The right light

LUXO

Luxo Microscope Product Lines

THE MARKET LEADER IN MAGNIFICATION FOR OVER 70 YEARS



SYSTEM 250 BINOCULAR MICROSCOPES

Luxo's microscope product line is designed with today's high-tech manufacturing environment in mind. The breadth of the product line meets numerous application requirements from inspection to assembly to rework. Inspection operators will appreciate the magnification range and ergonomic features of the microscope systems, while assembly and rework technicians will enjoy the greater working distances and versatility of the digital imaging systems.

All Luxo microscope models feature high quality achromatic lenses with anti-reflective coatings for superior visual clarity. Optional eyepieces and accessory objective lenses can be added to microscopes to provide a wider range of magnification powers. A choice of lighting sources and mounting options enable the product set-up best suited for each individual application. Digital imaging systems are configurable to allow capturing of images to catalog or share inspection results and observations, for archiving or communicating electronically. The end result is increased productivity with an easy-to-use product line.



18711RB



18712

18711RB, System 250RB-RLI: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and Fiber Optic Illuminator with Ring Light.
18711, System 250-RLI: Same as 18711RB except with a Single Boom Stand.

18712RB, System 250RB-FL: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and Fluorescent Ring Light.
18712, System 250-FL: Includes a Binocular S-Z Microscope, Single Boom Stand and Fluorescent Ring Light.

18726RB, System 250RB-LED: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and LED Ring Light.
18726, System 250-LED: Same as 18726RB except with a Single Boom Stand.

Optics Data for all System 250 & 350 Models with WF10X Eyepieces, Zoom Setting 0.65 - 4.5

Accessory Lens	None	0.4X	0.5X	0.75X
Magnification (Range)	6.5 - 45X	2.6 - 18X	3.3 - 22.5X	4.9 - 33.8X
Field of View Diameter (mm)	31 - 4.5	78 - 11	61.5 - 8.9	41 - 5.9
Working Distance (mm)	95	220	150	120

System 273 Microscopes feature a 23mm optics system, greater working distance, larger field of view, and higher magnification than comparable System 250 and 350 models.



23712



23712RB

23711RB, System 273RB-RLI: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and Fiber Optic Illuminator with Ring Light.
23711, System 273-RLI: Same as 23711RB except with a Single Boom Stand.

23712RB, System 273RB-FL: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and Fluorescent Ring Light.
23712, System 273FL: Same as 23712RB except with a Single Boom Stand.

23713RB, System 273RB-DGI: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand with Fiber Optic Illuminator and Dual Gooseneck.
23713, System 273-DGI: Same as 23713RB except with a Single Boom Stand.

23714RB, System 273RB: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand. Lighting sold separately.
23714, System 273: Same as 23714RB except with a Single Boom Stand.

23726RB, System 273RB-LED: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and LED Ring Light.
23726, System 273-LED: Same as 23726RB except with a Single Boom Stand.

23727RB, System 273RB-DMLED: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and Dimmable LED Ring Light.
23727, System 273-DMLED: Same as 23727RB except with a Single Boom Stand.

23728RB, System 273RB-DMLED-HO: Includes a Binocular S-Z Microscope, Dual Boom Ball-Bearing Stand and Dimmable LED-High Output Ring Light.
23728, System 273-DMLED-HO: Same as 23728RB except with a Single Boom Stand.



23711RB



23714RB

SYSTEM 273 ESD-SAFE BINOCULAR MICROSCOPES

System 273 ESD-Safe Microscopes are designed for inspection and assembly applications in static-sensitive environments. The body and stand are powder-coated with a metal-laced paint that measures 10^5 Ω/sq. (static dissipative).



23714-ESD



23726-ESD

23712RB-ESD, System 273RB-FL-ESD: Includes a Binocular ESD-Safe S-Z Microscope, Dual Boom Ball-Bearing Stand and Fluorescent Ring Light.
23712-ESD, System 273-FL-ESD: Same as 23712RB-ESD except with a Single Boom Stand.

23714RB-ESD, System 273RB-ESD: Includes a Binocular ESD-Safe S-Z Microscope, Dual Boom Ball-Bearing Stand. Lighting sold separately.
23714-ESD, System 273-ESD: Same as 23714RB-ESD except with a Single Boom Stand.

23726RB-ESD, System 273RB-LED-ESD: Includes a Binocular ESD-Safe S-Z Microscope, Dual Boom Ball-Bearing Stand and LED Ring Light.
23726-ESD, System 273-LED-ESD: Same as 23726RB-ESD except with a Single Boom Stand.



23726RB-ESD



23714RB-ESD



18718RB-LCD



18719RB-USBSR

18718RB-LCD, System 350RB-FLXLCD: Includes a Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Fluorescent Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and 15" Flat Panel LCD Color Monitor.

18719RB-LCD, System 350RB-RLIXLCD: Includes a Trinocular S-Z microscope, Dual Boom Ball-Bearing Stand, Fiber Optic Illuminator with Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and a 15" Flat Panel LCD Color Monitor.

18719RB-USBSR, System 350RB-RLIXUSBSR: Includes a Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Fiber Optic Illuminator with Ring Light, Video Adapter with 0.5X Lens and USB 2.0 STD Camera.
18719-USBSR, System 350-RLIXUSBSR: Same as 18719RB-USBSR except with a Single Boom Stand.

System 350 Optics Data with 15" LCD Monitor

Accessory Lens	None	0.4X	0.5X	0.75X	2.0X
Magnification with zoom setting at 0.65	18X	7X	9X	14X	36X
Magnification with zoom setting at 4.5	126X	50X	63X	95X	252X

Optional Eyepieces and Objective Lenses for System 250 and 350 Microscopes

P/N	Description
18736	0.75X Reducing Lens
18749	0.4X Reducing Lens
18750	0.5X Reducing Lens
18760	Eyepiece/15X Pair
18762	Eyepiece/20X Pair
18763	Eyepiece/25X Pair

System 373 Microscopes feature a 23mm optics system, greater working distance, larger field of view, and higher magnification than comparable System 350 models.



23719RB-LCD



23719RB-USBSR

23718RB-LCD, System 373RB-FLXLCD: Includes Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, FL-Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and 15" Flat Panel LCD Color Monitor.
23718-LCD, System 373-FLXLCD: Same as 23718RB-LCD except with a Single Boom Stand.

23719RB-LCD, System 373RB-RLIXLCD: Includes a Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Fiber Optic Illuminator with Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and 15" Flat Panel LCD Color Monitor.
23719-LCD, System 373-RLIXLCD: Same as 23719RB-LCD except with a Single Boom Stand.

23719RB-USBSR, System 373RB-RLIXUSBSR: Includes a Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Fiber Optic Illuminator with Ring Light, Video Adapter with 0.5X Lens and USB 2.0 STD Camera.
23719-USBSR, System 373-RLIXUSBSR: Same as 23719RB-USBSR except with a Single Boom Stand.

23723RB-LCD: System 373RB-DMLEDLCD: Includes a Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Dimmable LED Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and 15" Flat Panel LCD Monitor.

23723RB-USBSR, System 373RB-DMLEDUSBSR: Includes a Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Dimmable LED Ring Light, Video Adapter with 0.5X Lens and USB 2.0 STD Camera.

Luxo TRU Trinocular Microscopes feature a 23mm optics system, greater working distance, larger field of view, and higher magnification than comparable System 350 models while allowing the user to simultaneously view images on screen and through the eyepieces.



23719RB-LCDTRT



23719RB-USBSRTRT

23719RB-LCDTRT, System 373RB-RLIXLCDTRT: Includes a TRU Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Fiber Optic Illuminator with Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and 15" Flat Panel LCD Color Monitor.

23719RB-USBSRTRT, System 373TB-RLIXUSBSRTRT: Includes a TRU Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Fiber Optic Illuminator with Ring Light, Video Adapter with 0.5X Lens and USB 2.0 STD Camera.

23725RB-LCDTRT, System 373RB-DMLED-HOLCDTRT: Includes a TRU Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Dimmable LED-High Output Ring Light, 1/2" CCD Camera, Video Adapter with 0.5X Lens and 15" Flat Panel LCD Color Monitor.

23725RB-USBSRTRT, System 373RB-DMLED-HOUSBSRTRT: Includes a TRU Trinocular S-Z Microscope, Dual Boom Ball-Bearing Stand, Dimmable LED-High Output Ring Light, Video Adapter with 0.5X Lens and USB 2.0 STD Camera.

SYSTEM 273 AND 373 MICROSCOPE BODIES, EYEPIECES AND ACCESSORY LENSES

Optional Eyepieces and Objective Lenses

Choose from an assortment of super widefield eyepieces to meet specific magnification needs. In addition to 10X eyepieces, standard with any microscope body or microscope system – System 273 or 373 models – optional widefield eyepieces are also available in pairs of 15X, 20X and 30X. For a complete listing of all eyepiece and objective lens combinations, including total magnification power, field of view and working distances, refer to the Microscope Optics table on the back page.

P/N	Description
23750	0.5X Reducing Lens 23mm
23736	0.7X Reducing Lens 23mm
23766	1.0X Cover Shield 23mm
23754	2.0 Amplifying Lens 23mm
23758	Eyepiece/ 10X Pair 23mm
23760	Eyepiece/ 15X Pair 23mm
23762	Eyepiece/ 20X Pair 23mm
23763	Eyepiece/ 30X Pair 23mm



Widefield Eyepieces



Accessory Lens

Microscope Bodies

All Luxo microscope bodies have heavy-duty aluminum housings and come with 10X, 23mm super widefield eyepieces and eyeshields. The microscopes rotate 360° in the focus mount. Stereo-Zoom (S-Z) models are available in Binocular and Trinocular versions with the zoom range being .7 – 4.5 giving magnification of 7X – 45X. The zoom ratio is 7:1 and the zoom is adjusted via dual graduated control knobs. 23mm models offer 25% greater magnification and 20% greater working distance.



23700

SYSTEM 273 AND 373 MOUNTING OPTIONS



23730RB, this Dual Boom Ball-Bearing Stand features a 26" stainless steel horizontal boom extension (limited to 24" when used with a System 373 model) and a 17 1/2" vertical boom mounted to a 10" x 10" die-cast base. Ball-bearing design allows fluid horizontal extension of the boomstand. The focus mount angles to 45° to permit additional viewing and inspection perspectives.



23730, this Boom Stand features a 10" x 10" base weighing 22 1/2 pounds with built-in contoured grips to make moving it easier. Its vertical column is 17 1/2" and the horizontal arm extends a total of 26". The final 2 1/2" inches of horizontal extension is accomplished via control knobs at the end nearest the focus mount. The knobs move a metal bar on a rack-and-pinion track connected to the drop post/focus mount to provide this extension. A setscrew extends through the bottom of the block into a groove on the horizontal arm to keep the microscope from accidentally rolling over, even when the retaining knob remains loose. The focus mount angles to 45° to permit additional viewing and inspection perspectives.



23731RB, this model has the same features as the 23730RB Dual Boom Ball-Bearing Stand except it comes with a heavy-duty clamp mount instead of a base. 26" stainless steel horizontal and 17 1/2" vertical boom extensions. Clamp opens to 4" wide to attach to workstations or bench edges.



23731, this model has all the same features as the 23730 Boom Stand except it comes with a heavy-duty clamp mount instead of a base. Clamp opens up to 4" wide to attach to workstations or bench edges.



23732, the Articulating Arm Stand has a heavy-duty mount that opens up to 4" wide to mount to workstations or bench edges. The horizontal reach is over 36" when fully extended (measured from vertical post to the middle of microscope body) and its maximum clearance is 14" above the worksurface. This is one stand that truly frees valuable bench space and still gets the microscope out where it's needed for assembly and rework.



23733, an illuminated stand used for viewing small objects. Two independently controlled light sources. A dimmable 10-watt halogen light is focused on the subject and a 5-watt compact fluorescent lamp provides back lighting from underneath through a translucent medium. Base of stand is 11 1/2" wide by 11 1/2" deep, the vertical post is 11" high (measured from surface to top of vertical post).



23734, a stand for viewing small objects when an independent light source (not included) is used. Base of stand is 6 1/2" wide by 9 1/2" deep. Overall height is 11" measured to the top of the vertical post. Base of stand is 11 1/4" wide by 11 1/2" deep. Overall height is 11" high measured to the top of the vertical post.

LIGHTING/DIGITAL OPTIONS FOR ALL LUXO MICROSCOPES



18742, Fluorescent Ring Light provides full illumination with a powerful 17-watt, 5600° Kelvin lamp. A durable powder-coated, metal housing protects the fluorescent lamp, and has a rated lamp-life of 4,500 hours. Plug-in ballast (polarized plug) included.



18744, LED Ring Light maximizes light output and distribution while preventing harmful glare and reflections. Its modular construction and brilliant 40 LED display makes this ring light ideal for the inspection of surface cracks and defects. Pure-white LED lights have a 50,000 hour lumen maintenance (lamp life). 6000°K color temperature is perfect for lead free inspection and a removable/replaceable diffuser allows for easy cleaning.



LFOD150, Fiber Optic Illuminator features a dimmable 150-watt halogen light source which produces up to 6450 footcandles at 4.5" working distance. A dimmer switch enables an operator to select the exact amount of light desired. Even for sensitive jobs, such as wire bonding or soldering of fine-pitch components, it delivers plenty of light. The LFOD150 can be placed on the worksurface in its conventional position, facing the operator, or, since there are "rubber feet" on its back, placed in a vertical position to occupy an even smaller footprint. A choice of light transmitters can be found below.



LFORL-CR, Fiber Optic Ring Light, with its continuous ring, is the most popular light transmitter. The ring light housing encases high-quality glass fibers to provide 360° shadow-free uniform illumination that makes viewing of inspection and assembly applications a snap. Its 36" length cable, made with interlocking stainless steel sheathing, enables the illuminator to be positioned outside the immediate work area to provide more space for inspection and assembly operations.



LFODG, Dual Gooseneck transmitter, has two 18" wands enclosed in stainless steel obedient sheating that "stays put". The wands can be focused on a single point to provide intense, shadow-free illumination. A single 18" wand, **LFOSG**, Single Gooseneck, is ideal for inspecting small, crevice-like openings or the inside of a tube or cylinder. Both models feature an adjustable lens at the end of each wand enabling the operator to change the focus of the light from a narrow, intense beam to a wider, more diffused pattern.



18746, Dimmable LED Ring Light maximizes light output and distribution while preventing harmful glare and reflections. Its modular construction, paired with brilliant 40 LED display and 6000°K color temperature, makes this ring light ideal for the inspection of surface cracks and defects as well as lead free inspection. 9 watts of pure-white LED light produce up to 3600 footcandles at 4.5" working distance and ease the examination of welds, solder joints, flux residues and hairline stress cracks. Removable/replaceable diffuser allows for easy cleaning. Dimmable to 15% output. A 50,000 hour lumen maintenance (lamp life) makes this LED ring light suitable as a replacement for traditional 150W Fiber Optic Illuminators.

LIGHTING/DIGITAL OPTIONS FOR ALL LUXO MICROSCOPES



18743, Dimmable LED-High Output Ring Light maximizes light output at a greater working distance. Its 80 high-output LEDs draw only 18 watts of energy while producing up to 5800 footcandles at 4.5" working distance. The LEDs are distributed among 2 concentric rings of lights (each containing 40 LEDs) and are controlled via 8 quadrant switches. A 50,000 hour lumen maintenance (lamp life) makes this an ideal lightsource for the inspection of surface cracks and defects, welds, lead-free solder joints, flux residues and hairline stress cracks as well as a suitable replacement for traditional 150W Fiber Optic Illuminators.



18791, USB 2.0 High Resolution Camera is a compact high resolution camera for industrial use. Over 15 frames/s in full frame mode, 30 frames/s in 1/2 partial scan mode and 61 frames/s in 1/4" partial scan mode. 1/1.8" Interline UXGA Progressive CCD color image sensors with 1600 x 1200 pixels at full size are standard. Equipped with CS-Mount and high speed USB. With its USB 2.0 architecture, this camera is ideally suited for use with PC, Notebook and Embedded Systems in image processing. Includes camera, 6' USB cable and software.

18792, USB 2.0 STD Resolution Camera is an ultra compact camera with USB 2.0 interface for industrial use. Equipped with high quality sensors, industrial design, C-Mount and high speed USB 2.0 output. Up to 29 frames/s in full frame mode, over 70 frames/s in 1/2 partial scan mode and 120 frames/s in 1/4" partial scan mode. High quality 1/3" Interline CCD color image sensors with 1024 x 768 pixels at full size are standard. With its USB 2.0 architecture, this camera is ideally suited to use with PC, Notebook and Embedded Systems in image processing and factory automation. Includes camera, 6' USB cable and software.



18799 (kit), 1/2" Color CCD Camera. A low-profile camera featuring manual controls for color balance and gain (DSP). It comes as a kit or as part of complete system models (see order guide). The kit includes CCD camera, a 12-volt power supply and power cord with an integrated S-video cable/connector for attaching a monitor or frame grabber.

Video Adapters

**Not for use with System 350 models.*



Components used to connect CCD or USB cameras to the photo tube in a Trinocular S-Z Microscope.

23769, Video Adapter with 0.5X lens. Included with all complete System 373 models.
23767, Video Adapter with 1.0X lens. Used to dramatically increase high tech digital magnification.
23768, Video Adapter with 0.3X lens. Used when equal digital and optical magnification is needed.



18797, LCD Flat Panel Monitor – 15" (diagonal). Included with System 350 and 373 models having an LCD monitor. Wide range power source; 100-240 VAC (auto switching). NTSC/PAL Auto detection, S-video input, high resolution (1024 x 768) output, and magnification up to 470X.

SYSTEM 273 AND 373 MICROSCOPE OPTICS DATA

Microscope Optics Data

		Objective zoom setting 0.7X – 4.5X			
Eyepieces	Objective	1.0X (included)	0.5X	0.7X	2.0X
10X	Total Magnification (Range)	7X - 45X	3.5X - 22.5X	4.9X - 31.5X	14X - 90X
	Field of View Diameter (mm)	32.8 - 5.1	65.7 - 10.2	46.9 - 7.3	16.4 - 2.6
15X	Total Magnification (Range)	10.5X - 67.5X	5.3X - 33.8X	7.4X - 47.2X	21X - 135X
	Field of View Diameter (mm)	24.3 - 3.8	48.6 - 7.6	34.7 - 5.4	12.1 - 1.9
20X	Total Magnification (Range)	14X - 90X	7X - 45X	9.8X - 63X	28X - 180X
	Field of View Diameter (mm)	20 - 3.1	40 - 6.2	28.6 - 4.4	10 - 1.6
30X	Total Magnification (Range)	21X - 135X	10.5X - 67.5X	14.7X - 94.5X	42X - 270X
	Field of View Diameter (mm)	12.9 - 2	25.7 - 4	18.4 - 2.9	6.4 - 1
	Working Distance (mm)	118	195	145	35

Trinocular Microscope Optics Data

1/2" CCD Camera, 15" LCD Monitor

	Accessory Lens	Magnification with zoom setting @ 0.7	FOV with zoom @ 0.7 (mm)	Magnification with zoom setting @ 4.5	FOV with zoom @ 4.5 (mm)	Working Distance (mm)
0.3X Video Adapter	None	10X	38.1	64.3X	5.9	118
	0.5	5X	76.2	32.1X	11.9	195
	0.7	7X	54.4	45X	8.5	145
	2.0	20X	19.0	128.6X	3.0	35
0.5X Video Adapter	None	16.7X	22.9	107.2X	3.6	118
	0.5	8.3X	45.7	53.6X	7.1	195
	0.7	11.7X	32.7	75X	5.1	145
	2.0	33.3X	11.4	214.3X	1.8	35
1.0X Video Adapter	None	33.3X	11.4	214.3X	1.8	118
	0.5	16.7X	22.9	107.2X	3.6	195
	0.7	23.3X	16.3	150X	2.5	145
	2.0	66.7X	5.7	428.6X	0.9	35

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