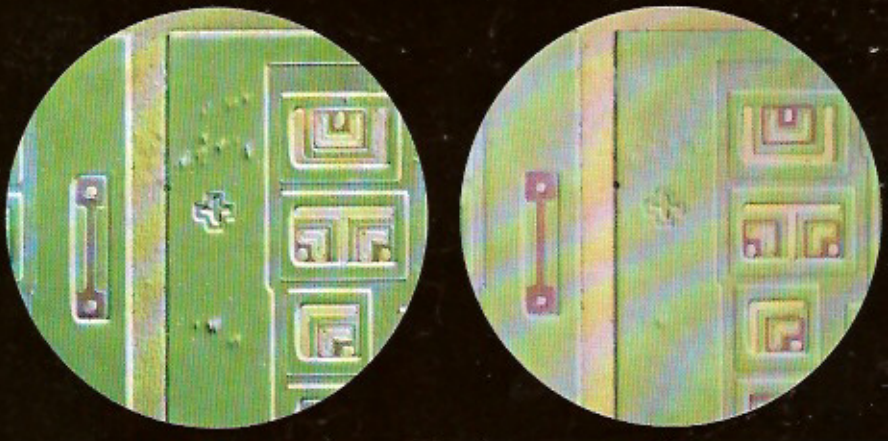
ZEISS

Epi-Microscope

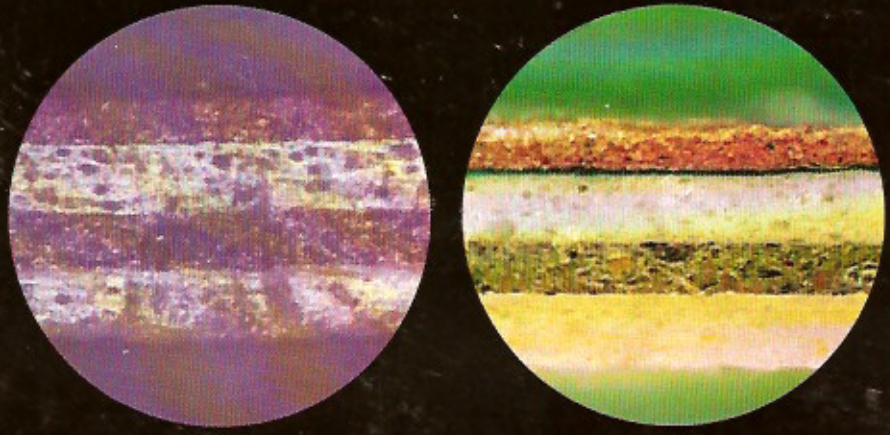
Rolled screw thread.
Deformed structure.
Brightfield on the left,
differential interference
contrast on the right.

Metal

Semiconductor



Integrated circuit.
Faults on the wafer.
Differential interference
contrast on the left,
brightfield on the right.



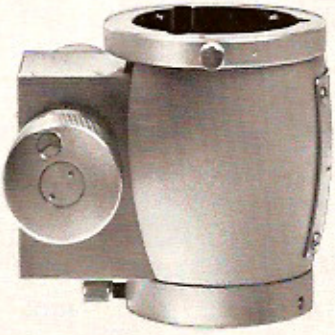
Transverse section
through lacquer layers.
Forensic test.
Brightfield on the left,
darkfield on the right.

Lacquer

EPI-MICR

EYEPIECE

TUBE BODY



TUBE

STAND

STAGE

OSCOPE

Maximum exchangeability for maximum flexibility

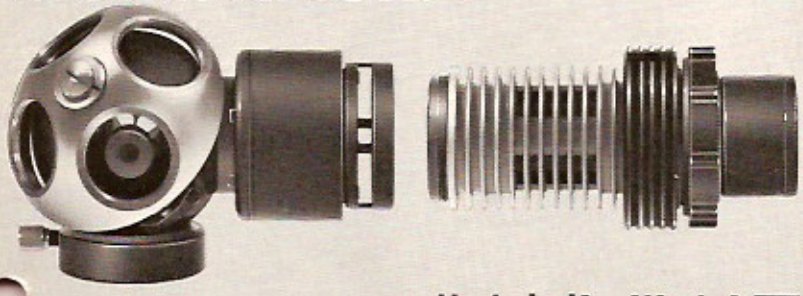
Its rugged design and great flexibility make the Epi-Microscope the ideal instrument for industrial production control and materials testing in the lab or on the line, and for training and instruction.

The Epi-Microscope is small and handy, yet most versatile in application. It can be equipped for brightfield, darkfield, and even for Nomarski differential interference contrast – an outstanding advantage of a microscope this size, and of particular importance to spot irregularities which are not detectable with other methods.

The objectives, eyepieces, reflectors, tubes, and stages of your choice are grouped around the microscope's core, the vertical illuminator. And last but not least, you may select from a vast range of stands – also from the ZEISS MMS 1000 modular measuring system – to mount the equipment. You specify the items you want and get the microscope that optimally fits your requirements.

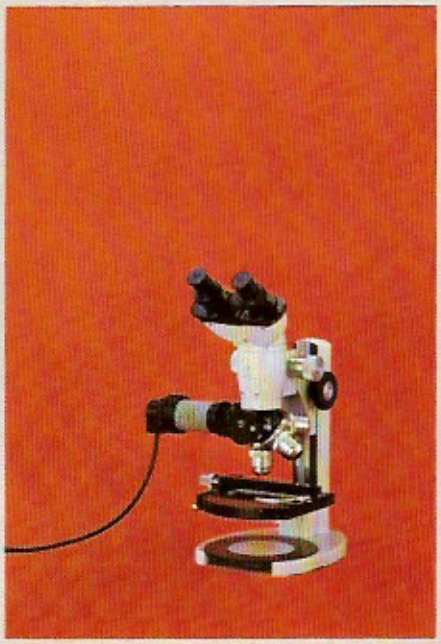
OBJECTIVE

CONDENSER



ILLUMINATOR

REFLECTOR



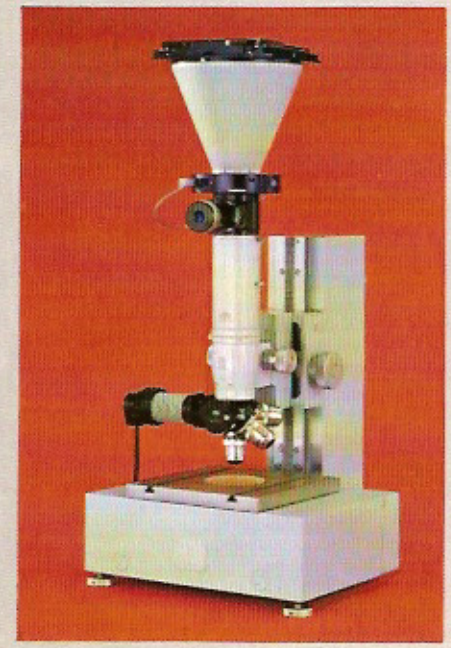
ZEISS

Penetrate the Surface

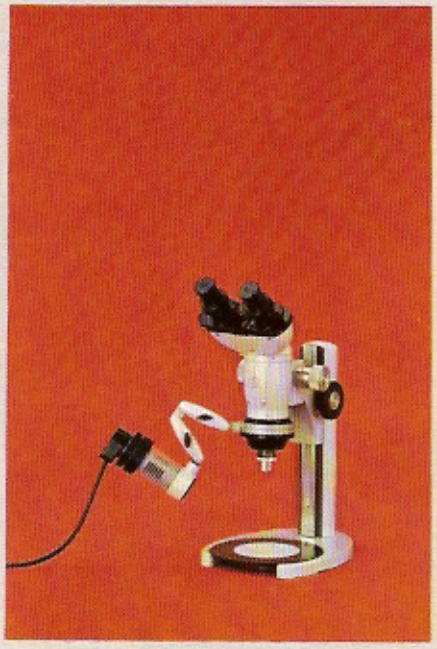
The earlier imperfections are spotted in the natural or treated surfaces of metals, semiconductors, lacquers, plastics, ceramics, wood, etc. the better the finished product. The ZEISS Epi-Microscope detects faults before they become problems. Rugged and sturdy, this workhorse for production line and quality control is easy and convenient to operate, and even withstands abuse from untrained operators.

The Epi-Microscope is simple, profitable, and easy to take, yet crafted with the same high precision as any large ZEISS research microscope, and equipped with great ZEISS optics.

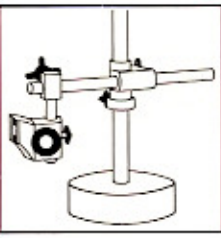
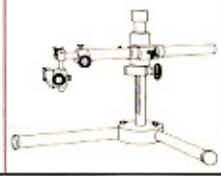
Epi-Microscope with vertical illuminator III A and 9 x 12 cm (4″ x 5″ Polaroid) camera, on MMS stand G1.



Epi-Microscope with carrier for two epi-illuminators and LD EPIPLAN objective instead of vertical illuminator, on F stand.



Epi-Microscope with vertical illuminator II A, lamp unit 60, and GLAREX projection screen, on K stand.

Stand	K	G+F	C	D	H	AC
						
Features						
with plastic-covered base for destruction-free setting of microscope on large objects. 10 mm horizontal motion adjustable by vernier on stand; reading to within $^1/_{100}$ mm.	for objects max. 42 mm high (G); max. 132 mm high (F); or to be set on objects with supporting rods: 130 mm long (G); 175 mm long (F).	with circular base, vertically adjustable, swivelling over large objects max. 310 mm high; adaptable to any inclination of the object.	like stand C, to be clamped to tables max. 80 mm high.	with circular base, vertically adjustable, swivelling over large objects max. 390 mm high; of high stability, securely adjustable; with outriggers and adjusting screws for levelling.	for objects max. 900 mm high; especially for microscopes with accessories (photomicrographic camera, TV camera); of high stability.	
Focusing range						
65 mm on stand	65 mm (G) 45 mm (F) on stand ea.	50 mm with rack and pinion box	50 mm with rack and pinion box	220 mm + 50 mm with rack and pinion box	165 mm with focusing slide	
Max. projection						
		300 mm	400 mm	700 mm + 80 mm with horizontal drive		
Swivelling range						
		360°	360°	90°		

Objectives	Initial magnification/ Numerical aperture	Working distance (mm)		Protective cap for EPIPLAN LD objectives	Nomarski interference-contrast equipment	
			w/protective cap		Condenser II A	Condenser III A
EPIPLAN for brightfield	4/0.10	9.0				
	8/0.20	7.2				
	16/0.35	2.8				
	40/0.85	0.23				
	80/0.95	0.09				
	100/1.25 oil	0.25				
EPIPLAN HD for brightfield and darkfield	4/0.10	1.0				
	8/0.20	1.0				
	16/0.35	1.0				
	40/0.85	0.23				
	80/0.95	0.09				
	100/1.25 oil	0.25				
EPIPLAN LD for brightfield with long working distance, with protection against acids, caustic solutions and other etching substances	4/0.10	9.5	7.5	cap LD 4		
	8/0.20	7.7	5.7	cap LD 8		
	16/0.30	5.6	3.6	cap LD 16		
	40/0.60	–	2.3	cap LD 40		
	40/0.60	3.1				
EPIPLAN POL for Nomarski differential interference contrast	4/0.10	9.0			Inko 4/8	
	8/0.20	7.10			Inko 4/8	
	16/0.35	2.70			Inko 16	Inko 16
	40/0.60 LD		2.3	cap LD 40	Inko 40 LD	
	40/0.85	0.23			Inko 40	Inko 40
	80/0.95	0.09			Inko 80	Inko 80
	100/1.25 oil	0.25			Inko 100	
EPIPLAN-ANTIFLEX immersion for objects with low reflectivity	2.5/0.08 methylene iodide	0.3				
	8/0.20 oil	0.4				
	6.3/0.16 methylene iodide	0.3				
ANTIFLEX-EPI-Achromats for objects with low reflectivity	16/0.40 oil	0.45				
	16/0.40 methylene iodide	0.35				
	40/0.65 oil	0.5				
	40/0.65 methylene iodide	0.25				

ZEISS

CARL ZEISS
7082 Oberkochen
West Germany

Specifications

Tube body	fine adjustment: 2 mm
Tubes	monocular or binocular for observation; straight or trinocular for photomicrography
Objectives	see table; change ring with W 0.8 thread for vertical illuminator II A or intermediate ring with W 0.8 / M 24 thread for vertical illuminator III A for Epiplan, Epiplan LD, and Epiplan POL objectives with interference-contrast equipment; change ring with M 24 thread for vertical illuminator II A for Epiplan HD and Epiplan-Antiflex objectives
Eyepieces	for standard magnifications 50 – 100 – 200 – 500 – 1000 x: Kpl 8x, Kpl 8x Br for spectacle wearers; Kpl 8x with focusing eyelens for single reticles; for standard magnifications for the format 4″ x 5″ (9 x 12 cm): C 5x for large fields of view: Kpl 10x Br wide-angle eyepiece for spectacle wearers; Kpl 10x Br wide-angle eyepiece with focusing eyelens for spectacle wearers for single reticles; Kpl 12.5x Br eyepiece for spectacle wearers; Kpl 12.5x Br wide-angle eyepiece for spectacle wearers; Kpl 16x wide-angle eyepiece; further eyepieces as per delivery program
Equipment for measuring and counting	micrometer disk and stage micrometer; K 10x Br eyepiece for spectacle wearers with integrating micrometer disk turret I; eyepiece screw micrometer with internal reading: Kpl 8x and Kpl 16x
Vertical illuminators	III A with revolving nosepiece; II A for single objectives; for oblique epi-illumination: carrier for epi-illuminators
Reflectors	HPI for brightfield; D for darkfield; HPr for projection
Light sources	low-voltage illuminator 6 V 15 W; low-voltage illuminator 12 V 60 W; power requirements: 100 – 110 – 127 – 220 – 240 V, 50 . . . 60 Hz
Stands	see table
Stages	for stands G and F: **plain circular stage** with exchangeable central part for optimum background; in addition: V-bearing for cylindrical specimens; ball-bearing stage for specimen tilt in all directions; sliding stage for specimen shifting in all directions (18 mm motion range) **plain mechanical stage** with stage carrier; range of motion 24 x 75 mm **circular rotating centerable mechanical stage** with stage carrier range of motion 50 x 75 mm **sliding stage** with stage carrier; shifting range 30 mm
Alignment press	with scale adjustment for object heights
Nomarski differential interference-contrast equipment	see table "Objectives"; in addition: swing-out polarizer; screw-in tube analyzer
Photomicrography at standard magnifications	photomicrographic camera system for negative formats from 35 mm to 9 x 12 cm (4″ x 5″)
Micro-projection	projection attachment with GLAREX projection screen; in addition: insert 9 x 12 cm (4″ x 5″)

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