

INDUSTRIAL microscopes



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Professional entry-level stereomicroscopes LAB LAB-10 / LAB-20

LAB Series Professional entry-level stereomicroscopes



LAB Series

The LAB series can be considered as the entry-level of the OPTIKA professional stereomicroscopes range. The two models have been designed for end users who need professional quality at low cost.



LAB Range



LAB-10



LAB-20

LAB-20 Series



Heads

Binocular heads, 360° rotating and 45° inclined. Interpupillary distance Adjustable between 51 and 75 mm.

Eyepieces

WF10x/20 mm.

LAB-10: Dioptric compensation adjustable on left eyepiece tubes. LAB-20: Dioptric compensation adjustable on both eyepiece tubes.

Specimen stage

Fitted with a semi-transparent disc for transmitted light with specimen clips.

Objectives

LAB 10: with double magnification (2x-4x) that can be selected by rotating the lens unit. Working distance 80mm. LAB 20: continuous zoom 0,7x ...4,5x. (6,43:1 zoom factor). Working distance: 85 mm.

Stand

Fixed arm type with focusing mechanism.

Focusing

Rack and pinion controlled by a pair of knobs placed on both sides of the stand.

Illumination

Double adjustable illuminator for incident and transmitted light fitted with two high-efficiency LED light sources. The angle of the incident illuminator is adjustable. Voltage: 110/240V ac.

LAB Series - Technical specifications

Model	Head	Eyepiece	Objectives	Working Distance	Stand	Illumination
LAB-10	Binocular	WF 10x/20mm	2x - 4x selectable by rotating	80 mm	Pillar stand with fixed holder	Double incident and transmitted light. High- efficiency LED light sources with separate brightness controls
LAB-20	Binocular	WF 10x/20mm	0,7x4,5x zoom	85 mm	Pillar stand with fixed holder	Double incident and transmitted light. High- efficiency LED light sources with separate brightness controls

LAB Series - Accessories

LAB

ST-001.1	Eyepieces (pair) WF5x/22mm
ST-401	Eyepieces (pair) WF10x/20mm
ST-402	Eyepieces (pair) WF15x/15mm
ST-403	Eyepieces (pair) WF20x/10mm
ST-405	Eyepiece micrometric WF10x/20mm
ST-410	Additional lens 0,5x for LAB 20 (w.d. 170 mm)
ST-411	Additional lens 1,5x for LAB 20 (w.d. 42 mm)
ST-415	Eye cups (pair) type 1
ST-029	Dust cover type 12

15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.















Professional stereozoom microscopes **SZM** SZM-1 / SZM-1Led / SZM-2 / SZM-2Led / SZM-3 / SZM-4



Professional stereozoom microscopes



SZM Series

The stereomicroscopes of the SZM series are instruments designed for laboratory and industry applications.

Their optical and mechanical qualities place them at the top of their category and the price/quality ratio is excellent. The stereomicroscopes share the same optical system consisting of binocular and trinocular heads with zoom objectives.

The four models of the SZM series find their proper application wherever professional instruments are required. Several accessories provide an ample choice of configurations and applications.

SZM-LED2

3<u>0</u>00

360°

SZM-1	Binocular with pillar stand, halogen lamp
SZM-LED1	Binocular with pillar stand, LED
SZM-2	Trinocular with pillar stand, halogen lamp
SZM-LED2	Trinocular with pillar stand, LED
SZM-3	Binocular with overhanging stand
SZM-4	Trinocular with overhanging stand



SZM Range



SZM Series



Heads

Binocular and trinocular, 360° rotating and 45° inclined. Interpupillary distance Adjustable between 51 and 75 mm. Dioptric compensation On both eyepiece tubes. Eyepieces EWF10x/20 mm

Objectives

Parfocal achromatic zoom 0,7x...4,5x (6,428:1 zoom factor). **Specimen stage:**

Models with halogen illumination are fitted with a black/white disc, speciment clips and a frosted disc for transmitted light. LED versions are not equipped with black/white and frosted discs. **Focusing**

Rack and pinion mechanism controlled by a pair of knobs placed on both sides of the stand.

Stand

Pillar stand: 30 mm and 25 cm high. Base: 26x20x6h cm. Overhanging stand: 42 cm high, 23x23 cm base and 45 cm horizontal arm lenght.

Illumination

Double, adjustable incident and transmitted light, fitted with two 12V/15W halogen bulbs. The angle of the incident illumination is adjustable.

The two models SZM-LED1 / SZM-LED2 are equipped with high-power LEDs.

SZM Series - Technical specifications

Model	Head	Eyepiece	Objectives	Working Distance	Stand	Illumination
SZM-1	Binocular	WF 10x/20mm	0,7x4,5x zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-LED1	A-LED1 Binocular WF 10x/20m		0,7x4,5x zoom	100 mm	Pillar stand, low profile base	Incident: high power X-LED ³ Transmitted: 40mm LED diffusing disc
SZM-2	Trinocular	WF 10x/20mm	0,7x4,5x zoom	100 mm	Pillar stand	Incident and transmitted 12V/15W halogen
SZM-LED2	Trinocular	WF 10x/20mm	0,7x4,5x zoom	100 mm	Pillar stand, low profile base	Incident: high power X-LED ³ Transmitted: 40mm LED diffusing disc
SZM-3	Binocular	WF 10x/20mm	0,7x4,5x zoom	100 mm	Overhanging stand	Without illumination
SZM-4	Trinocular	WF 10x/20mm	0,7x4,5x zoom	100 mm	Overhanging stand	Without illumination

SZM Series - Accessories

SZM		15103 - Lens cleaner, 50ml	OPTIKA
ST-081	Eyepieces (pair) WF10x/20 mm	It cleans glass quickly and effectively,	Station .
ST-082	Eyepieces (pair) WF15x/15 mm	without leaving residue or odor.	
ST-083	Eyepieces (pair) WF20x/10 mm	Ideal for precision lens or prism cleaning.	Constant of
ST-084	Eyepiece micrometric WF10x/20 mm		
ST-085	Additional lens 0,5x (w.d. 165 mm)		
ST-091	Additional lens 0,75x (w.d. 117 mm)		
ST-086	Additional lens 1,5x (w.d. 47 mm)		
ST-087	Additional lens 2x (w.d. 26 mm)		
ST-088	Polarising set (filters and rotating stage) *		
ST-040	Darkfield condenser *		
ST-041	Sample clip		
ST-100	Moving stage *		
ST-110	Moving stage, with coaxial knobs		
ST-111	Moving stage, with micrometer screws		
ST-089	Reflex camera adapter for full frame sensor		
ST-090	CCD camera adapter (for 1/3" sensors)	24	
ST-090.1	CCD camera adapter (for 1/2" sensors)		-
ST-036	Eye cups (pair) type 2	The second second	
ST-012	White/black object-plate, type 2 dia. 95 mm (not available on LED version)	1 The second sec	
ST-014	Glass stage, type 2, dia. 95 mm (not available on LED version)		
ST-038	Halogen bulb, 12V/15W	ATT THE	4
ST-037	Halogen bulb, 12V/15W, with dichroic mirror		
ST-033	Dust cover type 13		
ST-666	Heating stage, with digital temperature controller		
ST-173	APS-C Reflex camera adapter		
	* For LED version special adapter required		

CAMERA ADAPTER CHART FOR TRINOCULAR MODELS







Laboratory stereozoom microscopes **SZN** SZN-1 / SZN-2 / SZN-3 / SZN-4 / SZN-5 / SZN-6 / SZN-7 / SZN-8 / SZN-9 / SZN-10

SZN Series

Laboratory stereozoom microscopes



SZN Series

The stereomicroscopes of the SZN series are instruments designed for laboratory and industry applications.

Their optical and mechanical qualities place them at the top of their category and the price/quality ratio is excellent. The stereomicroscopes share the same optical system consisting of binocular and trinocular heads with zoom objectives.

The four models of the SZN series find their proper application wherever professional instruments are required. Several accessories provide an ample choice of configurations and applications. SZN-4



SZN Range



SZN Series

Heads

Binocular or trinocular, 360° rotating and 45° inclined.

Interpupillary distance

Adjustable between 55 and 75 mm. Dioptric compensation on both eyepiece tubes.

Eyepieces

EWF10x/22mm, high-point.

Working distance

110 mm.

Objectives

Parfocal achromatic zoom 0,67x...4,5x with continuously variable magnification (max. 45x in the standard configuration, can be increased to 225x by using additional accessories).

Specimen stage:

Except overhanging models, the instruments are fitted with a white disc for contrast and specimen clamps.

Models with transmitted illumination also fitted with frosted glass disc.

Focusing

By means of rack and pinion system, controlled by a pair of knobs.

Illumination

High efficiency X-LED³ incident illuminators (single or double arm) and 100 mm white LED diffusing disc as transmitted illuminator.

Stands

The series has different stands for every requirement. Simple for vision without transmitted illumination; base for incident and transmitted illumination; overhanging stands (simple or hinged), that allow very large objects to be viewed and to be handled or worked.

100mm wide illumination LED disc



PTIKA

SZN Series - Models



SZN Series - Models

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SZN-4 Model



SZN Series - Technical specifications

Model	Head	Eyepiece	Objectives	Working Distance	Stand	Illumination
SZN-1	Binocular	EWF10x/22	0,674,5x	110mm	Pillar stand with rack and pinion system	Without illumination.
SZN-2	Trinocular	EWF10x/22	0,674,5x	110mm	Pillar stand with rack and pinion system	Without illumination.
SZN-3	Binocular	EWF10x/22	0,674,5x	110mm	Pillar stand with rack and pinion system	Transmitted: 100 mm LED disc Incident: OPTIKA X-LED ³ .
SZN-4	Trinocular	EWF10x/22	0,674,5x	110mm	Pillar stand with rack and pinion system	Transmitted: 100 mm LED disc Incident: OPTIKA X-LED ³ .
SZN-5	Binocular	EWF10x/22	0,674,5x	110mm	Pillar with rack and pinion system	Transmitted: 100 mm LED disc Incident: double arm OPTIKA X-LED ³ .
SZN-6	Trinocular	EWF10x/22	0,674,5x	110mm	Pillar with rack and pinion system	Transmitted: 100 mm LED disc Incident: double arm OPTIKA X-LED ³ .
SZN-7	Binocular	EWF10x/22	0,674,5x	110mm	Simple overhanging stand	Without illumination.
SZN-8	Trinocular	EWF10x/22	0,674,5x	110mm	Simple overhanging stand	Without illumination.
SZN-9	Binocular	EWF10x/22	0,674,5x	110mm	Hinged overhanging stand	Without illumination.
SZN-10	Trinocular	EWF10x/22	0,674,5x	110mm	Hinged overhanging stand	Without illumination.

SZN Series - Accessories

SZN

SAO1.5

SSAO2

	Eyepieces	1		Additional Accessories
ST-141	Eyepieces (pair) WF10x/22mm		ST-088	Polarising set (filters and rotating stage) *
ST-142	Eyepieces (pair) WF15x/16mm		ST-040	Darkfield condenser *
ST-143	Eyepieces (pair) WF20x/12mm		ST-100	Moving stage *
ST-144	Eyepieces (pair) WF25x/9mm		ST-110	Moving stage, with coaxial knobs
ST-145	Eyepiece micrometric WF10x/22mm		ST-111	Moving stage, with micrometer screws
			ST-666	Heating stage, with digital temperature controller
	Additional lenses			
SAO0.3	Additional lens 0,3x (w.d. 287 mm)			
SAO0.5	Additional lens 0,5x (w.d. 185mm)			
SAO0.75	Additional lens 0,7x (w.d. 120mm)			

Photo & Video adapters

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Additional lens 1,5x (w.d. 49mm)

Additional lens 2x (w.d. 28mm)

15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



CAMERA ADAPTER CHART FOR TRINOCULAR MODELS





Modular stereozoom microscopes for industry MODULAR SZM-B / SZM-T / SZN-B / SZN-T / SZP-6 SZP-8 / SZP-10 / ST-150 / ST-151 / ST-152 / ST-153 SZ-STL1H / SZ-STL2H / SZ-STL3Led / SZ-STL4 SZ-STL4Led / SZ-STL8 / ST-155 / ST-156

MODULAR Series

Modular stereozoom microscopes for industry



MODULAR Series - Heads

The MODULAR series has been designed to match professional needs in industrial field. With a wide range of stereozoom heads and special stands, it allows to build your own model on the basis of your needs.

SZM-B	Binocular head, greenough optical system
SZM-T	Trinocular head, greenough optical system
SZN-B	Binocular head, greenough optical system
SZN-T	Trinocular head, greenough optical system
SZP-6	Binocular head galilean optical system
SZP-8	Binocular head galilean optical system
SZP-10	Binocular head galilean optical system

HEAD Range



MODULAR Series - SZM Heads





SZM-B Binocular stereozoom head

45° inclined, 360° rotatable; WF10x/20mm high-point widefield eyepieces; Interpupillary distance: 51-75 mm; Dioptric adjustment: +/-5 dp; 0,7x...4,5x zoom objective; Zoom ratio: 6,43:1; Working distance: 100 mm.

SZM-T Trinocular stereozoom head

45° inclined, 360° rotatable; WF10x/20mm high-point widefield eyepieces; Interpupillary distance: 51-75 mm; Dioptric adjustment: +/-5 dp; 0,7x...4,5x zoom objective; Zoom ratio: 6,43:1; Working distance: 100 mm.

MODULAR Series - Accessories

ST-081 ST-082	Eyepieces Eyepieces (pair) WF10x/20 mm Eyepieces (pair) WF15x/15 mm	ST-086 ST-087	Additional lens 1,5x (w.d. 47 mm) Additional lens 2x (w.d. 26 mm)
ST-083 ST-084	Eyepieces (pair) WF20x/10 mm Eyepiece micrometric WF10x/20 mm	ST-089 ST-090	Photo & Video adapters SLR Reflex camera adapter CCD camera adapter (for 1/3" sensors)
ST-085 ST-091	Additional lenses Additional lens 0,5x (w.d. 165 mm) Additional lens 0,75x (w.d. 117 mm)	ST-090.1 ST-173	CCD camera adapter (for 1/2" sensors) APS-C Reflex camera adapter

MODULAR Series - SZN Heads

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SZN-B Binocular stereozoom head

45° inclined, 360° rotatable; WF10x/22mm high-point widefield eyepieces; Interpupillary distance: 55-75 mm; Dioptric adjustment: +/-5 dp: 0,67x...4,5x zoom objective; Zoom ratio: 6,72; Working distance: 110 mm.

SZN-T Trinocular stereozoom head

45° inclined, 360° rotatable; WF10x/22mm high-point widefield eyepieces; Interpupillary distance: 55-75 mm; Dioptric adjustment: +/-5 dp:; 0,67x...4,5x zoom objective; Zoom ratio: 6,72; Working distance: 110 mm.



MODULAR Series - Accessories

	Eyepieces	1	SAO0.75	Additional lens 0,7x (w.d. 120mm)
ST-141	Eyepieces (pair) WF10x/22mm		SAO1.5	Additional lens 1,5x (w.d. 49mm)
ST-142	Eyepieces (pair) WF15x/16mm		SSAO2	Additional lens 2x (w.d. 28mm)
ST-143	Eyepieces (pair) WF20x/12mm			
ST-144	Eyepieces (pair) WF25x/9mm			Photo & Video adapters
ST-145	Eyepiece micrometric WF10x/22mm		ST-146	SLR Reflex camera adapter for full frame sensor
			ST-147	CCD camera adapter (for 1/3" sensors)
	Additional lenses		ST-147.1	CCD camera adapter (for 1/2" sensors)
SAO0.3	Additional lens 0,3x (w.d. 287 mm)		ST-173	APS-C Reflex camera adapter
SAO0.5	Additional lens 0,5x (w.d. 185mm)			

MODULAR Series - SZP Heads

SZP-6 Binocular parallel stereozoom head

30° inclined, 360° rotatable; WF10x/22mm high-point widefield eyepieces; Interpupillary distance: 52-75 mm; Dioptric adjustment: +/-5 diopters; Objective: 1x; 0,8x....5x zoom objective; Zoom ratio: 6:1; Working distance: 80 mm.

SZP-8 Binocular parallel stereozoom head

30° inclined, 360° rotatable; WF10x/22mm high-point widefield eyepieces; Interpupillary distance: 52-75 mm; Dioptric adjustment: +/-5 diopters; Objective: 1x; 0,8x...6,4x zoom objective; Zoom ratio: 8:1; Working distance: 80 mm.

SZP-10 Binocular parallel stereozoom head

30° inclined, 360° rotatable; WF10x/22mm high-point widefield eyepieces; Interpupillary distance: 52-75 mm; Dioptric adjustment: +/-5 diopters; Objective: 1x; 0,8x....8x zoom objective; Zoom ratio: 10:1; Working distance: 80 mm.

Also available models SZP-6ERGO, SZP-8ERGO, SZP-10ERGO Binocular ERGO 0°-35° inclined, 360° rotatable Diopter adjustment on both eyepieces +/- 5 diopters.

MODULAR Series - Accessories

	Eyepieces
ST-161	Eyepieces (pair) WF15x/15 mm
ST-162	Eyepieces (pair) WF20x/12 mm
ST-163	Eyepiece micrometric WF10x/22 mm
	Objectives
ST-165	Objective 0,3x (w.d. 280 mm)
ST-166	Objective 0,5x (w.d. 165 mm)

Objective 2x (w.d. 32,5 mm)

ST-167



Photo & Video attachments and adapters

ST-170	Photo/Video beam splitter - 1 port
ST-171	Photo/Video beam splitter - 2 ports
ST-172	Iris diaphgram
ST-173	Asp-c Reflex camera adapter
ST-174	CCD camera adapter (for 1/3" sensors)
ST-175	CCD camera adapter (for 1/2" sensors)

[[[[]]]]

The MODULAR series has been designed to match professional needs in industrial field. With a wide range of stereozoom heads and special stands, it allows to build your own model on the basis of your needs.

ST-150	Large plain stand, pillar type.
ST-151	Large plain stand, pillar type. LED trans-illuminator.
ST-152	Large plain stand, fixed arm type.
ST-153	Large plain stand, fixed arm type. LED trans-illuminator.
ST-155	Large stand. Coarse focusing LED transmitted and incident illuminator.
ST-156	Large stand, coarse and fine focusing. LED transmitted and incident illuminator.
SZ-STL1H	Simple overhanging stand.
SZ-STL2H	Hinged overhanging stand.
SZ-STL3	Industrial stand, with table clamp.
SZ-STL3Led	Industrial stand, with table clamp. Double X-LED ³ illuminator arm.
SZ-STL4	Industrial stand, bench support.
SZ-STL4Led	Industrial stand, bench support. Double X-LED ³ illuminator arm.
SZ-STL8	Small base, double X-LED ³ illuminator arm and LED disc trans-illuminator.

STAND Range





ST-152

ST-153





Large plain stand with head holder and focusing mechanism. Pillar type. Base: 320x280mm. Pillar: Ø32x360mm.



ST-151

Large plain stand with head holder and focusing mechanism. LED trans-illuminator with intensity control. Pillar type. Base: 320x280mm. Pillar: Ø32x360mm.

ST-152

Large plain stand with head holder and focusing mechanism. Fixed arm type. Base: 320x280mm. Fixed arm: 360mm.

ST-153

Large plain stand with head holder and focusing mechanism. LED trans-illuminator with intensity control. Fixed arm type. Base: 320x280mm. Fixed arm: 360mm.

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ST-155

Modern stand with large base. LED trans-illuminator and LED incident illuminator, both with intensity control. *Head not included.

ST-156

Modern stand with large base. LED trans-illuminator and LED incident illuminator, both with intensity control. Coaxial coarse and fine focusing system.

* Head not included.



SZ-STL1H



SZ-STL1H

Simple overhanging stand with head holder. Base dimensions: 230x230mm. Pillar: Ø32x380mm. Horizontal arm: 430mm. * Head not included



Hinged overhanging stand with head holder. Base dimensions: 260x210mm. Pillar: Ø32x380mm. Horizontal arm: 550mm. * Head not included



SZ-STL8

Modern stand with small base. With 2 incident X-LED illuminators on flexible arms, and high brightness LED disc trans -illuminator (100mm diameter).

SZ-STL8

OPTIKA





Stereozoom microscope for SMD inspection SZM-SMD

SZM-SMD Model

Stereozoom microscope for SMD inspection



SZM-SMD Model

The SZM-SMD has been designed specifically for the inspection of solder connections, rework and repair of electronic circuits and for mounting small electronic components.

One-touch sliding movement allows the user to quickly change from vertical to oblique viewing.

Heads

Trinocular, 45° inclined, 360° rotating. Microscope for SMD inspection. **Eyepieces** WF10X/20mm, high-point. **Objectives** Zoom 0,7x...4,5x. **Magnification**

7x...45x Illumination Optional.

SMD attachment:

Rotatable 360°. vertical working distance 103mm. Oblique working distance 103mm. With inclination adjusting mechanism.



SZM-SMD Model - Technical specifications



SZM-SMD Model - Accessories

Eyepieces

ST-081	Eyepieces (pair) WF10x/20 mm
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Eyepiece micrometric WF10x/20 mm
	Dhote & Video adoptors

Photo & Video adapters

SLR Reflex camera adapter for Full Frame
CCD camera adapter (for 1/3" sensors)
CCD camera adapter (for 1/2" sensors)
APS-C Reflex camera adapter

15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.











Illumination and sample positioning **ACCESSORIES** CLD-1 / CL-11.1 / CL-12 / CL-15.1 / CL20 / ST-100 / ST-110 / ST-111 CL-30 / CL-31 / CL-41 / M-666 / ST-666

ACCESSORIES

Illumination and sample positioning





ACCESSORIES Series

The achievement of an ideal work situation is the result of not only choosing the most suitable microscope, but of choosing correctly its accessories as well.

We offer a range of devices for any situations: external illuminators, moving stages, heating stages.

A correct choice of accessories for your microscope is instrumental in getting the highest performance out of it.

CLD-01	LED cold light generator
CL-30	2-arm LED illuminator
CL-31	2-arm LED illuminator
CL-41	2-arm X-LED ³ illuminator
CL-11.1	Double-arm optic fiber guide
CL-12	Ring optic fiber guide
CL-15.1	LED ring light illuminator
CL-20	Ring light illuminator


ACCESSORIES Series - CLD-01





Accessories

The output can be coupled to the following accessories: **CL-11.1:** Double-arm optical fiber guide with focusing lenses. Arm length 500 mm.

Optional lenses for arms:

- **CL-17:** Focusing lens(pair) with built-in polarizer filter.
- **CL-12:** Ring optical fiber guide, guide length 700 mm. Guide diameter 16 mm. Diameter of the fixing ring: 55mm. The circular end is suitable for all stereo series.

ACCESSORIES Series - Illuminators

CL-30

2-arm LED illuminator

Light sources: LED (x2); With 2W high efficiency LEDs. Chromaticity coordinates (x,y): 0.320, 0.320; Luminous flux: 80 lm each arm; Emission angle: 35°; Power supply: 12Vdc, 1500 mA; Without brightness control.

CL-31

2-arm LED illuminator

Light sources: LED (x2); With 2W high efficiency LEDs. Chromaticity coordinates (x,y): 0.320, 0.320; Luminous flux: 80 lm each arm; Emission angle: 35°; Power supply: 12Vdc, 1500 mA; With brightness control.



CL-41

2 arm X-LED illuminator;

With 3,5W high efficiency X-LED. Chromaticity coordinates (x,y): 0.320, 0.320); Luminous flux: 400 Im each arm; Emission angle: 25°; Power supply: 12Vdc, 1500 mA; With brightness control.



ACCESSORIES Series - Illuminators



CL-11.1

Double-arm optic fiber guide with focusing lenses. Arm length 500 mm.

Each arm fitted with focusable lens adapter: **CL-17:** lens pair with built-in linear polarizer (not included)





Ring optic fiber guide

CL-12

Lenght 700 mm, diameter 16 mm. The circular end is suitable for all series , by using the three locking screws. Diameter of the fixing ring: 55mm.

CL-15.1

LED ring light illuminator

Led ring light illuminator. Suitable for all series. Intensity light control. Diameter of the fixing ring 60mm.

CL-20 Ring light illuminator

Fluorescence ring light illuminator, 8W. Suitable for all series. Diameter of the fixing ring: 60mm.





ACCESSORIES Series

ST-100	Moving stage * Manual positioning stage. Dimensions: 185x145mm. Range: 56mm (X) x 35mm (Y)	<u>SI-100</u>
ST-110	Moving stage, with knobs * Manual positioning stage, using knobs for X-Y movements. Dimensions: 180x155mm. Range: 75mm (X) x 54mm (Y).	
ST-111	Moving stage, with micrometer screws * Manual positioning stage, using micrometer screws. Dimensions: 185x145mm. Range: 25mm (X) x 25mm (Y). Micrometer screws resolution: 0.01mm	ST-110
M-666	Heating stage * Temperature range: 20°C (room temperature) – 50°C Temperature setting resolution: 1°C Temperature measuring resolution: 0.1°C Display: LED display for set temperature LED display for measured temperature Power supply: Input: 110/220Vac 50/60Hz. Power: 50W	CT 111
ST-666	Heating stage for stereomicroscopes * Temperature range: 20°C (room temperature) – 50°C Temperature setting resolution: 1°C Temperature measuring resolution: 0.1°C Display: LED display for set temperature LED display for measured temperature Power supply: Input: 110/220Vac 50/60Hz. Power: 50W	<u>ST-111</u>

* The model of microscope that will be used with this accessory must be specified.

ST-100





Gemological stereomicroscopes OPTIGEM OPTIGEM 1 / OPTIGEM 2 / OPTIGEM 3 / OPTIGEM 4 SZM-GEM-1 / SZM-GEM-2

OPTIGEM Series

Gemological stereomicroscopes



OPTIGEM Series

Optika Microscopes has designed a series dedicated to the science of Gemology. These microscopes have especially been designed to observe samples of precious stones as well as jewels which may contain them. This series offers instruments equipped with multiple image-enhancing illumination systems, tilting stands and darkfield condensers developed for any gemological needs.

SZM-GEM-1	Gemological stereozoom, binocular head, pillar stand.
SZM-GEM-2	Gemological stereozoom, trinocular head, pillar stand.
OPTIGEM-1	Gemological stereozoom, binocular head, tlting stand.
OPTIGEM-2	Gemological stereozoom, trinocular head, tlting stand.
OPTIGEM-3	Gemological stereozoom, binocular head, tilting stand.
OPTIGEM-4	Gemological stereozoom, trinocular head, tlting stand.





OPTIGEM Range





SZM-GEM-2



OPTIGEM-1







OPTIGEM-4

SZM-GEM-1

OPTIGEM-2

OPTIGEM-3

OPTIGEM Series - **SZM-GEM -1/2 models**

Heads

SZM-GEM-1: Binocular rotating 360° and 45° inclined.

SZM-GEM-2: Trinocular rotating 360° and 45° inclined. Diopter adjustment on both evepieces.

Interpupillary adjustment 51-75 mm.

Eyepieces

Widefield eyepieces WF10x/20mm with field number 20. **Objectives**

Parfocal achromatic objective 1x. Working distance: 100 mm. Zoom range: 0,7x - 4,5x. Zoom factor: 6,428:1.

Specimen stage:

Specimen clamps. Adjustable gemology clip.

Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

Microscope stand

Pillar stand height 25 cm. Base: 26x20x6h cm. Weight: 6 Kg. Illumination

Incident illumination: dichroic halogen lamp (12V/15W) with angle and brightness adjustment.

Transmitted illumination: pure white (6300K) LED system for observation in brightfield (with diffusive LED disc) and dark-field (with side-emitting LED ring).

Through a selector it's possible to choose between 3 modes: brightfield only, darkfield only, or both brightfield and darkfield.

Provided with a lever for the insertion of a black background in order to improve the darkfield observation.

Voltage: 110/240Vac, 50/60Hz, 1A ; Fuses: T1A 250V Max. required power: 30W





SZM-GEM-1/2 models

These two models are typical gemological microscopes with fixed stand.

A special ultrabright LED-based electronic condenser, with intensity control, and perfectly colour-matched to sunlight, allows to switch from bright to dark field. The condenser uses a new optical configuration for a perfect dark field usability range.

OPTIGEM Series - **OPTIGEM -1/2 models**

The **OPTIGEM-1** and **OPTIGEM-2** are revolutionary 2-in-1 gemology instruments that can be used both as a vertical and as a horizontal microscopes, at the turn of a knob and without disassembling any part.

A special ultrabright LED-based electronic condenser, with intensity control, and perfectly colour-matched to sunlight, allows to switch from bright to dark field. The condenser uses a new optical configuration for a perfect dark field usability range. An additional flexible arm and velvet-field slider allow for extra contrast, for crisp and vibrant images even in a brightly lit environment.

A modular optional accessories, that include: gemology clip, an iris aperture diaphragm, a polarization analysis kit, an optical unit to switch the dark field from a "sharp" (gem exhibition) to a "soft" (diamond analysis) mode translating cell holder with vacuum pick-up and quartz immesion cells complete and enhance the instrument usability. All the accessories can be stacked, in any order, both when the microscope is being used as a horizontal unit and when it is in its vertical configuration.

The microscope body can be rotated through a full 360°, yet keeping the base sturdly fixed on the table, to show gems to a customer, or to share opinions with a colleague.

Illumination

Incident illumination: LED flexible arm with brightness adjustment.

Transmitted illumination: LED system for observation in brightfield (with diffusive LED disc) and darkfield (with side-emitting LED ring). Through a selector it's possible to choose between 3 modes: brightfield only, darkfield only, or both brightfield and darkfield.

Provided with a lever for the insertion of a black background in order to improve the darkfield observation. LED temperature color: 6300K (pure white). External power supply provided. Input: 110/240Vac, 50/60Hz; Output: 12V 1A. Max. required power: 15W.







OPTIGEM Series - **OPTIGEM -1/2 models**

Heads

OPTIGEM-1: Binocular rotating 360° and 45° inclined. OPTIGEM-2: Trinocular rotating 360° and 45° inclined.

Diopter adjustment on both eyepieces.

Interpupillary adjustment 51-75 mm. Eyepieces

Widefield eyepieces WF10x/22 with field number 22.

Objectives

Parfocal achromatic objective 1x. Working distance: 110 mm. Zoom range: 0,7x - 4,5x. Zoom factor: 6,428:1.

Specimen stage:

Adjustable gemology clip. Base 360° rotating. Pair of rods for assembling optional accessories.

Focusing

By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope.

Microscope stand

Rack-and-pinion stand (it can be inclined through full 90° for horizontal observation, and rotated 360°). Base: 27x21x6h cm. Weight: 6 Kg.







OPTIGEM-2





OPTIGEM - 3/4 models

These models are classic gemological microscopes with tilting stand. The darkfield condenser uses a typical optical configuration, based on an halogen illumination system and a classic reflecting system.

A flexible arm with a fluorescent tube simulates north facing daylight for accurate color grading.



Heads

OPTIGEM-3: Binocular rotating 360° and 45° inclined. OPTIGEM-4: Trinocular rotating 360° and 45° inclined. Diopter adjustment on both eyepieces. Interpupillary adjustment 55-75 mm. Eyepieces Widefield eyepieces WF10x/22 with field number 22. Objectives Parfocal achromatic objective 1x. Working distance: 110 mm. Zoom range: 0,67x - 4,5x. Zoom factor: 6,71:1. Specimen stage: Adjustable gemology clip. Base 360° rotating. Focusing By means of a rack and pinion controlled by a pair of knobs placed on both sides of the stereomicroscope. Microscope stand Rack-and-pinion stand (it can be inclined 45°). Base: 305x260x70h mm. Weight: 7 Kg. Illumination Incident illumination: flexible arm with fluorescent tube 7W 6400K (pure white). Independent ON/OFF switch. Transmitted illumination: system for observation with brightfield and darkfield, based on 30W halogen illumination and a dedicated reflecting system. Brightness adjustment. Iris diaphragm and removable black background for contrast enhancement with darkfield. Input: 240Vac, 50Hz; Max. required power: 45W.





OPTIGEM-4

300) 22
360°	\otimes



OPTIGEM Series - **Technical specifications**

Model	Head	Eyepiece	Objectives	Stand	Illumination
SZM-GEM-1	Binocular	WF10x/20mm	0,7 4,5x Zoom	Pillar stand	Incident illumination: dichroic halogen lamp 12V/15W. Transmitted illumination: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
SZM-GEM-2	Trinocular	WF 10x/20mm	0,7x4,5x zoom	Pillar stand	Incident illumination: dichroic halogen lamp 12V/15W. Transmitted illumination: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
OPTIGEM-1	Binocular	WF10x/22mm	0,7 4,5x Zoom	Gemological stand	Incident illumination: LED flexible arm with brightness adjustment. Transmitted illumination: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
OPTIGEM-2	Trinocular	WF10x/22mm	0,7 4,5x Zoom	Gemological stand	Incident illumination: LED flexible arm with brightness adjustment. Transmitted illumination: Diffusive LED disc for observation in brightfield and side-emitting LED ring for observation in darkfield.
OPTIGEM-3	Binocular	WF10x/22mm	0,67 4,5x Zoom	Gemological stand	Incident illumination: flexible arm with fluorescent tube 7W(pure white). Transmitted illumination: 30W halogen bulb and a dedicated reflecting system for observation with brightfield and darkfield.
OPTIGEM-4	Trinocular	WF10x/22mm	0,67 4,5x Zoom	Gemological stand	Incident illumination: flexible arm with fluorescent tube 7W(pure white). Transmitted illumination: 30W halogen bulb and a dedicated reflecting system for observation with brightfield and darkfield



OPTIGEM Series - **Accessories**

Accessories for SZM-GEM - 1/2:

ST-230	Polarizing analisys kit
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-086	Additional lens 1,5x
ST-087	Additional lens 2x
ST-089	Full Frame reflex camera adapter
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

Accessories for OPTIGEM - 1/2:

ST-201	Iris aperture diaphragm for darkfield
ST-207	Iris aperture diaphragm for standard illuminato
ST-202	Polarizing analisys kit
ST-203	Glass immersion cell
ST-204	Translating cell holder
ST-205	Vacuum pick-up
ST-082	Eyepieces (pair) WF15x/15 mm
ST-083	Eyepieces (pair) WF20x/10 mm
ST-084	Micrometric eyepiece WF10x/20 mm
ST-086	Additional lens 1,5x
ST-087	Additional lens 2x
ST-089	Full Frame reflex camera adapter
ST-090	CCD camera adapter (for 1/3" sensors)
ST-090.1	CCD camera adapter (for 1/2" sensors)
ST-173	APS-C Reflex camera adapter

Accessories for OPTIGEM - 3/4:

Polarizing analisys kit
Eyepieces (pair) WF15x/16mm
Eyepieces (pair) WF20x/12mm
Eyepieces (pair) WF25x/9mm
Micrometric eyepiece WF10x/22mm
Additional lens 1,5x
Additional lens 2x
Full frame Reflex camera adapter
CCD camera adapter (for 1/3" sensors)
CCD camera adapter (for 1/2" sensors)
Halogen Bulb 6V/30W
APS-C Reflex camera adapter

15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.













Metallurgical and measuring microscopes INDUSTRY XC-100L / XZ-1 / XZ-2 / B-353MET / B-500MET / XDS-3MET / B-1000MET



INDUSTRY Series

This series has been designed to handle and observe samples of any dimension. Industrial microscopes incorporate many complex designs that aim to improve resolution and sample contrast. From models designed for routine analysis up to models dedicated to industrial laboratory and quality control, Optika Microscopes is able to satisfy any demand in this field.

XC-100L	Monocular portable microscope for measurement
XZ-1	Monocular microscope for measurement with pillar stand
XZ-2	Binocular microscope with pillar stand and 8" TFT LCD screen
B-353MET	Trinocular upright metallurgical microscope
B-500MET	Advanced trinocular upright metallurgical microscope
XDS-3MET	Inverted metallurgical microscope
B-1000MET	Advanced trinocular upright metallurgical microscope

INDUSTRY Range



INDUSTRY Series - XC-100L



XC-100L

Portable microscope for measurements. Fitted with WF10x/18mm micrometric eyepiece with cross divided into tenths of a millimetre. 10x achromatic objective (total magnification 100x); focusing controlled by a rack and pinion mechanism; adjustable battery powered penlight lighting unit.



INDUSTRY Series - XZ-1 and XZ-2

XZ-1

Bench monocular microscope for measuring and viewing surfaces with a zoom objective.

Fitted with WF10x/18mm micrometric eyepiece with cross divided into tenths of a millimetre. 0.7...4.5x achromatic zoom objective (max. magnification 45).

Focusing controlled by a rack and pinion mechanism.

Double lighting unit for incident and transmitted light fitted with low voltage halogen bulbs (12V/10W). Working distance 90 mm.

XZ-2

Bench binocular microscope for measuring and viewing surfaces with a zoom objective and TFT LCD screen (8").

0.7x...4.5x achromatic zoom objective.

Focusing controlled by a rack and pinion mechanism.

Working distance: 96 mm.

LED ring light generator with brightness control.

CCD colour camera (380 TVlines). 8" TFT LCD screen with electronic graduated measuring cross.





INDUSTRY Series - **B-353MET**

B-353MET - Upright metallurgical microscope

Head: Trinocular, 30° inclined, 360° rotating.
Eyepieces: WF10X/20mm.
Nosepiece: 5-positions, reversed.
Objectives: PLAN IOS 4x/0.10, 10x/0.25, 20x/0.40, 50x/0.75 (no cover slide).
Magnifications: 40x, 100x, 200x, 500x.
Focusing system: Coaxial coarse and fine.
Stage: Double layer with mechanical sliding stage, 160x142 mm, moving range 76x52 mm.
Condenser: 1.25 N.A., with iris diaphragm, focusable.
Illumination: High-power white X-LED³ whit brightness control.
Metallurgical Attachment: High-power white LED[™]; field and aperture diaphgram.
Filters: Blue, yellow, frosted, polarizer & analyzer.







OPTIKA

INDUSTRY Series - **B-500MET**

B-500MET - Upright metallurgical microscope

Head: Trinocular, 30° inclined, 360° rotating.
Eyepieces: WF10X/22mm.
Nosepiece: 5-positions, reversed.
Objectives: PLAN IOS MET (no cover slide) IOS 5x/0.14, 10x/0.25, 20x/0.4, 50x/0.7, 100x/0.9 (dry).

Magnifications: 50x, 100x, 200x, 500x, 1000x.

Focusing system: Coaxial coarse and fine.

Stage: Double layer with mechanical sliding stage, 175x145 mm, moving range 76x52 mm.

Condenser: 0,7 N.A. swing-out type, with iris diaphgram, centrable and focusable. **Illumination:** OPTIKA X-LED³ system. Brightness is adjustable.

Metallurgical Attachment: High-power white X-LED³ system with brightness control; field and aperture diaphragms (centrable). Simple sliding darkfield system. **Filters**: Blue, polarizer & analyzer.









OPTI

B-1000 MET Model

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OPTIK

B-1000 MET

300	1 22	1000x
360°		
X-LED ⁸	IOS Ø	\otimes

B-1000 MET Typology: RESEARCH MICROSCOPE Description: Laboratory microscope for routine and research applications. Dye-cast frame, with high stability and ergonomy, for transmitted and incident light observation.



Version for material analysis (transmitted and incident light). Transmitted illumination X-LED⁸ (8W power).

Special attachment with built-in 100W halogen lamp.

B-1000 MET Model - Configuration chart

BUILD THE MICROSCOPE THAT SUITES YOUR NEEDS BY CHOOSING AMONG THE COMPONENTS OF CONFIGURATION CHART:



INDUSTRY Series - **XDS-3-MET**

XDS-3MET - Inverted metallurgical microscope

Head: Trinocular, 45° inclined.
Eyepieces: WF10X/22mm.
Nosepiece: 5-positions.
Objectives: LWD PLAN IOS MET (no cover slide): 5x/0.14, 10x/0.25, 20x/0.4, 50x/0.7.
Magnifications: 50x, 100x, 200x, 500x.
Focusing system: Coaxial coarse and fine.
Stage: 250x230mm; mechanical stage with lowered ergonomic coaxial controls. X-Y range: 114x81mm.
Diaphragms: Field and aperture diaphragms (centrable).
Illumination: 12V/50W halogen bulb in external case. Centrable bulb and brightness control.
Filters: Blue, polarizer & analyzer.

XDS-3-MET



Stand Stand St

INDUSTRY Series - **Technical specifications**

Model	Head	Eyepieces	Objectives	Working Distance	Stand	Illumination
XC-100L	Monocular	WF10x/18mm micrometric	10x	7,7 mm	Portable stand	Incident illumination: xenon penlight
XZ-1	Monocular	WF10x/18mm	0,7 4,5x Zoom	90 mm	Pillar stand	Incident illumination: halogen bulbs 12V/10W Transmitted illumination: halogen bulbs 12V/10W
XZ-2	Binocular	WF10x/18mm	0,7 4,5x	96 mm	Pillar stand with 8"	Incident illumination: LED ring light with brighness control



Model	Head	Eyepieces	Objectives	Nosepiece	Stage	Focusing	Condenser	Illumination
B-353MET	Trinocular	WF10x /20mm	Planachromatic IOS 4x, 10x, 20x, 50x (no cover slide)	Quintuple reversed	Double layer mechanical sliding stage, 160x142 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Brightfifield condenser: 1.25 N.A. Abbe type, with iris diaphragm, focusable	Transmitted illumination: X-LED ³ Metallurgical Attachment: High-power white LED with field and aperture diaphgram.
B-500MET	Trinocular	WF10x /22mm	PLAN IOS MET (no cover slide) 5x, 10x, 20x, 50x, 100x (dry)	Quintuple reversed	Double layer with mechanical sliding stage, 175x145 mm, moving range 76x52 mm	Coaxial coarse and fine system, with limit stop	Brightfifield condenser: 0,7 N.A. swing-out type, with iris diaphgram, centrable and focusable	Transmitted illumination: X-LED ³ illumination system. Metallurgical Attachment: High-power white X-LED ³ system with brightness control.
XDS-3MET	Trinocular	WF10x /22mm	LWD PLAN IOS MET (no cover slide) 5x, 10x, 20x, 50x	Quintuple reversed	250X230mm; mechanical stage with lowered ergonomic coaxial controls. X-Y range: 114x81 mm	Coaxial coarse and fine system, with limit stop		12V/50W halogen bulb in external case. Centrable bulb and brightness control.

B-1000MET

See the configuration chart for your own configuration

INDUSTRY Series - Accessories

M-899	XC-100L - Measuring microscope Pen illuminator
101-099	Pen numinator
	XZ-1 - Measuring monozoom microscope
M-001	Eyepiece H5x
M-003	Eyepiece WF16x/12mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.
ST-012	Object-plate white/black, type 2 dia. 95 mm
ST-014	Glass stage, type 2, dia. 95 mm
ST-028	Halogen bulb 12V/10W
M-013	Halogen bulb, with dichroic mirror 12V/10W
ST-029	Dust cover type 12
	XZ-2 - Measuring monozoom videomicroscope
M-001	Eyepiece H5x
M-003	Eyepiece WF16x/12mm
M-004	Eyepiece micrometer WF10x/18mm.
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.
	B-353MET - Upright metallurgical microscope
M-301	Eyepiece high-point WF10x/20mm
M-302	Eyepiece high-point WF16x/12mm
M-303	Eyepiece micrometer high-point WF10x/20mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm
M-330	Objective IOS Planachromatic 4x/0.10
M-331	Objective IOS Planachromatic 10x/0.25
M-332	Objective IOS Planachromatic 20x/0.40
M-333	Objective IOS Planachromatic 40x/0.65
M-335	Objective IOS Planachromatic 50x/0.75 (no cover glass)
M-334	Objective IOS Planachromatic 100x
M-365	Photo tube adapter for SLR cameras Full Frame
M-366	CCD camera adapter
M-031	Dust cover type 3
M-173	APS-C Reflex camera adapter
	B-500MET - Upright metallurgical microscope
M-680	Ergo Binocular Head 30°-60°
M-625	Eyepiece EWF10x/22mm
M-601	Eyepiece WF15x/16mm
M-602	Eyepiece micrometer EWF10x/22mm
M-005	Micrometric slide 26x76 mm, range 1 mm, div. 0,01 mm.
M-693.1	Objective IOS planachromatic 5x/0.14 (no cover slide)
M-694.1	Objective IOS planachromatic 10x/0.25 (no cover slide)
M-695.1	Objective IOS planachromatic 20x/0.40 (no cover slide)
M-696.1	Objective IOS planachromatic 50x/0.70 (no cover slide)
M-698.2	Objective IOS planachromatic 100x/0.90 DRY (no cover slide)
M-613	Polarising set (filters only) for transmitted light
M-615	Lambda filter for polarising set for transmitted light
M-614	Rotating table for polarising set

M-619	Photo tube adapter for SLR cameras Full Frame
M-699	Photo tube adapter for DIGI digital camera series
M-620	CCD camera adapter (for 1/3" sensors)
M-620.1	CCD camera adapter (for 1/2" sensors)
M-622	Halogen bulb 12V/50W
M-034	Dust cover type 5
M-975	Blue filter, 45 mm diameter for transmitted light
M-977	Green filter, 45 mm diameter for transmitted light
M-979	Yellow filter, 45 mm diameter for transmitted light
M-989	Frosted glass filter, 45 mm diameter
M-690	Eyecup (pair)
M-173	APS-C Reflex camera adapter
	XDS-3MET - Inverted metallurgical microscope
M-625	EWF10x/22mm Eyepiece
M-601	WF15x/16mm Eyepiece
M-602	Micrometer Eyepiece EWF10x/22mm
M-005	26x76 mm micrometric slide. Range 1mm, div. 0,01mm
M-735	LWD 5x/0.14 IOS planachromatic objective (no cover slide)
M-736	LWD 10x/0.25 IOS planachromatic objective (no cover slide)
M-737	LWD 20x/0.40 IOS planachromatic objective (no cover slide)
M-738	LWD 50x/0.70 IOS planachromatic objective (no cover slide)

M-746 LWD 100x/0.80 IOS plan achromatic objective (no cover slide)

M-619	Photo tube adapter for SLR cameras full frame
M-699	Photo tube adapter for DIGI digital camera series
M-789	CCD camera adapter

M-789	CCD camera adapter
14 (22)	

M-622 12V/50W halogen bulb M-036

- Dust cover type 7 M-173
 - APS-C Reflex camera adapter

B-1000-MET - Inverted metallurgical microscope

Centering telescope for phase contrast	
Micrometric slide, 26x76mm, range 1mm, div. 0,01mm	
Polarizing set (filters only)	
Lambda filter for polarizing set	
Set phase contrast, single IOS PLAN objective 40x	
Green filter, 45mm diameter	
Eyecup (pair)	
Photo tube adapter for full frame SLR camera	
I-173 Photo tube adapter for APS-C SLR camera	
Photo tube adapter for DIGI digital camera series	
CCD camera adapter for 1/3" sensor	
CCD camera adapter for 1/2" sensor	
OPTIKA immersion oil, 10ml	

15103 - Lens cleaner, 50ml

It cleans glass quickly and effectively, without leaving residue or odor. Ideal for precision lens or prism cleaning.



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OPTIKA SRL

Via Rigla, 30 - 24010 Ponteranica (BG) - ITALIA - Tel.: +39 035 571392 (6 linee r.a.) Fax: +39 035 571435 - info@optikamicroscopes.com

M.A.D. IBERICA APARATOS CIENTIFICOS

c/. Puig i Pidemunt, nº 28 1º 2ª - (Pol. Ind. Plà d'en Boet) - 08302 - MATARO (Barcelona) España - Tel: +34 937.586.245 Fax: +34 937.414.529

Alpha Optika Microscopes Hungary

2030 ÉRD, Kaktusz u. 22.- HUNGARY - Tel.: (23) 520-077 Fax: (23) 374-965