

# Catalog Addendum

## New Products and Updates

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# New Products and Updates

## ➤ Compound Light Microscopes: Upright and Inverted

Electron Microscopy Sciences is proud to announce the introduction of the highest quality line of compound and stereo microscopes in the market place today. The microscopes incorporate advanced technology into a durable, cost effective solution. All of the microscopes have:

- **A Modern** frame with enhanced stability for image documentation
- **An Ergonomic** single hand stage/focus control to minimize fatigue
- **A Robust** stainless steel/brass focus mechanism endures high use
- **Brilliant** images resolved with superb optics
- **Versatile performance** - multiple techniques available, including polarization with First Order (Full Wave/Red) Retardation Plate, phase contrast, dark field and more

We are convinced that our Microscopes are the best in the marketplace and at the right price.

## ➤ Compound Microscopes

The BC Series Upright Compound microscopes is designed to perform in a demanding research environment and incorporates advanced technology into a durable, cost effective solution for your microscope needs.

### Key Specifications

- **Optical body** - Seidentopf design inclined 30°; 55 to 75 mm interpupillary adjustment, 360° rotation
- **Eye pieces** - 10X wide field; Focal Length 25mm, Field Number 22 mm.
- **Turret** - 4 position ball bearing, reversed, with positive click stops
- **Mechanical stage** - 8.25"(209mm) X 5.5"(140mm) with vernier scale; Range of motion 75x52mm; Low-positioned right hand coaxial control knobs for one hand focusing; slide holder
- **Focusing** - 0.002mm markings, adjustable tension control & focus stop prohibits drift, protects specimen and objectives
- **Condenser** - 1.25 N.A. 2 element Abbe with iris diaphragm and focusing
- **Kohler Illumination** - field diaphragm, 20W 6V Halogen with dimmer
- **Dimensions** - (WHD) (in/cm) 7.8 x 16.5 x 10.9 / 20.0 x 41.9 x 27.8  
Gross Weight (lb/kg) 21/9.5

Microscope Includes: dust cover, immersion oil, two color filters, spare halogen lamp and fuse; phase centering telescope & green filter



Objective Magnification	Numerical Aperture (mm)	Field of View w/ 10X E.P. (mm)	Working Distance Bright-field Planachromatic (mm)	Working Distance Phase Contrast Planachromatic (mm)
4X	0.1	4.5	17	NA
10X	0.25	1.8	8	8
20X	0.4	0.72	NA	0.5
40X Retractable	0.65	0.45	0.47	0.4
100XR(oil)	1.25	0.25	0.18	0.18
Binoc/ Trinoc/ Polarized			BC-211 / BC-311 BC-2PL/ BC-3PL	BC-221 / BC-321

## Ordering

<b>BC-211</b>	Binocular, Planachromat	each	\$1,520
<b>BC-311</b>	Trinocular Planachromat	each	\$1,625
<b>BC-221</b>	Binocular, Planachromat, Phase contrast	each	\$2,095
<b>BC-321</b>	Trinocular, Planachromat, , Phase contrast	each	\$2,195
<b>BC-2PL</b>	Binocular, with full wave (1st class red) Compensator 10X 40X 50X, 100X oil	each	\$1,995
<b>BC-3PL</b>	Trinocular, with full wave (1st class red) Compensator 10X 40X 50X, 100X oil	each	\$2,095

## ➤ Inverted Microscope

### A New Level of Inverted Microscopy

EMS introduces a high optical standard on a versatile frame at budget conscious levels. The long working distance condenser (55 mm) and objectives (six supplied) provide brilliant resolved images in both phase contrast and brightfield techniques. The condenser swings out to accommodate roller bottles or other large cultivation vessels.

- Affordable - EMS delivers exacting performance for routine research without consuming your budget
- Versatile - trinocular body for image documentation; condenser design for observation of virtually all vessel types; mechanical stage with inserts for well plates and petri dishes; three objectives each for phase contrast and brightfield
- Durable - an all metal frame with an all metal focusing mechanism ensures this instrument will perform well beyond the industry leading 5 Year Warranty

### Key Specifications

- Optical body - Seidentopf design inclined 30°; 55 to 75 mm interpupillary adjustment, 360° rotation
- Nosepiece - quintuple, ball bearing
- Eye pieces - 10X, Focal Length 25mm, FN 20 mm.
- Focus mechanism - adjustable tension control to prohibit drift and adjustable up-stop to protect objective lenses; dial markings at 0.002mm increments
- Condenser - 1.25 N.A. 2 element Abbe with iris diaphragm and rack and pinion focusing; 55mm optical working distance, swing out or bright field working distance is 125mm or 5"
- Kohler Illumination, field diaphragm, 30 watt, 6 volt Halogen bulb with electronic dimmer
- Mechanical stage: (WxD) (in/cm) 8.25 x 8.875 / 20.95 x 22.54; Right-hand Coaxial dropdown X-Y Control Knobs; Four Inserts for: well plates (13 x 8 cm and 8 x 5 cm ) petri dish (6.8 cm diam.) and slides (7.5 x 3.5 cm and 7.5 x 2.5 cm)
- Dimensions: (WHD) (in/cm) 7.7 x 18.4 x 13.8 / 19.5 x 46.8 x 35; Gross Weight: (lb/kg) 25/55
- Microscope Includes: phase centering telescope and phase annulus sliders, dust cover, color filters (blue green and frosted), spare halogen lamp and fuse.



Objective Magnification	Numerical Aperture (mm)	Field of View w/ 10X E.P. (mm)	Working Distance Bright Field Plan Achromatic (mm)	Working Distance Phase Plan Achromatic (mm)
10X	0.25	1.8	8.1	---
25X	0.40	0.72	4.8	---
40XR	0.60	0.45	3.3	---
10X	0.25	1.8	---	8.1
25X	0.40	0.72	---	4.8
40XR	0.60	0.45	---	3.3

## Ordering

<b>CP-2A1</b>	Inverted, Trinocular, Mechanical Stage, 6 ea. Plan Objectives: 10X, 25X, 40XR, 3 Brightfield/Phase Contrast , 5 position turret, 30W Halogen	each	\$3,150
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# New Products and Updates

## ► Fluorescence Illumination for Live Cells

Fluorescence Illumination for Live Cells The EMS Epi-fluorescence Inverted Microscope allows you to quickly locate fluorescent tagged items and save room in your budget. The BC Series Epi Inverted uses a single band filter cube and six objectives to deliver a brightly resolved image for identifying proteins and other specimens within a cell.

- Obtain sharp images through the bottom of a culture vessel because of the superior long working distance phase contrast objectives
- Examine large roller bottles or flasks with a swing out condenser - 7" (180mm) bright field working distance or 2" (55 mm) phase contrast working distance
- Custom filter sets available

### Key Specifications

- **Optical Body** - Seidentopf design inclined 30° with 55 to 75 mm interpupillary adjustment, 360° rotation
- **Nosepiece** - Quintuple ball bearing reversed
- **Eye pieces** - 10X; Focal Length 25mm, FN 20 mm.
- **Focus mechanism** has adjustable tension control to prohibit drift and adjustable up-stop to protect objective lenses; dial markings at 0.002mm increments
- **Condenser** - 1.25 N.A. 2 element Abbe with iris diaphragm, rack and pinion focusing
- **Kohler Illumination**, field diaphragm, 30 watt, 6 v Halogen bulb electronic dimmer
- **Mercury Lamp** and Electronic Power supply with elapsed time counter, Type: HBO 100W/2
- **Fixed stage:** (WxHxD) (in/cm) 8.25 x 0.59 x 8.875 / 20.95 x 1.5 x 22.54
- **Optional Attachable Mechanical Stage:** Right-hand Coaxial dropdown X-Y Control Knobs
- **Dimensions:** Trinocular: (WHD) 9 x 22.5 x 21.5 (16 on BC-2A1) / 22.86 x 57.15 x 54.61 (in/cm)
- **Gross Weight:** 60/27.27 (lb/kg)



Objective Magnification	Numerical Aperture (mm)	Field of View w/ 10X E.P. (mm)	Working Distance Bright Field Plan Achromatic (mm)	Working Distance Phase Plan Achromatic (mm)
10X	0.25	1.8	8.1	---
25X	0.40	0.72	4.8	---
40XR	0.60	0.45	3.3	---
10X	0.25	1.8	---	8.1
25X	0.40	0.72	---	4.8
40XR	0.60	0.45	---	3.3
Model Number	BC-364 BC-2A1 without Mercury Burner & Filters			

ExcitorType	Peak Wave-length	FilterType	ExcitationFilter	DichroicMirror	EmissionFilter
UV		DANSA	IF 330-400		425 W
VIOLET		SITS Primuline	IF 395-415		455 W
BLUE	445	FITC	IF 420-485	DM 510	520 W
GREEN	546	TRITC	IF 535-550	DM 580	580 W

### Ordering:

BC-2A1	Inverted with option for fluorescence, Trinocular, Mechanical Stage, 6 ea. Plan Objectives: 10X, 25X, 40XR, 3 Brightfield/Fluor and 3 Phase Contrast, 30W Halogen	each	\$5,595
BC-EPI	Fluorescent Attachment kit for Inverted Microscope	each	\$5,395
BC-364	Inverted Epi-fluorescence, Trinocular, Mechanical Stage, 6 ea. Plan Objectives: 10X, 25X, 40XR, 3 Brightfield/Fluor and 3 Phase Contrast, 30W Halogen	each	\$10,795

➤ **Polarized and Metallurgical Light Microscopes**

**Polarized Microscope for Petrology**

**Polarized Investigations made Easy**

The EMS Polarizing Microscope is an excellent tool for Petrography and other mineral or earth science applications. Observation and analysis is easy with strain-free optics and polarizing mechanisms that ensure concentric field of views and accurate identification. Built with user comfort in mind, the PL series is also built to last, with an all metal focusing mechanism, all metal frame and all glass condenser that will outlast the 5 year warranty. Key polarization features of models PL-211 and PL-311 Trinocular include:

- A rotatable (0-90°) Analyzer with slide in/out Bertrand Lens
- DIN standard full wave (first class red) and quarter wave compensators and quartz wedge with slide stops for positioning in the Analyzer
- A precision rotating stage graduated in 1° increments and a swing out polarizer
- Four strain-free objectives, each centerable, mounted on a rear facing four position turret

**Key Specifications**

- Optical Body - Seidentopf design inclined 30° with 55 to 75 mm interpupillary adjustment, 360° rotation
- Nosepiece - Quadruple reversed
- Eye pieces - 10X; Focal Length 25mm, FN 18 mm. and one with crosshair and scale of 0.1 mm.
- Objectives - Strain-free Achromat:  
 4X Working Distance 37.50mm NA 0.10 FOV 4.5mm  
 10X Working Distance 7.316mm NA 0.25 FOV 1.8mm  
 40X Working Distance 0.632mm NA 0.65 FOV 0.45mm  
 63X Working Distance 0.33mm NA 0.85 FOV 0.29mm
- Condenser - 1.25 N.A. 2 element Abbe with iris diaphragm and rack and pinion focusing
- Focusing - All metal mechanism with coaxial coarse/fine adjustment and markings at 0.002mm increments
- Illumination - 20 watt, 6 volt Halogen bulb with electronic dimmer
- Round stage - Diameter 145 mm., rotatable 360°, graduated in 1° increments, center adjustable
- Bertrand Lens- slides in and out of optical path
- Analyzer - Rotatable with 0-90° graduations
- Compensator- Full wave first class red and quarter wave and quartz wedge
- Polarizer - slides in and out of optical path
- Dimensions: (WHD) (in/cm) 8 x 15 x 9.5 / 29 x 61 x 38;
- Gross Weight (lb/kg) 19.8 / 9

**Ordering**

<b>PL-211</b>	Binocular, Polarizing Microscope	each	\$3,035
<b>PL-311</b>	Trinocular, Polarized Microscope	each	\$3,200



Analyzer with Bertrand Lens and Optical Compensators: full wave and 1/4 wave



Round stage with 360° rotation and 1 mm. graduations



Polarizer slides in and out of light path above light collector

# New Products and Updates



## ➤ Metallurgical Microscopes

### For Materials Analysis and more -Metallurgical Microscopes

EMS Metallurgical Microscopes use long working distance objectives and reflected or incident illumination to deliver sharp, high contrast images of solid specimens. The large collector lens and light path combine with the specifically positioned diaphragms to allow more light for brighter images. A polarizer and analyzer and color filters are built-in to enhance observation. The Inverted model utilizes incident illumination for over size samples. The trinocular head allows for quick and easy attachment of cameras for documentation.

- Five long working distance objectives without cover slip correction for close specimen observation
- Transmitted illumination is facilitated with large glass inserts in the mechanical stage
- The polarizing analyzer is used in conjunction with the polarized filter cube, which is easily accessed via the push rod. The analyzer may also be placed on the lower light source and used with the polarized filter cube for transmitted light work.

### Objectives

Objective Magnification	Numerical Aperture (mm)	Field of View with 10X E.P. (mm)	Working Distance Bright Field Plan Achromatic (mm)
5X LWD	0.12	3.6	18.3
10X LWD	0.25	1.8	8.9
20X LWD	0.40	0.9	8.7
50X R LWD	0.60	0.45	3.7
80X R LWD	0.80	0.225	0.96

### Key Specifications

- Optical body - Seidentopf design inclined 30°; 55 to 75 mm interpupillary adjustment, 360° rotation
- Nosepiece - quintuple, ball bearing
- Eye pieces - 10X, Focal Length 25mm, FN 18 mm.
- Focus mechanism - adjustable tension control to prohibit drift and adjustable up-stop to protect objective lenses; dial markings at 0.002mm increments
- Incident light system includes: condenser, iris diaphragm, color and polarizing filter. Transmitted illumination, 1.25 N.A. Abbe condenser with iris diaphragm; all systems use a 20 watt, 6 volt Halogen bulb with dimmer
- Mechanical stage: (WxD) (in/cm)  
BC-233 two tiered: 10.7 5 x 10.875/ 27.30 x 27.62;  
MET-233: 6.3 x 3.4 / 16 x 14;  
BC4-311: 7.25 x 5.5 / 18.5x15; with right-hand coaxial drop-down control knobs
- Frame Dimensions: (WHD) (in/cm)  
BC-233: 9.8x17x18/25x44x45;  
MET-233: 7.8x46.4x17/20x42x43;  
BC4-311: 7.7x13.5x22/19.5x34.5x55
- Gross Wt.: (lb/kg)  
BC-233: 80/36; MET-233 18/8.2; BC4-311 40/18.2 , BC-233 MET-233 BC4-311

**Ordering**

MET-233	Metallurgical Trinocular	each	\$2,075
BC4-311	Metallurgical Trinocular Inverted Model	each	\$2,250
BC-233	Metallurgical Trinocular	each	POR

**➤ Compound Microscope Accessories**

LB-15WH	15 Watt 6 Volt Halogen Bulb for transmitted or lower illumination	each	\$6.00
LB-15WHR	15 Watt 6 Volt Halogen Bulb with Reflector for reflected or upper illumination	each	\$9.00
LB-5WF	5W Fluorescent Bulb for transmitted or lower illumination	each	\$7.00
LB-20WH	20W 6 Volt Halogen Bulb for all Upright Compounds	each	\$6.00
LB-30WH	30W 6 Volt Halogen Bulb for Inverted Compounds	each	\$9.00
A9-10-100	Reticle, 10mm Scale with 100 divisions	each	\$55.00
A9-5-100	Reticle, 5mm Scale with 100 divisions	each	\$55.00
A9-100SQ	Reticle, Square Grid with 1mm divisions	each	\$75.00
A9-400SQ	Square Grid with 0.5 mm divisions	each	\$75.00
A9-STM	Reticle, Stage Micrometer, 1mm scale with 100 divisions	each	\$95.00
OP-050	50XR Oil Plan Achromatic, N.A. 0.65	each	\$550.00

**➤ Camera Systems**

EMS offers three types of camera systems for documenting resolved microscopic images.

Each system is fully integrated with: software for image analysis, optical adapters to obtain the image in the correct focal plane, and cables for connection to computers, monitors or projectors All components are conveniently packaged under one part number for easy ordering.

CCD cameras and cooled CCD cameras for fluorescence available upon request.

59-SC8	Digital Still Camera, 8 MP with memory card, USB cable, optical adapter, batteries	each	\$995
59-2M	Digital Video Color Camera, 1/2" CMOS, USB 2.0, 3 M Pixel resolution with advanced software for measurement, optical adapter and cable included	each	\$795
59-3ML	Digital Video Color Camera, 1/2" CMOS, USB 2.0, 3 M Pixel resolution with advanced software for measurement, optical adapter and cable included	each	\$895
59-5ML	Digital Video Color Camera, 1/2" CMOS, USB 2.0, 5 M Pixel resolution with advanced software for measurement, optical adapter and cable included	each	\$2,595

**➤ Microscopes for Educational and Clinical Uses****➤ Compound Brightfield Microscopes**

**Clinicians, Educators, and Researchers Want These**

Designed for ease of use, the CP Series allows a novice to approach the microscope and quickly analyze their specimen. Void of complicated features, the CP Series offers pre-centered lenses and condensers, preventing operator confusion.

High eye point eye pieces, a rear facing turret for easy slide handling and a choice of lenses that provide large, flat fields of view offer brilliant images and outstanding resolution.

Built to take rough handling, the CP Series' frame, focusing and stage mechanisms are all metal construction because plastic wears over time. Spring loaded objectives protect against abuse but a focus stop control prohibits stage ramming accidents. Anti fungal protection and all glass light collectors ensure these microscopes will outlast their industry leading 5 Year Warranty.



# New Products and Updates

## Key Specifications

- Eye pieces - 10X wide field; Focal Length 25mm, FN 20 mm.
- Turret - 4 position ball bearing, reversed, with positive click stops
- Optical body - Seidentopf design inclined 30°; 360° rotation, 55-75mm interpupillary adjustment
- Mechanical stage – (in/cm) 5.25 / 13.5 x 5 / 12.5 with vernier scale; Range of motion 75x35mm; right hand coaxial control knobs; slide holder holds two slides; double plated for durability
- Focusing - 2µm markings, adjustable tension control prohibits drift, focus stop protects specimen and objectives
- Condenser - 1.25 N.A. 2 element Abbe with iris diaphragm and focusing
- Illumination - 20W 6V Halogen with dimmer
- Dimensions - (WHD) (in / cm) 7.5 x 15.4 x 12.4 / 19.2 x 39.2 x 31.6 Gross Weight (lb/ kg) 13 / 5.9
- Microscope Includes: dust cover, immersion oil, two color filters, spare halogen lamp and fuse; on phase contrast: phase centering telescope & green filter



Objective Magnification	Numerical Aperture (mm)	Field of View with 10X E.P. (mm)	Working Distance Brightfield Achromatic (mm)	Working Distance Brightfield Semi-Planachromatic (mm)	Working Distance Phase Contrast Achromatic (mm)
4X	0.1	5	27	17	NA
10X	0.25	2	6.6	4.1	6.6
20X	0.4	1	NA	NA	0.8
40XR	0.65	0.5	0.57	0.6	0.57
100XR (oil)	1.25	0.2	0.19	0.25	0.19
Monocular			CP-101	CP-111	
Binocular			CP-102	CP-112	PHP-102
Trinocular			CP-103	CP-113	PHP-103
			education, routine lab	economical	research

<b>CP-101</b>	Monocular Brightfield Achromatic	each	\$615
<b>CP-102</b>	Binocular Brightfield Achromatic	each	\$860
<b>CP-103</b>	Trinocular Brightfield Achromatic	each	\$980
<b>CP-111</b>	Monocular Brightfield Semi-Planachro	each	\$660
<b>CP-112</b>	Binocular Brightfield Semi-Planachro	each	\$920
<b>CP-113</b>	Brightfield Semi-Planachro	each	\$1,070
<b>PHP-102</b>	Binocular Phase Contrast Achromatic	each	\$1,495
<b>PHP-103</b>	Trinocular Phase Contrast Achromatic	each	\$1,610



## ➤ Upright Compound Microscope

EMS keeps prices low, quality high. Our microscopes virtually eliminate down time and our optics deliver brilliant images. Your purchase is protected by our Industry leading 5 year limited warranty.

Choose from the following options for the right equipment to meet your needs:

- Illumination: the popular rechargeable LED, or 20W halogen bulb or an incandescent bulb
- Monocular or Binocular heads or Teaching heads. Also, video systems are available to project images on a screen
- Three objective system, CP135-M3, has 4X, 10X and 40X, or four objective system includes the 100X oil

DIN Objective Magnification	Numerical Aperture (mm)	Field of View with 10X E.P. (mm)	Working Distance Brightfield Achromatic (mm)
4X	0.1	4.5	27
10X	0.25	1.8	6.6
40X	0.65	0.45	0.57
100x Retractable (Oil)	1.25	0.18	0.19



<b>CP135-M3</b>	Monocular, Education, 3 Achromat objectives	each	\$375
<b>CP135-M4</b>	Monocular, Education, 4 Achromat objectives	each	\$475
<b>CP135-B4</b>	Binocular, Education, 4 Achromat objectives	each	\$620
<b>CP135-T4</b>	Teaching	each	POR

## ➤ Upright Compound Microscope with Dual View Body

### Technical Specifications

- Upright Compound Microscope Body: Dual Optical Body allows two people to observe simultaneously, inclined 45°, able to rotate a full 360° with 55mm to 75mm interpupillary adjustment. Left Eye diopter adjustment of -5 to +5
- Nosepiece: Quadruple ball-bearing nosepiece with positive click stops and smooth operation
- Eyepieces: 10X wide field, Focal Length 25mm, Field F 18mm
- Stage: Size 140mm X 135mm, range of motion 75mm X 50mm Integrated mechanical stage with vernier, Low-position Coaxial Control Knobs Removable spring clip slide holder
- Focus Mechanism: All stainless steel and brass gear train system Adjustable Tension Control to prohibit drift; Adjustable Up- Stop to protect slides, specimen and lenses Coaxial coarse and fine adjustments with dial markings at 0.002mm increments
- Condenser: 1.25 N.A. 2 element Abbe Condenser with iris diaphragm Rack and Pinion focusing
- Illumination: 20 watt, 6-volt Halogen bulb with electronic dimmer 120-volt operation, Fuse: ½ Amp, located in the base
- Finish: Bone colored, baked-on enamel paint with "stipple" finish
- Dimension: (WHD) (in/cm) 7 x 19 x 8.5 / 17.8 x 48.25 x 21.5
- Body Weight: 20 lb. / 9 Kg.
- Microscope Includes: Mold protection throughout the Optical body, Mirror assembly (for use where electricity is not available) dust cover, immersion oil, two color filters, spare halogen lamp and spare fuse.

\*R indicates retractable lens

DIN Standard Objective	Magnification	Numerical Aperture (mm)	Working Distance Brightfield Achromatic (mm)	Field of View with 10X E.P. (mm)
Achromatic	4X	0.1	17	4.5
Achromatic	10X	0.25	8	1.8
Achromatic	40X R*	0.65	0.4	0.45
Achromatic	100x R* (Oil)	1.25	0.25	0.18

### Ordering

<b>CP-300DH</b>	Monocular Bright Field DIN Achromatic	each	\$1,565
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# New Products and Updates

## ➤ Fluorescence Microscope

### Fluorescence Observation Brilliant and Affordable

Incorporating system versatility with outstanding Infinity-corrected optics, the JC Series offers an affordable Fluorescence module to meet this specialized need.

- Filters - two cubes with single band excitors easily slide into place and combine with the HBO illuminator to deliver intense, high contrast images
- Optics - Infinity-corrected planachromat lenses guaranty brilliant, color corrected, high contrast images
- Robust - all metal frame and focus mechanism endure high use while providing a stable platform minimizing vibration
- Mechanical Stage – Unique Locking Stage remains at focus even when pressed, saves time in changing specimens
- Versatile performance - multiple techniques available, including brightfield, polarization, phase contrast with slot built into condenser for slider and dark field

### Key Specifications

- Optical body - Seidentopf design inclined 30°; 48 to 75mm interpupillary adjustment, 360° rotation
- Eye pieces - 10X wide field; High Eyepoint, Field Number 22 mm.
- Turret - 5 position ball bearing, reversed for unrestricted access, with click stops
- Mechanical stage - 6.25"(156mm) X 5.4"(138mm) with vernier scale; Range of motion 76x54mm; right hand coaxial • Focusing - 0.001mm markings, adjustable tension control & focus stop prohibits drift, protects specimen and objectives
- Condenser - 1.25 N.A. 2 element Abbe with iris diaphragm, slot for phase slider, color coding corresponds to objectives
- Kohler Illumination - field diaphragm, 20W, 6V Halogen with dimmer
- HBO Illumination – Mercury vapor high pressure arc-discharge lamp, increases depth dimension by 4 in., 10cm.
- Dimensions - (WHD) (in/cm) 7.7 x 16.5 x 11.0 / 19.5 x 41.8 x 28.0 Gross Weight (lb/kg) 25/11.4
- Microscope Includes: dust cover, two color filters, spare halogen lamp and fuse



Objective Magnification	Numerical Aperture (mm)	Field of View with 10X E.P. (mm)	Working Distance Brightfield / ∞ Planachro (mm)
4X	0.13	5.5	12.3
10X	0.3	2.2	5.03
40XR	0.7	0.55	0.72
100XR	1.25	0.22	0.17

Filter Cube	Excitation Peak Wavelength (nm)	Emission Peak Wavelength (nm)	Dichroic Peak Wavelength (nm)
Blue	460-490	520	500
Green	510-550	590	570
UV (optional)	330-385	420	400
V (optional)	400-410	455	455

### Ordering

JC-2EF	Binocular Fluorescence Microscope	each	\$5,200
JC-3EF	Trinocular Fluorescence Microscope	each	POR
JC-UV	UV Model Microscope	each	POR
JC-V	V Model Microscope	each	POR

➤ **Stereo Microscopes for Education**

- Affordable - Portable
- Durable - Easy to use
- Five Year warranty

Dissection and observation of macro specimens is more enlightening with our Stereo microscope. The large stage allows ample room for sample manipulation but still fits in a storage cabinet. Their illuminated stands let you choose light from three directions - above, below or both, to help observe opaque or transparent samples. Solid, all metal focusing mechanisms will endure student use well beyond the five year warranty.

The ST-800 series two power stereo helps students down the road because they select magnification by turning a knob on the head, replicating a process on more sophisticated zoom models. Teachers like them because the eyepieces are locked and don't walk, the all metal frames are built to last and the low voltage bulbs last for hundreds of hours and are easy to replace. Even models with rechargeable illuminators are available.

The ZM-500 Series allows infinite magnification changes throughout the range, making available a world of discovery for the student.



Model	Illumination	10X Eyepiece		Working Distance
		Mag Range	Field Diameter	
ST-F801	Halogen/Fluorescent	10X / 20X	20.0 / 10.0	110
ST-F802	Halogen/Fluorescent	10X / 30X	20.0 / 6.6	110
ST-F803	Halogen/Fluorescent	10X / 40X	20.0 / 5.0	110
ST-F804	Halogen/Fluorescent	20X / 40X	10.0 / 5.0	110
ZM-F502	Halogen/Fluorescent	7.5X to 35X 4:1 ratio	26 - 5.7	90

**ZM-500 Auxiliary Lens**

Model	4:1 ratio Auxiliary Lens	10X Eyepiece		Working Distance
		Mag Range	Field Diameter	
	1.0X (none)	7.5X to 35X	26 - 5.7	90
SM-0503	1.5X	11.25X to 52X	17 - 3.3	48
SM-0504	2.0X	15X to 70X	13 - 2.9	34

Additional Eye Pieces for the ZM-500, 15X & 20X, are available on request. All models available with non-illuminated post stand

**Ordering**

<b>ST-F801</b>	Binocular Two Power Stereo Microscope	each	\$470	<b>SM-0502</b>	0.5X Auxiliary Lens for ZM-F500	each	\$95
<b>ST-F802</b>	Binocular Two Power Stereo Microscope	each	\$470	<b>SM-0503</b>	1.5X Auxiliary Lens for ZM-F500	each	\$95
<b>ST-F803</b>	Binocular Two Power Stereo Microscope	each	\$470	<b>SM-0504</b>	2.0X Auxiliary Lens for ZM-F500	each	\$100
<b>ST-F804</b>	Binocular Two Power Stereo Microscope	each	\$470	<b>SEP-10X</b>	10X Wide Field Eyepiece for ZM-F500	each	\$35
<b>ZM-F502</b>	Binocular Stereo Zoom Microscope	each	\$650	<b>SEP-15X</b>	15X Wide Field Eyepiece for ZM-F500	each	\$35
<b>ZM-F503</b>	Trinocular Stereo Zoom Microscope	each	\$795	<b>SEP-20X</b>	20X Wide Field Eyepiece for ZM-F500	each	\$35

# New Products and Updates

## ► Stereo Microscopes

Superb Depth of Field and Contrast

### Benefits of all three GL Series Stereo Zoom Optical Bodies:

- **Save time** - no need to refocus when zooming magnification, the GL Series is parfocal and its continuous zoom is available with detentes at 0.5X increments for precise measurements
- **Accommodate all users** - wide interpupillary adjustment (45 - 75mm) and diopters built in to the eyepieces allow virtually all individuals to work in comfort
- **Minimize fatigue** - side mounted zoom controls and low positioned focus control with tension adjustment reduce stress and let the user rest in a natural position
- **Save Money for years to come** - high contrast, flat images are now cost effective and EMS's 5 year limited warranty protects your investment

The remarkably clear, non-distorted 3D image resolved by the GL Series optics is a result of advanced technologies in optical design. The GL Series Greenough design produces lifelike images in a large field of view and presents upright or erect images with astounding depth perception. A long (100mm) working distance facilitates observation.

### Choose from 3 Zoom Ranges

	GL6 Series	GL7 Series	GL9 Series
<b>Zoom Ratio</b>	6.5:1	7:1	9:1
<b>Zoom Range</b>	1.0X - 6.5X	0.65X - 4.5X	0.65X - 6.0X

## ► Illuminated Stand Stereo Microscope

Pictured here, the Illuminated stand allows observation of both opaque and transparent specimens because of individual controls for reflected and transmitted light. While reflected or incident light is a 15W Halogen with electronic dimmer, the transmitted light can be either a 15W Halogen with dimmer or a "cool" 5W fluorescent bulb for heat sensitive samples. individual lighting controls provide ideal conditions for photographing images in a fully illuminated field.

All models include: a pair of 10X eye pieces, black/white reversible stage plate, dust cover, power cord and instruction manual.

Model Number		Illumination	Zoom Ratio	Magnification Range with 10X Eyepiece
Binocular	Trinocular			
GL6-280		Dual Halogen	6.5:1	10X - 65X
GL6-290		Halogen Fluorescent		
	GL6-380	Dual Halogen	7:1	6.5X - 45X
GL7-280		Dual Halogen		
GL7-290		Halogen Fluorescent		
	GL7-380	Dual Halogen	9:1	6.5X - 60X
GL9-280		Dual Halogen		
GL9-290		Halogen Fluorescent		
	GL9-380	Dual Halogen		



GL7-205 Post Stand has a slim, 1.25" / 35 mm, streamlined base for easy manipulation of large specimens  
 WHD (in/cm) 12 x 12 x 11 / 30 x 30 x 27



GL7-206 Standard Boom extends over a work area to aid in assembly/analysis. WHD (in/cm) 10 x 19 x 18 / 25 x 49 x 45



GL7-206 Standard Boom extends over a work area to aid in assembly or analysis. WHD (in/cm) 10 x 19 x 18 / 25 x 49 x 45



GL9-208 Articulating Arm is spring balanced to articulate along XYZ axis. WHD (in/cm) 13 x 16 x 33 / 33 x 41 x 84

## ► EMS Non-illuminated Stands

### Versatility is a real advantage of EMS's GL Series

With over thirty (30) combinations of stands and optical bodies from which to choose, the GL Series has a model to satisfy your application. Which one is right for you?

**GL9 Optical Body** - boasting the extremely broad magnification range (highest zoom ratio in the series (9:1, 0.65X to 6.0X) at the lowest price, this head is hard to overlook. The newest model in our line features a compact design with high resolving capability, even at low powers.

**GL7 Optical Body** - brilliance, clarity, parfocality, flatness and depth of field characterize this hard working model. Its wide magnification range, (7:1 or 0.65X to 4.5X) zooms in on your specimen without distortion, delivering a resolved image true to character. The detents at 0.5X allow exactly repeatable magnifications for documentation.

**GL6 Optical Body** - designed for those demanding applications where you are challenged with new and different specimens requiring absolute clarity at all powers, this model achieves high magnification (1.0X to 6.5X, 6:1 ratio) at a low price. Going beyond the standard for this class of microscope, total magnification ranges from 0.5X to 260X with optional auxiliary lenses and eyepieces.

	Post Stand	StandardBoom	SmoothBoom	Articulating Arm Boom	Zoom Ratio
<b>Binocular / Trinocular</b>	GL6-205/ GL6-305	GL6-206/ GL6-306	GL6-207/ GL6-307	GL6-208/ GL6-308	6.5:1
<b>Binocular / Trinocular</b>	GL7-205/ GL7-305	GL7-206/ GL7-306	GL7-207/ GL7-307	GL7-208/ GL7-308	7:1
<b>Binocular / Trinocular</b>	GL9-205/ GL9-305	GL9-206/ GL9-306	GL9-207/ GL9-307	GL9-208/ GL9-308	9:1

The Post and Boom stands are heavy duty and designed to provide ample support for many years. Allowing freedom of movement in multiple directions over the work area to facilitate inspection of large samples, their rugged structure minimizes vibration and tipping, even on a Trinocular head with camera attached.

GL Series optical bodies and stands master Industrial environments

# New Products and Updates

Superb resolution meets demands in semi-conductor/high tech industries, medical device assembly and life science research.

- Comfort First Design - long duration tasks are less fatiguing with accessible controls
- Large Field of view - the GL7 boasts a 35mm object field size
- Bonders & Probers - compact design/long working distance facilitate machine mounts
- Large Zoom Range - accurate reproduction of the sample up to 260X
- Wide range of imaging functions - fully integrated camera/software systems

## Optical Specifications

Boom Stands, available in three styles (pictured on previous page) feature heavy bases for stability and tilting/swiveling mounts to facilitate observation of even hard to get to areas, but differ as follows:

Standard Boom is economical and well-matched to applications where continuous horizontal movement is not required. Used in medical device assembly where work stations and repetitive actions are common

Smooth Boom got its name from the smooth gliding motion produced by the ball bearings in the horizontal movement. Ideal for scanning large parts, like a circuit board, simply with the touch of a hand

Articulating Arm Boom features a counter balanced arm that moves vertically as well as horizontally, making it ideal for tight spaces

## Specifications

### GL6 Series 6.5 :1 ratio

Auxiliary Lens	10X Eye Piece, Field No. 22		15X Eye Piece, Field No. 16		20X Eye Piece, Field No. 13		Working Distance (mm)
	Magnification	Field dia. (mm)	Magnification	Field dia. (mm)	Magnification	Field dia. (mm)	
0.5X	0.5X-32.5X	44.0 -6.7	7.5X -48.8X	21.3 -3.2	10X -65X	13 -2.0	220
0.75X	0.7X -48.8X	31.42 -4.5	11.2X-73.1X	14.2 -2.1	15X 97.5X	8.7 -1.3	120
1X (none)	10.0X -65X	22.0 -3.3	15X -97.5X	10.6 -1.6	20X -130X	6.5 -1.0	90
1.5X	1.5X -97.5X	14.6 -2.2	22.5X-146.2X	7.1 -1.1	30X -195X	4.3 -0.7	43
2X	2X -130X	11.0 -1.6	30X -195X	5.3 -0.8	40X -260X	3.2 -0.5	30

### GL7 Series 7 :1 ratio

Auxiliary Lens	10X Eye Piece, Field No. 22		15X Eye Piece, Field No. 16		20X Eye Piece, Field No. 13		Working Distance (mm)
	Magnification	Field dia. (mm)	Magnification	Field dia. (mm)	Magnification	Field dia. (mm)	
0.5X	3.3X -22.5X	67.7 -9.8	4.9X -33.8X	49.2 7.0	6.5X -45X	40 -5.8	163
0.75X	4.9X -33.8X	45.1 -6.5	7.3X -50.6X	32.8 -4.7	9.75X -67.5X	26.6 -3.8	117
1X (none)	6.5X -45X	33.8 -4.9	9.8X -67.5X	24.6 -3.5	13X -90X	20 -2.9	100
1.5X	9.8X -67.5X	14.6 -3	14.6X -101.3X	16.4- 2.3	19.5X -135X	13.3 -1.9	45
2X	13X -90X	19.5 -2.5	19.5X 135X	12.3 -1.8	26X -180X	13.3 -1.9	40

### GL9 Series 9 :1 ratio

Auxiliary Lens	10X Eye Piece, Field No. 22		15X Eye Piece, Field No. 16		20X Eye Piece, Field No. 13		Working Distance (mm)
	Magnification	Field dia. (mm)	Magnification	Field dia. (mm)	Magnification	Field dia. (mm)	
0.5X	3.25X - 30X	70.76 - 7.66	4.87X - 45X	46.15 - 5.0	6.5X - 60X	36.92 - 4.0	156
1X (none)	6.5X - 60X	35.38 - 3.83	9.75X - 90X	23.07 - 2.5	13X - 120X	18.46 - 2.0	100
1.5X	9.75X - 90X	23.58 - 2.55	14.62X - 135X	5.38 - 1.66	9.5X - 180X	2.3 - 1.33	50
2X	13X - 120X	7.69 - 1.91	9.5X - 180X	11.52 - 1.25	26X - 240X	9.23 - 1.0	36

**Ordering Information****Illuminated Stand, Two Power and Zoom Magnification**

<b>GL6-2L</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X, LED	each	\$1,400
<b>GL6-280</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X, Dual Halogen	each	\$1,400
<b>GL6-290</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X, Fluorescent/Halogen	each	\$1,400
<b>GL6-3L</b>	Trinocular, 6.5:1 Zoom Ratio 10X to 65X, LED	each	\$1,600
<b>GL6-380</b>	Trinocular, 6.5:1 Zoom Ratio 10X to 65X, Dual Halogen	each	\$1,600
<b>GL6-390</b>	Trinocular, 6.5:1 Zoom Ratio 10X to 65X, Fluorescent/Halogen	each	\$1,600
<b>GL7-2L</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X, LED	each	\$1,260
<b>GL7-280</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X, Dual Halogen	each	\$1,260
<b>GL7-290</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X, Fluorescent/Halogen	each	\$1,260
<b>GL7-3L</b>	Trinocular, 7:1 Zoom Ratio 6.5X to 45X, LED	each	\$1,470
<b>GL7-380</b>	Trinocular, 7:1 Zoom Ratio 6.5X to 45X, Dual Halogen	each	\$1,470
<b>GL7-390</b>	Trinocular, 7:1 Zoom Ratio 6.5X to 45X, Fluorescent/Halogen	each	\$1,470

**Non Illuminated Post Stand**

<b>GL6-205</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X	each	\$1,240
<b>GL6-305</b>	Trinocular 6.5:1 Zoom Ratio 10X to 65X	each	\$1,450
<b>GL7-205</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X	each	\$1,110
<b>GL7-305</b>	Trinocular 7:1 Zoom Ratio 6.5X to 45X	each	\$1,320

Note: Post Stands available with Reflected light only and Darkfield lighting

**Non Illuminated Boom Stand**

<b>GL6-206</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X	each	\$1,540
<b>GL6-306</b>	Trinocular 6.5:1 Zoom Ratio 10X to 65X	each	\$1,750
<b>GL7-206</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X	each	\$1,395
<b>GL7-306</b>	Trinocular 7:1 Zoom Ratio 6.5X to 45X	each	\$1,595
<b>GL6-207</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X, smooth ball bearing construction	each	\$1,820
<b>GL6-307</b>	Trinocular 6.5:1 Zoom Ratio 10X to 65X, smooth ball bearing construction	each	\$2,020
<b>GL7-207</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X, smooth ball bearing construction	each	\$1,650

<b>GL7-307</b>	Trinocular 7:1 Zoom Ratio 6.5X to 45X, smooth ball bearing construction	each	\$1,850
<b>GL6-208</b>	Binocular, 6.5:1 Zoom Ratio 10X to 65X, articulating boom	each	\$1,750
<b>GL6-308</b>	Trinocular 6.5:1 Zoom Ratio 10X to 65X, articulating boom	each	\$1,950
<b>GL7-208</b>	Binocular, 7:1 Zoom Ratio 6.5X to 45X, articulating boom	each	\$1,595
<b>GL7-308</b>	Trinocular 7:1 Zoom Ratio 6.5X to 45X, articulating boom	each	\$1,795

**Accessories for GL Stereo Microscopes**

<b>GL-5X</b>	0.5X Auxiliary Lens for GL Series	each	\$125
<b>GL-15X</b>	1.5X Auxiliary Lens for GL Series	each	\$135
<b>GL-2X</b>	2.0X Auxiliary Lens for GL Series	each	\$135
<b>SM-0319</b>	Polarization kit for GL7 Stereo	each	\$215
<b>GL-E10</b>	10X Wide Field Eye Piece for GL Series	each	\$45
<b>GL-E15</b>	15X Wide Field Eye Piece for GL Series	each	\$45
<b>GL-E20</b>	20X Wide Field Eye Piece for GL Series	each	\$45

**➤ Camera Systems**

EMS offers three types of camera systems for documenting resolved microscopic images.

Each system is fully integrated with: software for image analysis optical adapters to obtain the image in the correct focal plane cables for connection to computers, monitors or projectors

All components are conveniently packaged under one part number for easy ordering

<b>59-SC8</b>	Digital Still Camera, 8 MP with memory card, USB cable, optical adapter, batteries	each	\$995
<b>59-2M</b>	Digital Video Color Camera, 1/2" CMOS, USB 2.0, 3 M Pixel resolution with advanced software for measurement, optical adapter and cable included	each	\$795
<b>59-3ML</b>	Digital Video Color Camera, 1/2" CMOS, USB 2.0, 3 M Pixel resolution with advanced software for measurement, optical adapter and cable included	each	\$895
<b>59-5ML</b>	Digital Video Color Camera, 1/2" CMOS, USB 2.0, 5 M Pixel resolution with advanced software for measurement, optical adapter and cable included	each	\$2,595

Note: CCD cameras and cooled CCD cameras for fluorescence available upon request.

# New Products and Updates

## ➤ EMS-Shield With Anti Fading

### ➤ Fluoro Gel with DABCO™

Fluoro Gel with antifading agent 1, 4-Diazobicyclo-(2,2,2-octane (DABCO™) is an aqueous mounting medium for preserving fluorescence of tissue and cell smears. This unique formula prevents rapid photobleaching of FITC, Texas Red, AMCA, Alexa fluoro 488, Alexa fluoro 594, Cy dyes, tetramethyl rhodamine, and Redox. The fluorescence is retained during prolonged storage at 4°C in the dark.

Application: Immunofluorescence, confocal microscopy.

Reagent: Ready to use mounting medium with anti-fading agent

Storage: 2-8°C is recommended

<b>17985-01</b>	Fluoro Gel with DABCO™	20 ml	50.00
<b>17985-02</b>	Fluoro Gel with DABCO™	100 ml	150.00
<b>17985-03</b>	Fluoro Gel with DABCO™	250 ml	300.00
<b>17985-04</b>	Fluoro Gel with DABCO™	1000 ml	800.00

### ➤ EMS-Mount

EMS-Mount is a non-permanent, low viscosity an aqueous mounting medium designed for mounting of tissue sections and cell smears with peroxidase and alkaline phosphatase chromogens that cannot be dehydrated with organic solvents. This mounting medium preserves Fast red, Aminoethylcarbazole (AEC), BCIP/NBT, BCIP/INT chromogens and is also compatible with counterstain like Hematoxylin and Nuclear fast red (NFR). It is also suitable for chromogens like DAB and DAB with nickel and cobalt. (It is not compatible with H and E staining).

Application: Mounting of chromogens that cannot be dehydrated with organic solvents.

Reagent: Ready to use mounting medium

Storage: 2-8°C is recommended

<b>17985-05</b>	MS-Mount	30 ml	50.00
<b>17985-06</b>	MS-Mount	100 ml	100.00
<b>17985-07</b>	MS-Mount	250 ml	200.00
<b>17985-08</b>	MS-Mount	1000 ml	400.00

## ➤ EMS Shield Mount

EMS Shield Mount is an aqueous non-permanent, low viscosity mounting medium for immunofluorescence. This unique formula prevents rapid photobleaching of FITC, Texas Red, AMCA, Cy2, Cy3, Cy5, Alexa fluoro 488, Alexa fluoro 594, Green fluorescent protein (GFP), tetramethyl rhodamine and Redox. The fluorescence is retained during storage at 4°C in the dark. This medium does not contain phenylenediamine, which destroys immunofluorescence of Cy dyes.

Application: Immunofluorescence, confocal microscopy.

Reagent: Ready to use mounting medium for Immunofluorescence.

Storage: 2-8°C is recommended

<b>17985-09</b>	EMS Shield Mount	30 ml	50.00
<b>17985-100</b>	EMS Shield Mount	100 ml	120.00

## ➤ EMS Shield Mount with Anti Fading

EMS Shield Mount with antifading agent 1, 4-Diazobicyclo-(2,2,2-octane (DABCO™) is an aqueous non-permanent, low viscosity mounting medium for immunofluorescence. This unique formula prevents rapid photobleaching of FITC, Texas Red, AMCA, Cy2, Cy3, Cy5, Alexa fluoro 488, Alexa fluoro 594, Green fluorescent protein (GFP), tetramethyl rhodamine and Redox. The fluorescence is retained during storage at 4°C in the dark. This medium does not contain phenylenediamine, which destroys immunofluorescence of Cy dyes.

Application: Immunofluorescence, confocal microscopy.

Reagent: Ready to use mounting medium for Immunofluorescence.

Storage: 2-8°C is recommended

<b>17985-150</b>	EMS Shield Mount	30 ml	50.00
<b>17985-200</b>	EMS Shield Mount	100 ml	120.00

## ➤ DAPI-Fluoromont G™

DAPI-Fluoromont™ G is a water-soluble, instant blue nuclear probe fluorescing (455nm) compound for mounting fixed slides using a staining procedure having an aqueous final step. Mounting slides with DAPI Fluoromont™ G stains the cell nucleus and may reduce fluorochrome quenching during analysis of slides by fluorescence microscopy. this mounting medium also provides a semi permanent seal for long term storage of slide preparations.

<b>17984-24</b>	DAPI-Fluoromont G™	20 ml	50.00
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➤ **EMS-Hitachi SEM Mount Storage Box**

EMS introduces a unique box for Hitachi SEM mounts with M4 threaded hole in the base. The box is numbered 1 – 10 to accommodate Hitachi mounts from 15 to 32mm diameter. The box can hold the following:



- 10 x 15mm mounts
- 8 x 25mm mounts
- 2 x 32mm mounts

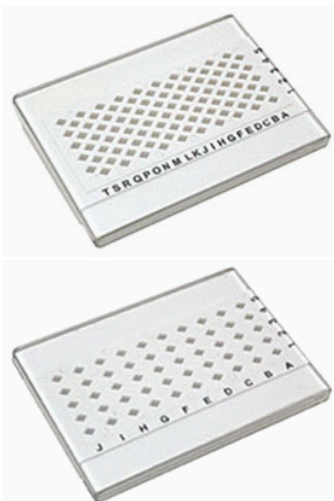
76503	EMS-Hitachi SEM Mount Box	each	10.00
76504	EMS-Hitachi SEM Mount Box	10/pk	95.00

➤ **SEM Paper Storage Box for Pin Mounts**

An inexpensive solution for storing Pin Mounts

With a Pop Up box which stores up to 8 mounts: 1/2" (12.7mm) head, 1/8" (3.2mm) diameter pin.

Box Dimensions: 7cm long x 3.8cm wide x 3.5cm high (2-3/4 x 1-1/2 x 1-3/8")



76505	SEM Paper Storage Box	50/Pack	39.00
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➤ **Inexpensive Grid Storage Boxes**

THE EMS 50 and EMS100 Capacity Inexpensive Grid Storage Boxes

The EMS50 and EMS100 TEM Grid Storage Boxes are used for the storage of TEM grids for routine grid handling, transport and long term TEM grid storage for standard grids that are 3.05mm in diameter.



The box has a simple number/letter combination printed on the side of the body. Dimensions for both boxes are: 75 x 55 x 6.5mm. Anti Static treated.

71146-01	EMS 50 Grid Box	Each	6.75
71146-02	EMS 100 Grid Box	Each	7.00

**EMS Conductive GOLD Paste**

➤ **EMS Conductive Epoxy Gold- Paste**

This EMS one part Epoxy Gold Paste is a gold-filled conductive bonding, exhibiting high electrical conductivity and bond strength. This Gold Paste is used in preference to silver-epoxy or other silver preparations to avoid silver migration problems, or when a higher signal is required.

This Gold Paste is well suited to all SEM work, and it bonds well to alumina ceramic substrate, phenolic circuit boards, and transistor headers. It is also useful in a variety of applications in solid state and hybrid circuits including attachment, bonding semiconductor devices, heat sinks, capacitor chips.

**Properties of Epoxy Gold-Paste:**

Composition:	88% Gold
System:	One-part epoxy
Viscosity:	175,000 cps
Pot Life (25°C):	6 months
Cure:	15 hrs. @150°C, or 1 hr. @ 150°C plus 2 hrs. @200°C
Elec. Resist (Ohm-cm):	4 x 104
Bond Shear Strength:	1000 psi
Outgasing (postcure):	0.70% 1000 hrs @125°C
Thinner:	Butyl carbitol acetate or butyl cellosolve acetate
Serv. Temp. Range:	-65°C to +200°C

12640	Gold Epoxy Paste	2 g	\$160.00
12685-25	Gold Thinner( Butyl Carbitol Acetate)	25 ml	\$9.00

➤ **EMS Conductive Gold-Paste**

This EMS Conductive Gold-Paste is a one part adhesive. Fast drying – dries at room temperature. Maximum service temperature is 65°C. This adhesive is not for permanent use, useful for testing and temporary work where a high signal is required from the adhesive. Gold content is ~75%, including sphere sizes < 2 µm, and flake size <10 µm, in organic binders and a solvent. Keep refrigerated for good shelf life.

Sheet resistance is 0.02 to 0.05 ohm-cm @ 1 mil thickness.

12642	EMS Conductive Gold-Paste	2 gm	\$157.00
12643	Conductive Gold-Paste Extender	25ml	\$6.00

# New Products and Updates

## ➤ Anapore and Polycarbonate Membranes

- Easy cultivation of most cell types without matrix coating
- Treated for cell culture
- Inserts with 0.02 µm Anapore™
- membrane have maximum clarity for microscopy, and are non-auto-fluorescent and highly porous
- Polycarbonate membranes in larger pore sizes are adaptable to many uses in cell culture, including transport studies, toxicity tests, chemotaxis studies and electron microscopy
- Both membrane types are trans-parent when wet and suitable for phase contrast and Nomarski Optic Systems



### Polycarbonate membrane inserts pre-packed in multidishes

- For multidishes 6, 12, 24
- Treated and tested for cell attachment
- Easy cultivation of most cell types without matrix coating
- Used in a variety of applications, including transport studies, toxicity tests, chemotaxis studies and electron microscopy
- Non-toxic
- Packed in sterile Nunclon™Δ treated multidishes
- Packed in resealable bags
- Non-pyrogenic
- Tabs for better grip/handling



Anapore™ is a trademark of Whatman Scientific Ltd.

### Details

Nunc CC Inserts - Polycarbonate membranes  
Sterile. Pre-packed in multidishes.

Cat. No.	72296-16	72296-17	72296-18	72296-19	72296-20	72296-21
<b>Pore size, µm</b>	0.4	3	8	0.4	3	8
<b>For use with Nunc product</b>	Multidish 24	Multidish 24	Multidish 24	Multidish 12	Multidish 12	Multidish 12
<b>Pore density, pores/cm<sup>2</sup></b>	<0.85 X 10 <sup>8</sup>	<1.7 X 10 <sup>6</sup>	<0.85 X 10 <sup>5</sup>	<0.85 X 10 <sup>8</sup>	<1.7 X 10 <sup>6</sup>	<0.85 X 10 <sup>5</sup>
<b>Porosity %</b>	<6.8%	<7.7%	<2.7%	<6.8%	<7.7%	<2.7%
<b>Culture area, cm<sup>2</sup></b>	0.47	0.47	0.47	1.13	1.13	1.13
<b>Suggested working volume, ml</b>	0.5	0.5	0.5	1.1	1.1	1.1
<b>Units per pack/ case</b>	12/48	12/48	12/48	12/48	12/48	12/48
<b>Price per Case</b>	246.00	246.00	246.00	260.00	260.00	260.00

All Nunc CC Inserts: Suggested working volume, ml =  
In addition to normal well working volume.