

Living up to Life



Leica KL1500 LED Leica KL1500 LED P Leica KL2500 LED

Cold light - the right light for your application



Leica KL1500 LED

The next generation of cold light sources

The Leica KL1500 LED is an innovative fiber optic light source which uses cold light to illuminate all types of objects in industrial and life science applications. It is a benchmark in the field of LED light sources.

Employing state-of-the-art technology, SCHOTT has developed and designed a multiple LED driven light source to provide an attractive alternative to conventional halogene cold light sources.

The brightness is equivalent to a 150-watt halogene lamp and therefore optimized as a standard illumination system for the requirements of all stereomicroscopes.

An optimized heat management is assured by an extremely silent fan.

The LEDs have an extremely long lifetime of at least 50.000 hours. That means users do never have to change bulbs which reduces the costs of ownership and avoids

service and downtime costs. Due to 80% lower energy consumption of LED light sources, compared to conventional halogene light sources, there is additional potential to save money.

Emitting neutral white light (approx. 5600 K) the KL1500 LED is DC driven, making the ripple free illumination perfect for digital imaging applications. An additional benefit is that the color temperature does not change when the light source is dimmed.

The Leica KL1500 LED combines all advantages of LED light with the advantages of fiber light guides.

All the light guides from the Leica KL1500 series can be connected to the Leica KL1500 LED. That allows the full flexibility to realize common illumination techniques and all existing inspection processes.

FEATURES / BENEFITS

- › Low energy consumption
- › Equivalent to 150 W halogen bulb
- › No bulb changing
- › White light (daylight) approx. 6000 K
- › Continuous dimming from 0 to 100 %
- › No visible colour temperature shift on dimming
- › Ripple free DC illumination
- › Silent cooling fan
- › Small footprint with weighted ballast for stability when used with goosenecks
- › Filter slider with two positions. Filter can remain in the light source even if it is not used.
- › Compact high quality housing with integrated handle
- › Easy to use fixture mechanism with clamping screw
- › Comprehensive range of light guides and accessories available (KL1500 Series)





Leica KL1500 LED P

Improve repeatability with LAS Control

The Leica KL1500 LED P is an enhancement of the standard version, designed for the more upscaled demands in industrial and life science applications of Stereo Microscopy and Macroscopy. The brightness is equivalent to a 150-watt halogene cold light source. All advantages of LED light sources are combined with the advantages of using fiber optic light guides, for an outstanding price-performance ratio.



Light intensity controllable via Leica Application Suite LAS

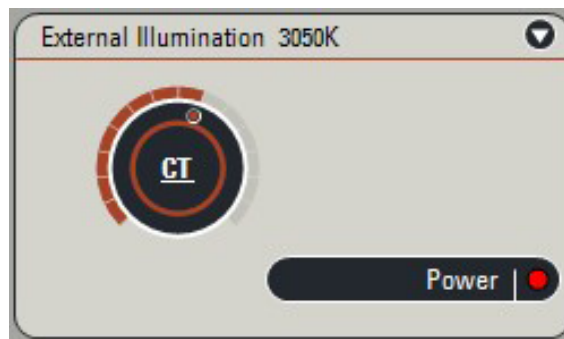
FEATURES / BENEFITS

- › LAS controllable via USB
- › Equivalent to 150 W halogen bulb
- › LCD Display indicates brightness
- › Electronic shutter function
- › Foot switch control
- › Intensity control of two sensitivities (standard and fine tuning)
- › Low energy consumption
- › No bulb changing
- › White light (daylight)
- › Continuous dimming from 0 to 100 %
- › No visible colour temperature shift on dimming
- › Ripple free DC illumination
- › Silent fan cooling
- › Small footprint and additional iron ballast for stability when used with goosenecks
- › Filter slider with two positions filter can remain in the light source even if it is not used
- › Compact high quality housing with integrated handle
- › Easy to use fixture mechanism with clamping screw
- › Comprehensive range of light guides and accessories available (KL1500 Series)

Leica KL2500 LED

More light! Longer life! Energy efficient!

The KL2500 LED is the performance leader in LED based cold light sources. It is designed for the highest requirements of industrial and life science applications of Stereo Microscopy. This new light source has a brightness level that is equivalent to a 250-watt halogene cold light source. It has all advantages of LED light sources, such as long life and low power consumption, plus can be integrated with all the fiber optics guides for the Leica KL1500 LED.



Light intensity controllable via Leica Application Suite LAS

FEATURES / BENEFITS

- › 1000 lumen output at light guide end (light guides with active diameter of 9 mm)
- › Equivalent to 250 W bulb
- › LAS controllable via USB
- › LCD Display indicates brightness setting, operation mode, or error code
- › Electronic shutter function
- › Connection for foot switch and remote control
- › Intensity control of three sensitivities (fine, standard and coarse tuning)
- › Foot switch control
- › Low energy consumption
- › No bulb changing
- › White light (daylight) approx 6000 K
- › Continuous dimming from 0 to 100 %
- › No visible colour temperature shift on dimming
- › Ripple free DC illumination
- › Silent cooling fan
- › Small footprint with weighted ballast for stability when used with goose-necks
- › Filter slider with two positions filter can remain in the light source even if it is not used
- › Compact high quality housing with integrated handle
- › Easy to use fixture mechanism with clamping screw
- › Comprehensive range of light guides and accessories available (KL1500 Series)

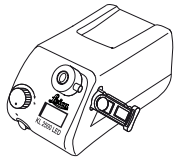


Technical Data

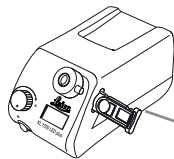
General Data	Leica KL1500 LED	Leica KL1500 LED P	Leica KL2500 LED
Part-No	31 150 400	31 150 500	31 250 400
Dimensions (W × D × H)	220 × 113 × 137 mm / 8.7" × 4.5" × 5.4"	220 × 113 × 137 mm / 8.7" × 4.5" × 5.4"	231 × 114 × 137 mm / 9.1" × 4.5" × 5.4"
Weight	Approx. 1.75 kg	Approx. 1.75 kg	Approx. 2.45 kg
Cooling	Silent fan	Silent fan	Silent fan
Electrical Data			
Operating voltage	90 - 264 V ~	90 - 264 V ~	90 - 264 V ~
Frequency	47 - 63 Hz	47 - 63 Hz	47 - 63 Hz
Input Voltage	12 V	12 V	24 V
Power consumption	Max. 30 VA	Max. 36 VA	Max. 80 VA
Protection class	II	II	II
Overvoltage category	II	II	II
Diodes	Cree -Xlamp high power LEDs	Cree -Xlamp high power LEDs	Osram Ostar Compact
LED power rating	7 × 3.5 W	7 × 3.5 W	9 × 7 W
LED life time / hours	50.000 hours (luminous flux reduced to 80 %)		
Illumination data			
Light flux	380 lm	380 lm	1000 lm
Colour temperature	Approx. 6000 K	Approx. 6000 K	Approx. 6000 K
Light control	Electrical	Electrical	Electrical
Active light guide Ø	max. 9 mm / max. 0.35" inch	max. 9 mm / max. 0.35" inch	max. 9 mm / max. 0.35" inch
Certification marks			
Approvals	CE (power supply CE, UL, PSE)	CE (power supply CE, UL, PSE)	CE (power supply CE, UL, PSE)
EMV-class	B	B	B



Specification

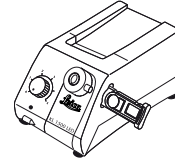


KL1500 LED
(31 150 400)



KL1500 LED P
(31 150 500)

Insert filter with holder
blue (31 158 302)
red (31 158 303)
green (31 158 304)
yellow (31 158 305)
daylight filter (31 158 306)
halogen (31 258 307)



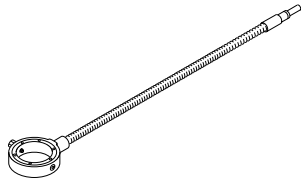
KL2500 LED
(31 250 400)

Dark field Adapters

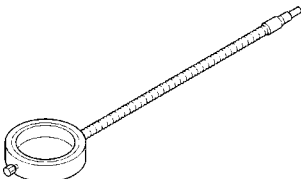
WD 80 - 110 mm (31 157 562)
WD 50 - 80 mm (31 157 567)
WD 30 - 50 mm (31 157 569)



Slit ring light for incident dark field
flexible length approx. 1000 mm
(31 157 406)

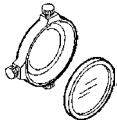


4-point ring light
flexible length approx. 1000 mm
Ø = 66 mm (31 157 402)



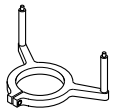
Polarisations Filter

for slit ring light Ø = 66 mm (31 158 430)
for slit ring light Ø = 58 mm (31 158 440)
for slit ring light Ø = 80 mm (31 158 450)



Slit ring light
flexible length approx. 1000 mm
Ø = 58 mm (31 157 410)
Ø = 66 mm (31 157 420)
Ø = 80 mm (31 157 080)
Ø = 85 mm (31 157 085)

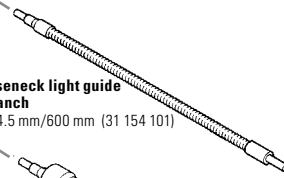
Maxi ring light
Ø = 150 mm (31 157 440)



Holder for Maxi ring light
Ø = 58 mm (31 157 445)

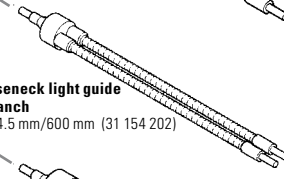
Gooseneck light guide

1-branch
Ø = 4.5 mm/600 mm (31 154 101)



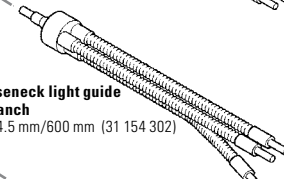
Gooseneck light guide

2-branch
Ø = 4.5 mm/600 mm (31 154 202)



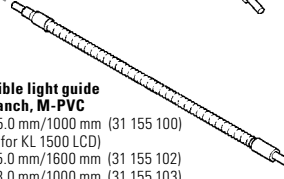
Gooseneck light guide

3-branch
Ø = 4.5 mm/600 mm (31 154 302)



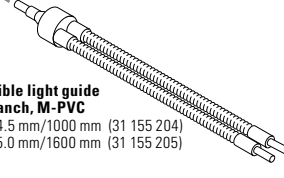
Flexible light guide

1-branch, M-PVC
Ø = 5.0 mm/1000 mm (31 155 100)
(only for KL 1500 LCD)
Ø = 5.0 mm/1600 mm (31 155 102)
Ø = 8.0 mm/1000 mm (31 155 103)



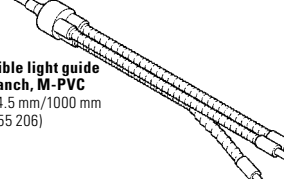
Flexible light guide

2-branch, M-PVC
Ø = 4.5 mm/1000 mm (31 155 204)
Ø = 5.0 mm/1600 mm (31 155 205)



Flexible light guide

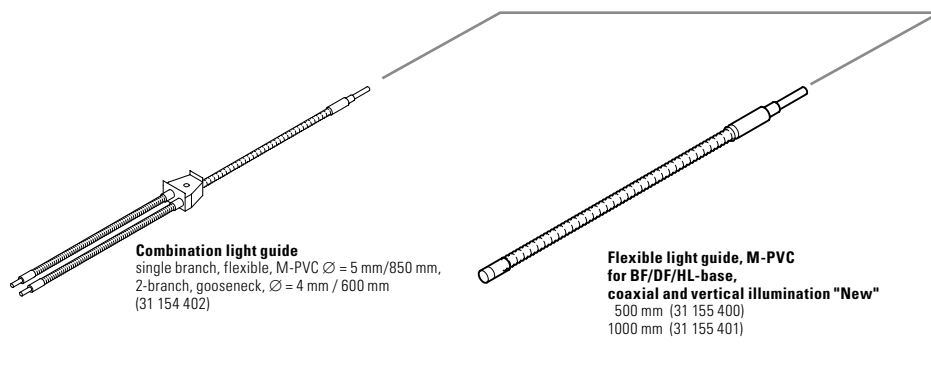
2-branch, M-PVC
Ø = 4.5 mm/1000 mm
(31 155 206)



Spot to line assembly with adjustable front lens, flexible length approx. 1000 mm, M-PVC

Slit 50 mm × 1.2 mm (31 160 100)
Slit 100 mm × 0.6 mm (31 160 110)
Slit 200 mm × 0.3 mm (31 160 120)





**Polarization Filter for
focussing lens**
(31 158 205)



Focussing lens and filter set
for light guides up to $\varnothing = 5$ mm
blue, red, green, yellow
(31 158 200)

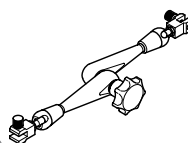


Focussing lens
for light guides up to $\varnothing = 5$ mm
(31 158 210)

**Holder for
focussing lens**
(31 158 341)



Holder for focussing lens
(31 158 220)

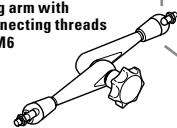


Clampable Articulating arm
(10 399 211)

Adapter/column $\varnothing = 25$ mm
(10 404 243)



**Articulating arm with
2x M60 connecting threads
1x M5 / 1x M6**
(10 450 265)



Transmitted light state, $\varnothing 120$ mm
for flexible light guide up to $\varnothing = 5$ mm
(10 447 038)



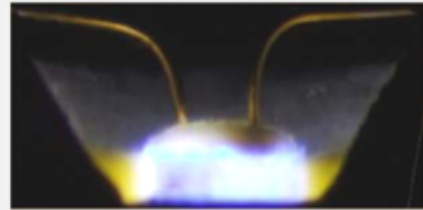
Holder with M6 thread
for flexible light guide up to $\varnothing = 5$ mm (31 158 330)
for flexible light guide up to $\varnothing = 8$ mm (31 158 335)



**Base for articulating arm with
3x M6 connecting threads / 1x M5**
(30 221 008)



Spectrum of White LEDs



yellow Phosphor
emission

combined spectrum
of white LED

Spectrum blue
InGaN LED-Chip

400 470 550 700