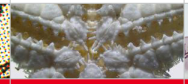
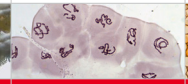
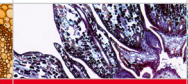
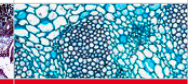
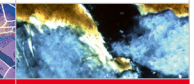
OVERVIEW TECHNICAL SPECIFICATIONS
EDUCATIONAL MICROSCOPES

Leica MICROSYSTEMS

EDUCATIONAL MICROSCOPES											
											
	Leica ES2	Leica EZ4 10×	Leica EZ4 16×	Leica EZ4, open	Leica EZ4 W Leica EZ4 E	Leica DM100	Leica DM300	Leica DM500	Leica DM750	Leica DM750 M	Leica DM750 P
Type of specimen	gross specimens	gross specimens	gross specimens	gross specimens	gross specimens	glass slides	glass slides	glass slides	glass slides	glass slides / thin sections	thin sections
Type of microscope	10° Greenough	10° Greenough	10° Greenough	10° Greenough	10° Greenough	compound	compound	compound	compound	compound	compound
Optical system	parfocal	parfocal	parfocal	parfocal	parfocal	finite	finite	infinity	infinity	infinity	infinity
Magnification changer	2-level, 3:1	zoom 4.4:1	zoom 4.4:1	zoom 4.4:1	zoom 4.4:1	4-position	4-position	4-position	4-or 5-position	4-or 5-position	4-position centerable
Eyepieces for spectacle wearers	10×/20 fixed	10×/20 fixed	16×/15 fixed	replaceable, fixed or adjustable: 10×/20, 16×/16 (20×/12 not suitable for spectacle wearers)	10×/20 fixed	10×/18 fixed	10×/18 fixed	10×/20 fixed or adjustable 16×/14 adjustable	10×/20 fixed or adjustable 16×/14 adjustable	10×/20 fixed or adjustable	10×/20 fixed or adjustable 16×/14 adjustable
Diopter correction	–	–	–	from +5 to –5 (adjustable eyepieces)	–	preset	preset	yes or fixed	yes or fixed	yes or fixed	yes or fixed
Viewing angle	60°	60°	60°	60°	60°	30° or 45° (mono tube)	30° or 45° (mono tube)	30° or 45°	30° or 45°	30° or 45°	30°
Working distance	100 mm	100 mm	100 mm	100 mm	100 mm	objective-dependent	objective-dependent	objective-dependent	objective-dependent		objective-dependent
Magnification range	10×/30×	8× to 35×	12.8× to 56×	depending on eyepieces used: 8× to 70×	8× to 35×	40× to 1 000×	40× to 1 000×	depending on eyepieces used: 25× to 1 600×	depending on eyepieces used: 25× to 1 600×	50× to 1 000×	depending on eyepieces used: 25× to 1 600×
Maximum resolution	159 lp/mm	170 lp/mm	170 lp/mm	170 lp/mm	170 lp/mm	objective-dependent	objective-dependent	objective-dependent	objective-dependent	objective-dependent	objective-dependent
Maximum objective numerical aperture	0.053 nA	0.057 nA	0.057 nA	0.057 nA	0.057 nA	1.25 NA	1.25 NA	1.25 NA	1.25 NA	0.75 NA	1.25 NA
Object field diameter	20 mm / 6.7 mm	5.7 mm to 25 mm	4.3 mm to 18.8 mm	depending on eyepieces used: 3.4 mm to 25 mm	5.7 mm to 25 mm	0.18 mm to 4.5 mm	0.18 mm to 4.5 mm	depending on eyepieces used: 0.14 mm to 5.6 mm	depending on eyepieces used: 0.14 mm to 5.6 mm	0.2 mm to 4 mm	depending on eyepieces used: 0.14 mm to 5.6 mm
Eyecups	replaceable	replaceable	replaceable	replaceable	replaceable	replaceable	replaceable	replaceable	replaceable	replaceable	replaceable
Interpupillary distance	50 mm to 75 mm	50 mm to 75 mm	50 mm to 75 mm	50 mm to 75 mm	50 mm to 75 mm	52 mm to 75 mm	52 mm to 75 mm	52 mm to 75 mm	52 mm to 75 mm	52 mm to 75 mm	52 mm to 75 mm
Beam path	100 % visual	100 % visual	100 % visual	100 % visual	50 % visual and 50 % video/photo	100 % visual	100 % visual	Binoc: 100 % visual Trinoc: 50 % visual and 50 % video/photo	Binoc: 100 % visual Trinoc: 50 % visual and 50 % video/photo	Binoc: 100 % visual Trinoc: 50 % visual and 50 % video/photo	Binoc: 100 % visual Trinoc: 50 % visual and 50 % video/photo

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Leica MICROSYSTEMS

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					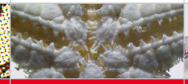	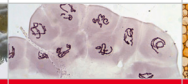		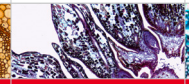	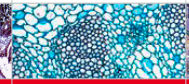		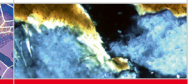
	Leica ES2	Leica EZ4 10×	Leica EZ4 16×	Leica EZ4, open	Leica EZ4 W Leica EZ4 E	Leica DM100	Leica DM300	Leica DM500	Leica DM750	Leica DM750 M	Leica DM750 P
Focusing drive	individually adjustable ease of movement, 75 mm travel	individually adjustable ease of movement, 75 mm travel	individually adjustable ease of movement, 75 mm travel	individually adjustable ease of movement, 75 mm travel	individually adjustable ease of movement, 75 mm travel	coaxial focus controls; self-adjusting focus mechanism; 300 micros per fine focus rotation; calibrated in 3 micro increments	coaxial focus controls; self-adjusting focus mechanism; 300 micros per fine focus rotation; calibrated in 3 micro increments	coaxial focus controls; self-adjusting focus mechanism; 300 micros per fine focus rotation; calibrated in 3 micro increments	weighted coaxial focus controls; self-adjusting focus mechanism; 300 micros per fine focus rotation; calibrated in 3 micro increments	weighted coaxial focus controls; self-adjusting focus mechanism; 300 micros per fine focus rotation; calibrated in 3 micro increments	weighted coaxial focus controls; self-adjusting focus mechanism; 300 micros per fine focus rotation; calibrated in 3 micro increments
ILLUMINATION SYSTEM											
LED incident light and transmitted light	integrated, independent, or combined	integrated, independent, or combined, dimmable	integrated, independent, or combined, dimmable	integrated, independent, or combined, dimmable	integrated, independent, or combined, dimmable	integrated, dimmable	integrated, dimmable	integrated, independent, or combined	integrated, independent, or combined	integrated, independent, or combined	integrated, independent, or combined
Control	on/off switch	membrane switch	membrane switch	membrane switch	membrane switch	wheel	wheel	wheel	wheel	wheel and membrane switch	wheel
Incident light method	angled incident light with three upper LEDs	> maximum intensity with 5 LEDs > angled incident light with LEDs > side light with 3 LEDs	> maximum intensity with 5 LEDs > angled incident light with LEDs > side light with 3 LEDs	> maximum intensity with 5 LEDs > angled incident light with LEDs > side light with 3 LEDs	> maximum intensity with 5 LEDs > angled incident light with LEDs > side light with 3 LEDs	–	–	4 LEDs selectable brightfield, polarisation, oblique	4 LEDs selectable brightfield, polarisation, oblique	4 LEDs selectable brightfield, polarisation, oblique	4 LEDs selectable brightfield, polarisation, oblique
Dimmer	–	yes, for incident and transmitted light, sealed	yes, for incident and transmitted light, sealed	yes, for incident and transmitted light, sealed	yes, for incident and transmitted light, sealed	yes, for transmitted light	yes, for transmitted light	yes, for incident and transmitted	yes, for incident and transmitted	yes, for incident and transmitted	yes, for incident and transmitted
Auto OFF	–	after 2 hours	after 2 hours	after 2 hours	after 2 hours	–	–	–	after 2 hours	after 2 hours	after 2 hours
LED service life	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours	approx. 25,000 hours
Light quality	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV	homogeneous daylight, free of UV
Maintenance	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free	maintenance-free
Power supply	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated	universal from 100 V to 240 V, voltage-sensitive, integrated

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EDUCATIONAL MICROSCOPES	 Leica ES2	 Leica EZ4 10×	 Leica EZ4 16×	 Leica EZ4, open	 Leica EZ4 W Leica EZ4 E	 Leica DM100	 Leica DM300	 Leica DM500	 Leica DM750	 Leica DM750 M	 Leica DM750 P
ACCESSORIES											
Accessories	soft and hard carry case	soft and hard carry case	soft and hard carry case	soft and hard carry case	remote control or soft and hard carry case	simple polarisation kit, attachable mirror, soft and hard carry case	simple polarisation kit, attachable mirror, soft and hard carry case	phase contrast darkfield polarization kit, fluorescence measurement graticule/stage micrometer, soft and hard case	phase contrast darkfield polarization kit, fluorescence measurement graticule/stage micrometer, soft and hard case	polarization kit, fluorescence measurement graticule, stage well	phase contrast darkfield polarization kit, fluorescence measurement graticule/ stage micrometer, soft and hard case
OTHER											
Weight and dimensions	3.82 kg, 18 cm × 25.5 cm × 36.5 cm	3.82 kg, 18 cm × 25.5 cm × 36.5 cm	3.82 kg, 18 cm × 25.5 cm × 36.5 cm	3.64 kg, 28.0 cm × 25.5 cm × 36.5 cm	4.17 kg, 18 cm × 15.5 cm × 36.5 cm	6.5 kg, 45 cm × 31.5 cm × 42 cm	6.5 kg, 45 cm × 31.5 cm × 42 cm	9.0 kg, 40 cm × 37 cm × 39 cm	9.0 kg, 40 cm × 37 cm × 39 cm	9.0 kg, 40 cm × 37 cm × 39 cm	9.0 kg, 40 cm × 37 cm × 39 cm
Storage and transport	integrated handle	integrated handle	integrated handle	integrated handle	integrated handle	arm grip	arm grip	integrated handle, integrated cord wrap	integrated handle, integrated cord wrap	integrated handle, integrated cord wrap	integrated handle, integrated cord wrap
Safety Standards	CE Communauté Européenne / CSA Canadian Standards Association (USA, Canada)	CE Communauté Européenne / CSA Canadian Standards Association (USA, Canada)	CE Communauté Européenne / CSA Canadian Standards Association (USA, Canada)	CE Communauté Européenne / CSA Canadian Standards Association (USA, Canada)	CE Communauté Européenne / CSA Canadian Standards Association (USA, Canada)	cULus, CE, RoHS conforms to ISO anti-mold standard	cULus, CE, RoHS conforms to ISO anti-mold standard	cULus, CE, RoHS Ag Treat conforms to ISO anti-mold standard	cULus, CE, RoHS Ag Treat conforms to ISO anti-mold standard	cULus, CE, RoHS conforms to ISO anti-mold standard	cULus, CE, RoHS Ag Treat conforms to ISO anti-mold standard
DIGITAL CAMERA											
Camera	–	–	–	–	integrated	–	–	ICC50 W/E	ICC50 W/E	ICC50 W/E	ICC50 W/E
Modes	–	–	–	–	SD mode USB mode WiFi mode (EZ4 W only) Ethernet mode	–	–	SD mode USB mode WiFi mode (ICC50 W only) Ethernet mode	SD mode USB mode WiFi mode (ICC50 W only) Ethernet mode	SD mode USB mode WiFi mode (ICC50 W only) Ethernet mode	SD mode USB mode WiFi mode (ICC50 W only) Ethernet mode
Exposure time	–	–	–	–	1 msec – 500 msec	–	–	1 msec – 500 msec	1 msec – 500 msec	1 msec – 500 msec	1 msec – 500 msec
Live image	–	–	–	–	30 fps – depends on mode and resolution setting	–	–	30 fps – depends on mode and resolution setting	30 fps – depends on mode and resolution setting	30 fps – depends on mode and resolution setting	30 fps – depends on mode and resolution setting
Full frame image acquisition	–	–	–	–	5.0 megapixels max.	–	–	5.0 megapixels max.	5.0 megapixels max.	5.0 megapixels max.	5.0 megapixels max.

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					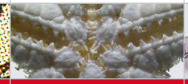	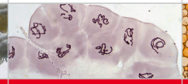		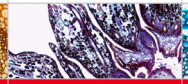	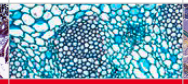		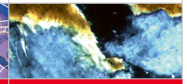
	Leica ES2	Leica EZ4 10×	Leica EZ4 16×	Leica EZ4, open	Leica EZ4 W Leica EZ4 E	Leica DM100	Leica DM300	Leica DM500	Leica DM750	Leica DM750 M	Leica DM750 P
Movie clip	–	–	–	–	1,920 × 1,080 max.	–	–	1,920 × 1,080 max.	1,920 × 1,080 max.	1,920 × 1,080 max.	1,920 × 1,080 max.
Color depth	–	–	–	–	24-bit	–	–	24-bit	24-bit	24-bit	24-bit
Data format	–	–	–	–	JPEG / TIFF / BMP / MP4 (choices depend on capture device)	–	–	JPEG / TIFF / BMP / MP4 (choices depend on capture device)	JPEG / TIFF / BMP / MP4 (choices depend on capture device)	JPEG / TIFF / BMP / MP4 (choices depend on capture device)	JPEG / TIFF / BMP / MP4 (choices depend on capture device)
Operating systems	–	–	–	–	Windows 7, 8, Windows Vista, Macintosh OS X, Mobile devices (iOS 7, 8 and Android 4.2+)	–	–	Windows 7, 8, Windows Vista, Macintosh OS X, Mobile devices (iOS 7, 8 and Android 4.2+)	Windows 7, 8, Windows Vista, Macintosh OS X, Mobile devices (iOS 7, 8 and Android 4.2+)	Windows 7, 8, Windows Vista, Macintosh OS X, Mobile devices (iOS 7, 8 and Android 4.2+)	Windows 7, 8, Windows Vista, Macintosh OS X, Mobile devices (iOS 7, 8 and Android 4.2+)
Software available	–	–	–	–	Leica AirLab (mobile devices), Leica Application Suite EZ (PC), Leica Application Suite (PC), Leica Acquire (Mac)	–	–	Leica AirLab (mobile devices), Leica Application Suite EZ (PC), Leica Application Suite (PC), Leica Acquire (Mac)	Leica AirLab (mobile devices), Leica Application Suite EZ (PC), Leica Application Suite (PC), Leica Acquire (Mac)	Leica AirLab (mobile devices), Leica Application Suite EZ (PC), Leica Application Suite (PC), Leica Acquire (Mac)	Leica AirLab (mobile devices), Leica Application Suite EZ (PC), Leica Application Suite (PC), Leica Acquire (Mac)
Minimum computer configuration	–	–	–	–	PC / Mac, Intel Core 2 Duo, > 2.4 GHz, 4 GB RAM, 24-bit graphics, 1,248 × 1,024	–	–	PC / Mac, Intel Core 2 Duo, > 2.4 GHz, 4 GB RAM, 24-bit graphics, 1,248 × 1,024	PC / Mac, Intel Core 2 Duo, > 2.4 GHz, 4 GB RAM, 24-bit graphics, 1,248 × 1,024	PC / Mac, Intel Core 2 Duo, > 2.4 GHz, 4 GB RAM, 24-bit graphics, 1,248 × 1,024	PC / Mac, Intel Core 2 Duo, > 2.4 GHz, 4 GB RAM, 24-bit graphics, 1,248 × 1,024
Minimum display specification	–	–	–	–	1,920 × 1,080 resolution, HDMI connection, DVI connection possible with HDMI/DVI adapter cable (not provided)	–	–	1,920 × 1,080 resolution, HDMI connection, DVI connection possible with HDMI/DVI adapter cable (not provided)	1,920 × 1,080 resolution, HDMI connection, DVI connection possible with HDMI/DVI adapter cable (not provided)	1,920 × 1,080 resolution, HDMI connection, DVI connection possible with HDMI/DVI adapter cable (not provided)	1,920 × 1,080 resolution, HDMI connection, DVI connection possible with HDMI/DVI adapter cable (not provided)
DIGITAL CAMERA OPTIONAL											
Leica EC4 or other C mount cameras	–	–	–	–	–	–	–	yes	yes	yes	yes
Leica ICC50 W / E	–	–	–	–	–	–	–	yes	yes	yes	yes