Living up to Life

Leica
MICROSYSTEMS

# Leica KL300 LED

Compact, modular cold light source for routine stereomicroscopes

# Optimized Illumination for Peak Performance

The key to top performance of any microscope depends on having the proper illumination for the specimen. Optimized illumination also improves the user's optical performance, and reduces eye strain, fatigue and error rates. Cold light sources and fiber optics are often present to illuminate specimens under a stereomicroscope for several reasons.

## REASONS TO USE COLD LIGHT SOURCES

- A wide variety of fiber optic light guides are available, allowing for multiple illumination techniques to achieve optimized illumination and to generate the best possible image of the specimen.
- They generate intense, bright, focused light that can be easily guided to the specimen.
- The infrared (heat generating) spectrum of light is filtered out to reduce the possibility of damaging heat sensitive specimens or injuring operators.
- The bulk of the system is removed from the immediate work-space, and the compact fiber optic light guides do not interfere with specimen handling and accessibility.

The Leica Routine Modular Lighting System is a powerful, compact, yet affordable cold light source system that is ideal for many routine applications in industry and life science.

At the heart of this system is the powerful Leica KL300 LED light source. This light source can be combined with a vast array of accessories such as standard one or two armed fiber light guides, one or two arm goosenecks, coaxial lighting, near vertical illumination, and transmitted light base adapters. This allows the users to customize their systems to meet the most demanding routine application needs.

Due to the smart design, the Leica KL300 LED can be mounted to nearly any routine microscope stand or used as a stand-alone illumination device.

## LEICA COLD LIGHT SOURCE – ILLUMINATION METHOD

In fiber optics, light is transmitted in bundled fiber optic cables made of glass. Glass guarantees the greatest possible safety during use, cannot be burned, and is not sensitive to heat, UV rays, and other environmental influences. Since the Leica KL300 LED is LED based, there is also no IR present.


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# The Freedom of Choice in Light

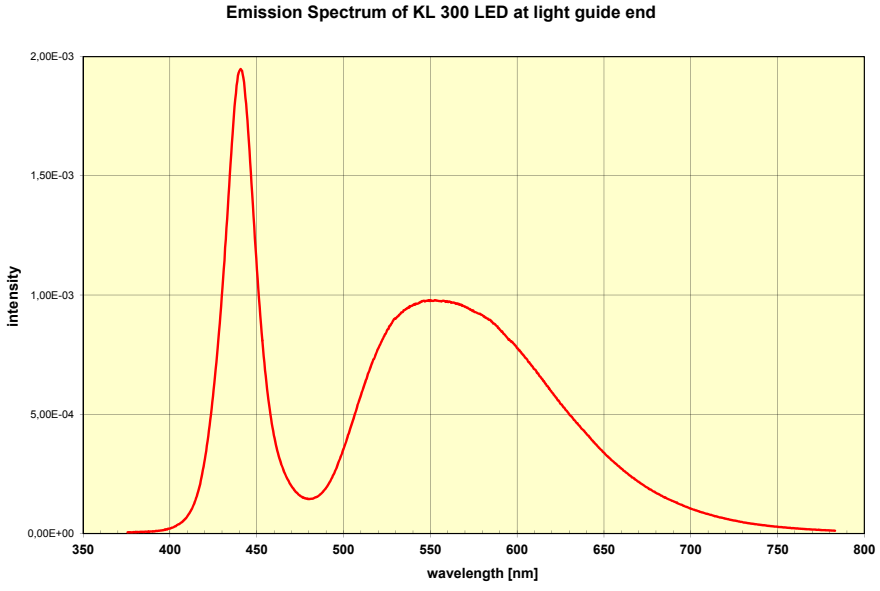
The Leica KL300 LED employs state-of-the-art technology, using a single powerful LED driven light source to provide an attractive alternative to conventional halogen cold light sources. The Leica KL300 LED has an extremely long service life-time of approximately 50 000 hours. This means users never have to change bulbs, which can reduce the cost of ownership and avoids service and downtime. Compared to conventional halogen light sources, the Leica KL300 LED consumes up to 80 % less energy, which not only has a positive impact on the environment, but also has the potential to save money.

The brightness is equivalent to a 30-watt halogen lamp, which makes it an ideal illumination system for the requirements of routine stereomicroscopes. Emitting neutral white light (approx. 5 600 K) the Leica KL300 LED is DC driven. This provides ripple free illumination that is well suited for digital imaging applications. An additional benefit is that the color temperature does not change when the light source is dimmed.

**Benefits of Leica KL300 LED**

The Leica KL300 LED combines all advantages of LED light with the advantages of illumination through fiber optic solutions. This means that one can achieve higher light intensities focused to a very small field of view.

The Leica KL300 LED offers simple operation combined with excellent value for your money.

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# Leica KL300 LED – Light with Variety!

## FOOTPRINT

In most laboratory and industrial environments bench space is at a premium. Since the Leica KL300 LED can be directly attached to most routine stereomicroscope stands, you can make the most of your work space! The advantages:

› The complete microscope and illumination system require minimal space and can be carried easily from one work place to another area.
› The illumination retains a constant orientation toward the specimen when the stereomicroscope is refocused or moved.

## THE FIBER OPTICS MAKE THE DIFFERENCE

The fiber optic light guides are made from specially selected glass to guarantee highest transmission rates and optimal light distribution. This creates the brightest, most evenly distributed beam of light possible at the exit end of the fiber bundle. The optical fiber bundles are encased in a high quality coating of halogen-free, self-erasing Megolon®. This environmentally friendly process creates a casing that is strong and flexible. It will not become brittle or crack with time and does not leave performance robbing deposits on the glass bundles it protects. The entrance ends of the fiber guides are heat resistant to prevent de-lamination and assure extraordinary long fiber optic life.

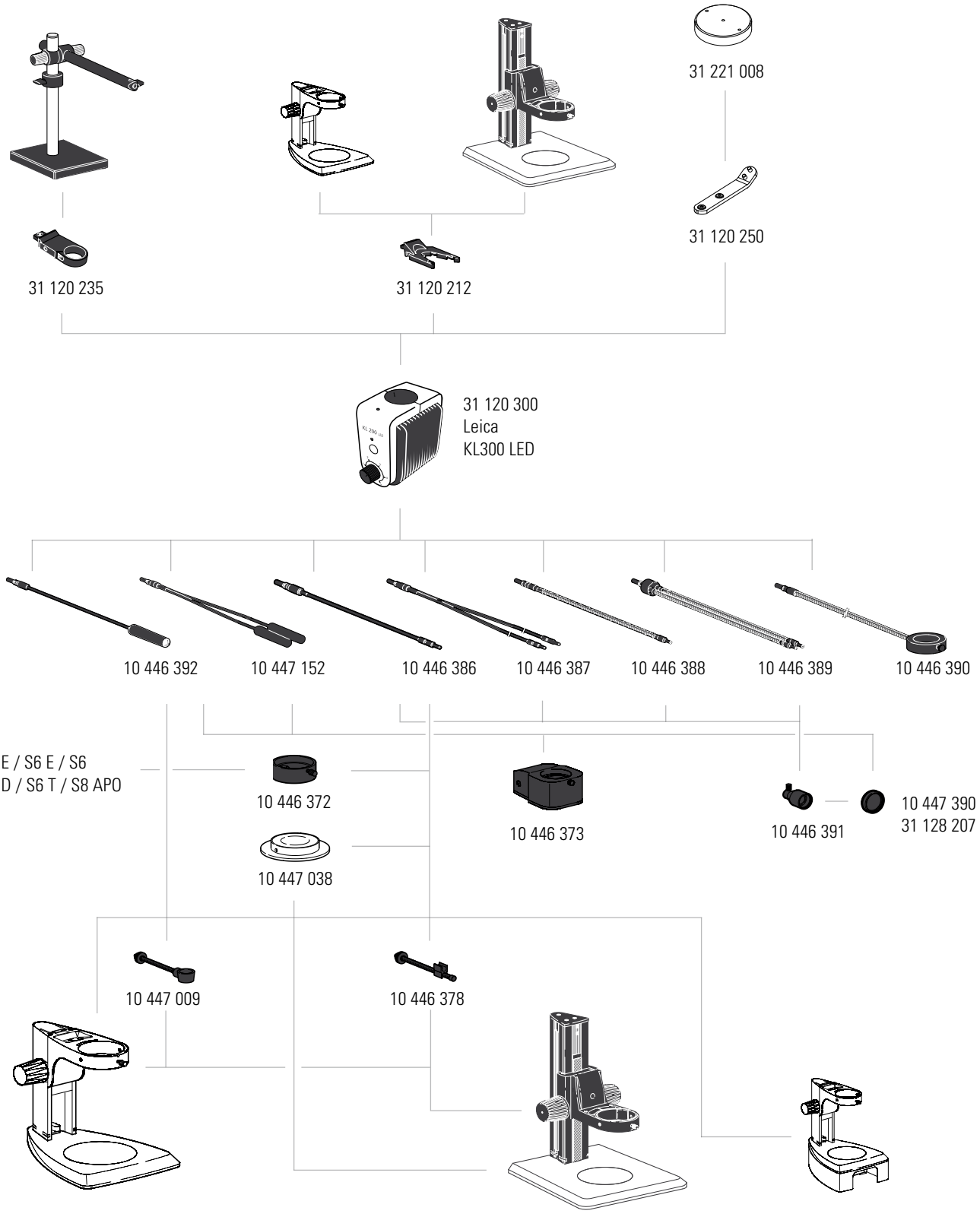
**CATALOGUE REFERENCES**

| | |
|---|---|
| 31 120 300 | Leica KL300 LED fiber optic light source |
| 10 446 386 | Single flexible light guide, 550 mm |
| 10 446 387 | Double flexible light guide, 750 mm |
| 10 446 388 | Single gooseneck, 500 mm |
| 10 446 389 | Double gooseneck, 500 mm |
| 10 446 390 | 6-point ringlight, 58 mm I.D., 750 mm |
| 10 447 038 | Transmitted light stage |
| 10 446 391 | Focussing lens |
| 10 447 055 | Daylight conversion filter for focusing lens |
| 31 128 207 | Warm light filter for focusing lens |
| 10 446 392 | Universal light guide |
| 10 447 152 | Double universal light guide |
| 10 446 378 | Flexible light guide mount |
| 10 447 009 | Universal light guide mount |

**CATALOGUE REFERENCES**

| | |
|---|---|
| 10 446 372 | Near vertical illuminator |
| 10 446 373 | Coaxial illuminator |
| 10 280 636 | Power cable, 2 m, CH |
| 10 445 661 | Power cable, 2 m, US |
| 10 445 662 | Power cable, 2 m, EURO |
| 10 445 663 | Power cable, 2 m, British Standard |
| 10 447 346 | Power cable, 2 m, Japan |
| 10 445 012 | Power cable, 2 m, Argentina |
| 10 450 013 | Power cable, 2 m, Australia |
| 10 450 014 | Power cable, 2 m, China |
| 10 450 015 | Power cable, 2 m, Israel |
| 10 450 016 | Power cable, 2 m, Italy |
| 10 450 017 | Power cable, 2 m, South Africa |
| 30 221 008 | Base Plate for Leica KL300 LED |
| 31 120 250 | Leica KL300 LED Adapter for Base Plate |
| 31 120 235 | Leica KL300 LED Adapter for Swing Arm Stand |
| 31 120 212 | Leica KL200 LED Bracket for S-Stand |

# Assembly Diagram



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# Technical Details

| | |
|---|---|
| Dimensions (W × D × H) | 115 mm × 106 mm × 59 mm |
| Weight | 0.35 kg |
| Material | - |
| Operational voltage of the network component, volt-sensitive | 100 .... 240 V ~ 50/60 Hz |
| Power consumption | 5 VA |
| Brightness control | continuous |
| Typical LED Service time | 50 000 hours |
| Cooling | convection ventilation, silent and vibration-free |
| Maximum technical usable bundle diameter of light guide | 6 mm |
| Total light stream at light guide output on level III (maximum) - Light Guide ∅ 4.5 mm | 80 lumens |
| Color temperature | 5600 K |
| **Attachments** | |
| Various adapters | 35 mm column M-Series, S-Series |
| Base plate | stand-alone version |
| Light guides | one and two-armed, flexible and self-supporting |
| Focussing front lens | adjustable (optional warm light filter) |
| Universal light guides | with convex lens |
| Various arms | to secure the light guides to the stereomicroscope |
| 6-point ring light | shadow-free, homogeneous illumination |
| Coaxial, vertical, and transparency illumination | usable with flexible light guides |
| Protective coating on light guides | halogen-free, Megolon® |
| Conformance with standards | The Leica KL300 LED is in compliance with the CE regulations. (Power supply: CE, UL, PSE) |

The statement by Ernst Leitz in 1907, "With the User, For the User," describes the fruitful collaboration with end users and driving force of innovation at Leica Microsystems. We have developed five brand values to live up to this tradition: Pioneering, High-end Quality, Team Spirit, Dedication to Science, and Continuous Improvement. For us, living up to these values means: Living up to Life.

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The Leica Microsystems Industry Division's focus is to support customers' pursuit of the highest quality end result. Leica Microsystems provide the best and most innovative imaging systems to see, measure, and analyze the microstructures in routine and research industrial applications, materials science, quality control, forensic science investigation, and educational applications.

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