Motic®

MORE THAN MICROSCOPY

TEC

PANTHERA TEC MAT

ROBUST FUNCTIONALITY FOR INDUSTRIAL APPLICATIONS

PANTHERA TEC MAT

POWERFUL SOLUTIONS FOR MATERIAL SCIENCES

The Panthera TEC series of Industrial microscopes is the missing link in the Panthera family: Incident light microscopes for material sciences, ready to handle semiconductors, LCD panels and wafers with a clever Brightfield/Darkfield illumination concept. To extend the application fields for compound materials, microscope models with additional Transmitted light by integrated LED illumination can be chosen.

Smart Darkfield 5 Segment modes

LM Plan BD Objectives and new 22mm FOV

Incident or incident/transmitted options

LED color temperature interchangeable

Motic LightTracer: Coded nosepiece & Digital light intensity knob

ROBUST FUNCTIONALITY FOR INDUSTRIAL APPLICATIONS

The Panthera TEC models offer a high value for the inspection of semiconductors and compound materials especially in technical education and quality control of industry. Brightfield, Darkfield and simple Polarization contrast are combined with a new segmental illumination. This concept allows an oblique incident illumination, perfect for the detection of scratches or other defects on flat and reflecting surfaces without a need to move the sample.

The Panthera TEC BD models feature LD Plan BD objectives with a superb imaging performance, mounted on a 5-fold encoded nosepiece. The light intensity for each objective position is automatically memorized and will be repeated once the objective is swung in again.

The compact Epi illuminator carries a slot for polarizer and analyzer, ready for Polarization contrast and to reduce internal reflections. The illuminator also includes the controls for varying the incident light in terms of mode (BF or DF) and illumination angle. The extended 22mm Field of View (FOV) offers 21% more visual area in comparison to a basic 20mm FOV system. Both trinocular versions (25° viewing angle) display an erect/upright image as a basic feature, highly appreciated in industrial applications. The beam split is fixed by 50/50 (vis/photo).

The Panthera TEC is clearly focused on material sciences. Incident illumination is performed by a 3W LED of selectable color temperature. The incident/transmitted stand type additionally carries a transmitted LED illumination system with 39 LEDs mounted in an LED condensor. For compound materials, a simultaneous illumination is possible. Here, a stage with glass insert will be applied. 2 stage options (3x2", 6x4") give flexibility for different sample dimensions.

The Panthera TEC models fill the last gap in the Panthera family. Now also opaque industrial samples can be examined with an extended ease of use: brilliant optics for significant image results, flexible models for a variety of applications and smart functionality in microscope controls.

SPECIFICATIONS | PANTHERA TEC MAT

Model	Panthera TEC-BF	Panthera TEC-BF-T	Panthera TEC-BD	Panthera TEC-BD-T
Optical System	Colour Corrected Infinity Optical System (CCIS®)			
Observation Tube	Trinocular head, Siedentopf type			
Interpupillary distance (mm)	48-75			
Trino light split	50/50 fixed			
Inclination	25° inclined, 360° swivelling			
Eyepieces	UC-WF10X/22			
Eyepieces diopter adjustment	+/- 5 dpt			
Nosepiece	Reversed quintuple, Brightfield, coded		Reversed quintuple, Brightfield / Darkfield,coded	
Objective classification	Plan Achromat LD / Plan S-APO		Plan Achromat BD / Plan S-APO BD	
Objectives	Plan Achromat LD 5X/0.13 (WD 20.3mm), Plan Achromat LD 10X/0.25 (WD 17.5mm), Plan Achromat LD 20X/0.40 (WD 8.1mm), Plan S-APO 50X/0.80 (WD 1mm)		Plan Achromat BD 5X/0.13 (WD 17.3mm), Plan Achromat BD 10X/0.25 (WD 16.3mm), Plan Achromat BD 20X/0.40 (WD 7.3mm), Plan S-APO BD 50X/0.80 (WD 1mm)	
Objective mounting thread	W 4/5" x 1/36" (RMS standard)		M32	
Intermediate tube	Compact EpiBF intermediate		Compact EpiBD intermediate with smart segmental ringlight	
Stage	3x2" Mechanical stage or 6x4" Mechanical stage			
Stage size (mm)	180x140mm surface (3"x2") or 300x180mm surface (6"x4")			
Travel range X&Y (mm)	75x50mm movement (3"x2") or 150x100mm movement (6"x4")			
Upper limit stop	Preset; adjustable			
Condenser	-	LED condenser	-	LED condenser
Focus mechanism	Coaxial; tension adjustment			
Minimum fine focus precision (µm)	2			
Z-axis movement (mm)	35			
Illumination type (Incident light from Intermediate)	3W LED		3W LED, smart segmental ringlight	
Illumination type (Transmitted light from stand)	-	0.06W * 39 LEDs (LED condenser)	-	0.06W * 39 LEDs (LED condenser)
Illumination interchangeability	LED color temperature interchangeability			
Illumination features	Motic LightTracer: Light memory, sleep mode, nosepiece LED light intensity and mode indicator			
Connectivity	USB for external camera power			
Power supply	110-240V (CE)			
Accessories included	power cord, dust cover, allen key, screws for metal extention support			
Dimensions L x W x H (mm)	282x210x450			
Weight (Kg)	10			
Optional Objectives	Plan S-APO 100x/0.90 Brightfield		Plan S-APO BD 100x/0.90 Darkfield	
Optional stage	6x4" Mechanical stage or 3x2" Mechanical stage			
Optional Analyzer, polarizer	360° Rotatable analyzer, polarizer slider			
Contrast techniques				
Brightfield	Yes			
Darkfield	-	-	Yes	Yes
Simple Polarization	Yes			

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Designed in Barcelona (Spain)
April 2019