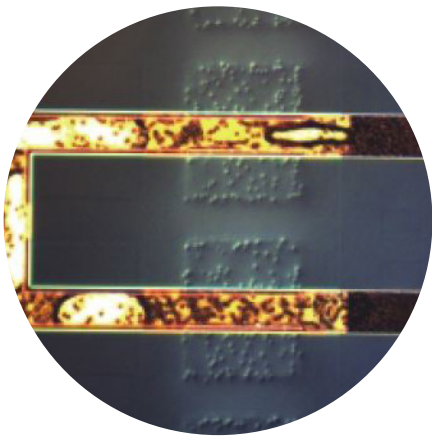




## M46 Metallurgical Microscope Semiconductor Inspection

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# M46 Metallurgical Microscope Features

1 5-35° inclined ergonomic trinocular head, erect image  
Interpupillary distance: 50-76mm  
Beam split ratio: 100:0 or 0:100.

2 High eyepoint widefield plan eyepiece PL10x/22mm. Eyepieces accept 26mm diameter reticle.

3 Model M46-RF  
Reflected Illumination:  
10W LED BD reflected illuminator with iris aperture and field diaphragms with lever to switch between brightfield and darkfield.

Model M46-TRF  
Transmitted/Reflected Illumination:  
Includes 12V/100W reflected illumination and transmitted illumination with brightness adjustment. N.A. 0.5 condenser with iris diaphragm.

4 Rotatable analyzer & polarizer.

5 Ergonomically low positioned coaxial focusing controls allow the operator to work with their forearms relaxed on the working surface. Coarse range of travel is 33mm. Rotation of fine focus is 0.001mm per revolution. Coarse adjustment stop and tension adjustment.



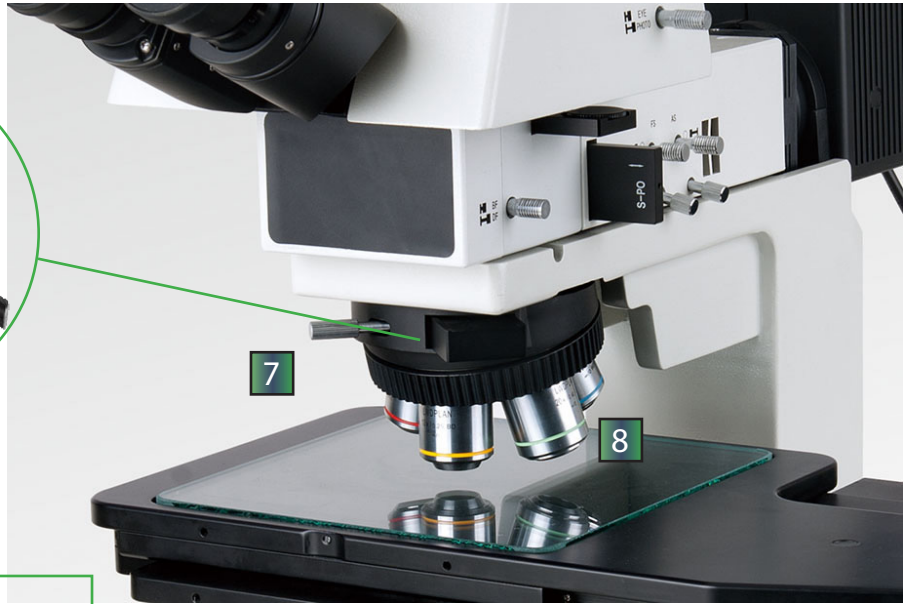
6 M46-RF has a stable 6" three layer long travel mechanical stage with low position coaxial adjustment. Moving range of 158mm x 158mm.

M46-TRF has a stable 6" three layer long travel mechanical stage with low position coaxial adjustment and glass stage. Transmitted moving range 158mm x 158mm.

# M46 Metallurgical Microscope Features

7

High performance nosepiece:  
Tilted quintuple brightfield/darkfield  
nosepiece, with DIC slot.



8

Metallurgical objective lenses:

- LWD Brightfield Plan Achromat
- High Resolution Brightfield Semi Apo
- LWD BD Plan Achromat
- High Resolution Brightfield / Darkfield Semi Apo
- BD Plan Achromat



# M46 Metallurgical Microscope Objectives

## LWD Brightfield Plan Achromat Objectives

- FMPLN5, Plan Achromat LWD 5x Objective, NA 0.15, WD 10.8mm
- FMPLN10, Plan Achromat LWD 10x Objective, NA 0.30, WD 12.2mm
- FMPLN20, Plan Achromat LWD 20x Objective, NA 0.45, WD 4mm
- FMPLN50, Plan Achromat LWD 50x Objective, NA 0.55, WD 7.9mm
- FMPLN100, Plan Achromat LWD 100x Objective, NA 0.80, WD 2.1mm



## High Resolution Brightfield Semi Apo Objectives

- BF-SAPO-M5, Semi Apo Metallurgical 5x objective; NA 0.15; WD 19.5mm
- BF-SAPO-M10, Semi Apo Metallurgical 10x objective; NA 0.30; WD 10.9mm
- BF-SAPO-M20, Semi Apo Metallurgical 20x objective; NA 0.50; WD 3.2mm
- BF-SAPO-M50, Semi Apo Metallurgical 50x objective; NA 0.80; WD 1.2mm
- BF-SAPO-M100, Semi Apo Metallurgical 100x objective; NA 0.90; WD 1.0mm

## LWD BD Plan Achromat Objectives

- LWD-BD-M5, Plan Achromat LWD 5X objective, NA 0.14, WD 20.5mm
- LWD-BD-M10, Plan Achromat LWD 10X objective, NA 0.25, WD 16mm
- LWD-BD-M20, Plan Achromat LWD 20X objective, NA 0.40, WD 7.8mm
- LWD-BD-M50, Plan Achromat LWD 50X objective, NA 0.55, WD 7.9mm
- LWD-BD-M100, Plan Achromat LWD 100X objective, NA 0.80, WD 2.1mm



## BD Plan Achromat Objectives

- Plan Epi BD5X objective, NA 0.10; WD 15mm
- Plan Epi BD10X objective, NA 0.25; WD 6.5mm
- Plan Epi BD20X objective, NA 0.40; WD 4.3mm
- Plan Epi BD50X objective, NA 0.75; WD 0.38mm
- Plan Epi BD100X objective, NA 0.90; WD 0.50mm

## High Resolution Brightfield / Darkfield Semi Apo Objectives

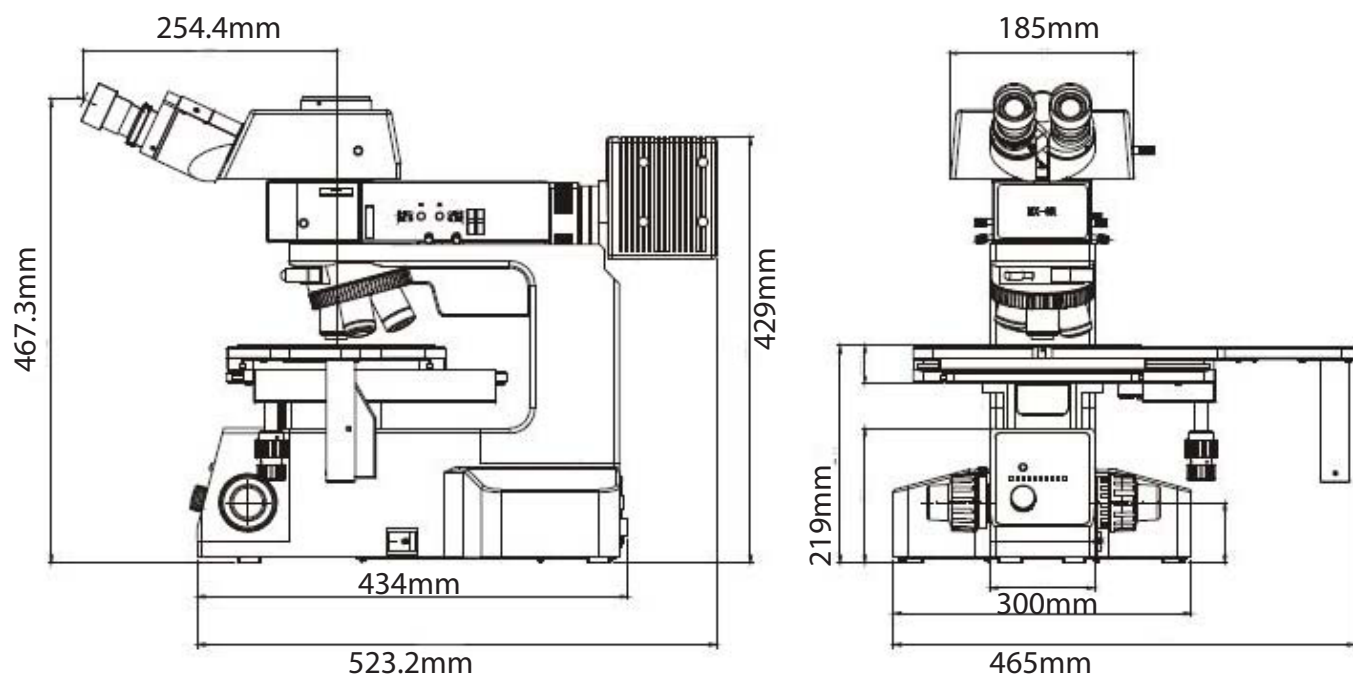
- BD-SAPO-M5, Brightfield / Darkfield Semi Apo 5x objective; NA 0.15; WD 19.5mm
- BD-SAPO-M10, Brightfield / Darkfield Semi Apo 10x objective; NA 0.30; WD 10.9mm
- BD-SAPO-M20, Brightfield / Darkfield Semi Apo 20x objective; NA 0.45; WD 3.2mm
- BD-SAPO-M50, Brightfield / Darkfield Semi Apo 50x objective; NA 0.80; WD 1.3mm
- BD-SAPO-M100, Brightfield / Darkfield Semi Apo 100x objective; NA 0.90; WD 1.0mm

# M46 Metallurgical Microscope Specifications

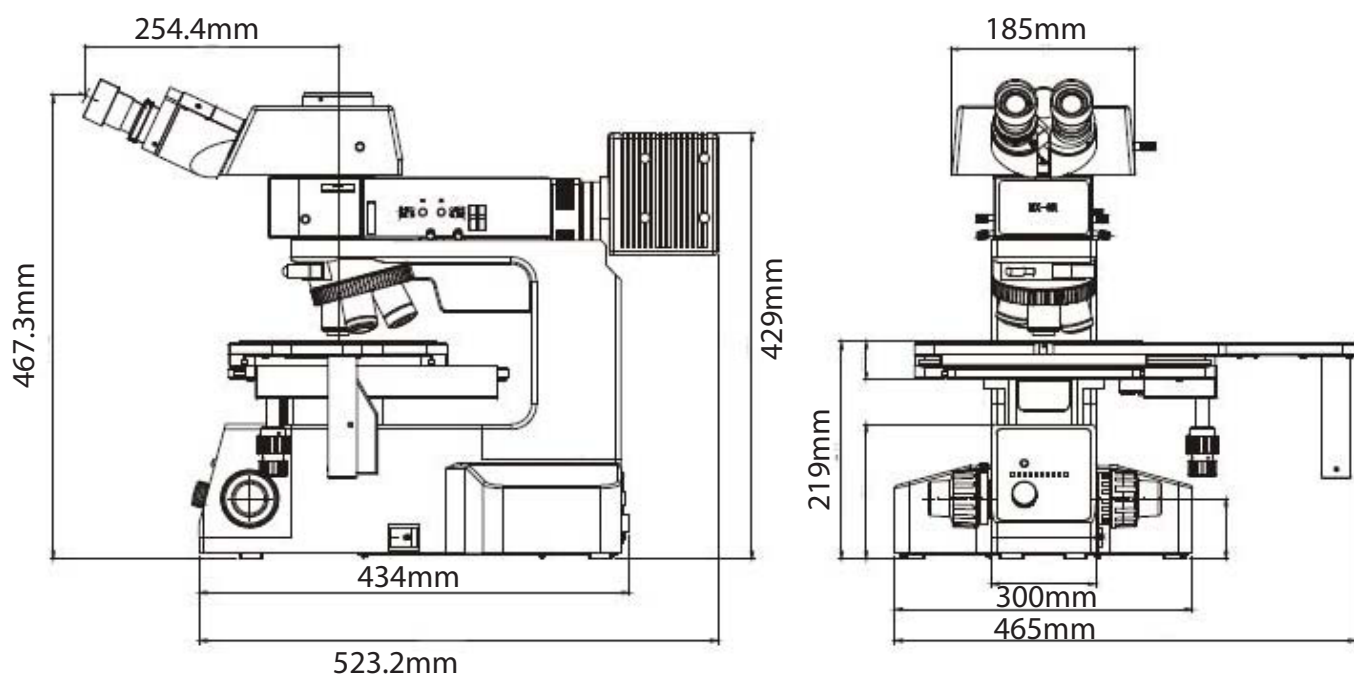
Model	M46-RF	M46-TRF
Optical System	Infinity Color Corrected Optical System	
Observation	Brightfield / Darkfield / Polarization / DIC	Brightfield / Darkfield / Polarization / DIC / Transmitted Illumination
Viewing Head	30° inclined trinocular head, erect image. Splitting ratio: 100:0 or 0:100. Interpupillary distance 50-76mm	
Eyepieces	High eyepoint widefield plan eyepiece PL10x/22mm, accepts 26mm diameter reticle.	
Objective Lenses	Infinity Corrected LWD Brightfield Plan Achromat Objectives 5x, 10x, 20x, 50x, 100x	
	Infinity Corrected High Resolution Brightfield Semi Apo Objectives 5x, 10x, 20x, 50x, 100x	
	Infinity Corrected LWD BD Plan Achromat Objectives 5x, 10x, 20x, 50x, 100x	
	Infinity Corrected High Resolution BD Semi Apo Objectives 5x, 10x, 20x, 50x, 100x	
	Infinity Corrected BD Plan Achromat Objectives 5x, 10x, 20x, 50x, 100x	
Nosepiece	Tilted, quintuple brightfield/darkfield nosepiece with DIC slot	
Focus Adjustment	Low position coaxial focus mechanism, coarse range: 33mm, fine precision: 0.001mm. Upper limit and tension adjustment.	
Body	Power supply 90~240V wide voltage system	
Stage	6" three layer mechanical stage with low position coaxial adjustment. Moving range: 158mm x 158mm. Clutch handle for quick movement.	6" three layer mechanical stage with low position coaxial adjustment. Moving range: 158mm x 158mm. Clutch handle for quick movement and glass plate for transmitted use.
Illumination	10W LED BD reflected illuminator with electronic variable aperture and field diaphragm, center adjustable with switch for changing from brightfield to darkfield. Has slots for filters and polarizer.	12V/100W reflected and transmitted illumination with electronic variable aperture and field diaphragm, center adjustable with switch for changing from brightfield to darkfield. Has slots for filters and polarizer.
Condenser	None	N.A 0.50 condenser with iris diaphragm.
Polarization	Analyzer with rotatable polarizer.	
C-Mount Adapter	0.5x, 0.65x, and 1x C-Mount Adapters are available separately.	



## M46-RF



## M46-TRF



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www.feinoptic.com