

**LED**



## LED LIGHTING FOR MICROSCOPY

# LED RING LIGHTS



## LED High-Power Ring Light (HPRL)

The LED High-Power Ring Light is the ideal lighting system for stereo microscopy applications in industry and life science.

- ▼ Ergonomic, intuitive operation
- ▼ Extensive, homogeneous illumination
- ▼ Remote version with USB and foot switch
- ▼ Extensive control options through memory function and set up configurations (e.g. left-handed mode)
- ▼ Continuous dimming
- ▼ Polarising filter set and diffuser
- ▼ Adjustable working distances: moveable ring lens enables two different working distances, 45-130 mm and 80-300 mm
- ▼ Mounting diameter: clamping to lens Ø 66 mm

The ring light is also available as USB version. Through integration of all operating elements, the ring light is ready to use together with the microscope.

- ▼ Plug & Work - no controller box necessary at the workstation
- ▼ Mobile operation with battery pack (optional)



## LED Ring Light 66/40

- ▼ 40 LEDs
- ▼ Slender build (outside diameter: 94 mm)
- ▼ Individual segment control
- ▼ Attached to the objective with spring and screw, thus protecting the objective
- ▼ Polarising filter set and diffuser available
- ▼ Working distances: 55-120 mm
- ▼ Mounting diameter: Ø 66 mm (various adapter)



## LED Ring Light 66/80

- ▼ 80 LEDs
- ▼ Comparable to 150 W halogen light source
- ▼ Individual segment control
- ▼ Polarising filter set and diffuser available
- ▼ Working distances: 35-120 mm or 120-300 mm
- ▼ Mounting diameter: Ø 66 mm (various adapter)

## LED HIGH-POWER SPOTS



### LED High-Power Spot (HPS)

- ▼ Illumination of small light fields (15 mm)
- ▼ Comparable to 150 W halogen light source
- ▼ Colour temperature: 5.900 K or 4.000 K
- ▼ Flexible cables
- ▼ Attachment through spot holder



### LED High-Power Spot, 2-arm

- ▼ Homogeneous illumination of small light fields (15 mm)
- ▼ Comparable to 150 W halogen light source
- ▼ Colour temperature: 5.900 K or 4.000 K
- ▼ Usage of either one of the spots or both at the same time possible
- ▼ Stable mounting on microscope stand
- ▼ Cable fed into the flexible arms
- ▼ Compact control unit

## LED BACK LIGHT



### LED Universal Back Light

- ▼ Homogeneous illumination
- ▼ Daylight quality, 5.500 K
- ▼ Infinitely variable brightness control
- ▼ Universally applicable
- ▼ Positioned below object field of microscopes
- ▼ Slim design

## CONTROL UNITS



### Segment Control Unit

The segment control unit has a button for segment selection, which is displayed by four LEDs.

- ▼ Separate buttons for left/right rotation of the segment
- ▼ Auto-rotation
- ▼ Rotation in 45° or 90° steps (segment size: semi, quarter or one-eighth circles)
- ▼ Infinitely adjustable dimmer
- ▼ No flickering with cameras due to direct-current excitation
- ▼ Permits operation of two light heads
- ▼ Wide-range power supply 100 - 240 V, ESD socket.

### High-Power Spot Control Unit

This control unit can be connected with up to two High-Power Spots. Either only one spot is activated or both spots can be used alternatively or simultaneously (with the selected setting shown on the display). This control unit permits infinitely variable brightness control.

### Combi Control Unit

Up to two High-Power Spots plus one LED component (e.g. a ring light) with a maximum of 40 LEDs can be connected to this control unit.

The LED combination control unit can be operated in normal or storage mode. In normal mode, any desired position can be entered, while in the storage mode, the selected positions are stored for use at a later time.

# ALL DEVICES — DATA AND EQUIPMENT

## Components

Lighting	LED Ring Light 66/40 (619-20-002)	LED Ring Light 66/80 (619-20-060 working distance 35-120 mm 619-20-061 working distance 120-300 mm)	LED High-Power Ring Light (10102 HPRL 10106 HPRL USB/foot switch)
Diodes	40 white LEDs	80 white LEDs	8 High-Power LEDs
Colour temperature	5.000 K	5.000 K	ca. 5.800 K
Dimensions	outside: Ø 94 mm x 25 mm inside: Ø 66 mm	outside: Ø 112 mm x 27 mm inside: Ø 66 mm	outside (WxDxH): 107 x 128 x 31 mm inside: Ø 66 mm
Mounting	circumference clamping with spring and screw	circumference clamping with spring and screw	circumference clamping with spring and screw
Working distance	55-120 mm from ring light	35-120 mm or 120-300 mm from ring light	adjustable, 2 working distances: 45-130 mm and 80-300 mm

Lighting	LED High-Power Spot (619-20-037 5.900 K, 619-20-053 4.000 K)	LED High-Power Spot, 2-arm (619-20-057 5.900 K, 619-20-055 4.000 K)	LED Universal Back Light (619-20-052)
Diodes	1 x High-Power LED	2 x High-Power LED	40 white LEDs
Colour temperature	5.900 K / 4.000 K	5.900 K / 4.000 K	5.500 K
Dimensions	Ø 25 mm x 51 mm		Ø 120 mm x 19 mm
Connections	M6 thread for holder		
Mounting	via spot holder	via incident light adapter	

Control Unit	Segment (619-30-020.99)	High-Power Spot (619-30-024.99), for max. 2 High-Power Spots	Combi (619-30-025.99), for max. 2 High-Power Spots and 1 Ring Light/Back Light
Power supply	24 V DC ± 5 %, hollow pin 5,5 x 2,1 mm 250 mA (for 40 LEDs), 500 mA (for 80 LEDs)	5 V DC ± 5 %, hollow pin 5,5 x 2,5 mm 1,2 A	24 V DC ± 5 %, hollow pin 5,5 x 2,1 mm 0,75 A
Dimensions (D x W x H)	95,5 x 64 x 29 mm	95,5 x 64 x 29 mm	126 x 52 x 45 mm
Connectors	2 x 9-pin miniature DIN socket	2x 3,5mm stereo jack	2x 3,5mm stereo jack and 1x mini-DIN
ESD connector	4 mm banana plug	4 mm banana plug	4 mm banana plug
Operation	Potentiometer wheel ca. 1–25 mA, with index markers, On/Off switch, 2 segment rotation pushbuttons (incl. autorotation)	Potentiometer, pushbutton for Port1/ Port2/On/Off with LED display	Potentiometer, 3 pushbuttons with LED display

## Accessories

### LED Ring Lights

Extension cord 0,5 m for ring lights 66/40 and 66/80	619-70-003
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#### Adapters:

66/58 for RL 66 mm to objective Ø 58 mm	595-32-258
66/60 for RL 66 mm to objective Ø 60 mm	598-32-043
Universal adapter for objectives Ø 38-58 mm	598-30-022
66 mm to thread M48 x 0,75 (SZ 51 and SZ 61, SMZ 445/SMZ-1)	598-32-049
66 mm to thread M55 x 0,75 (SMZ 645/660/745)	598-32-050

#### Diffusers:

for Ring Light 66/40	619-20-040
for Ring Light 66/80	619-20-044
for High-Power Ring Light	10104

#### Polarising filter sets:

Analyser and polariser for Ring Light 66/40	595-20-166
Analyser and polariser for Ring Light 66/80	619-20-022
Analyser and polariser for High-Power Ring Light	10103

### LED High-Power Spots

Polarising filter	OPP-00007
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#### Spot holders:

M6/M5, L = 85 mm	619-30-041
M6/M5, L = 200 mm	619-30-042
M6/M5, L = 300 mm	619-30-043

Base plate with M5 thread	619-30-007
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#### Adapters (for 2-arm):

Adapter for round columns Ø 25, 30, 32, 35 mm	619-20-049
SZ2-ST, C-PS, C-DS	619-20-048

# OVERVIEW OF THE ENTIRE SYSTEM

## Lighting

### LED High-Power Ring Light

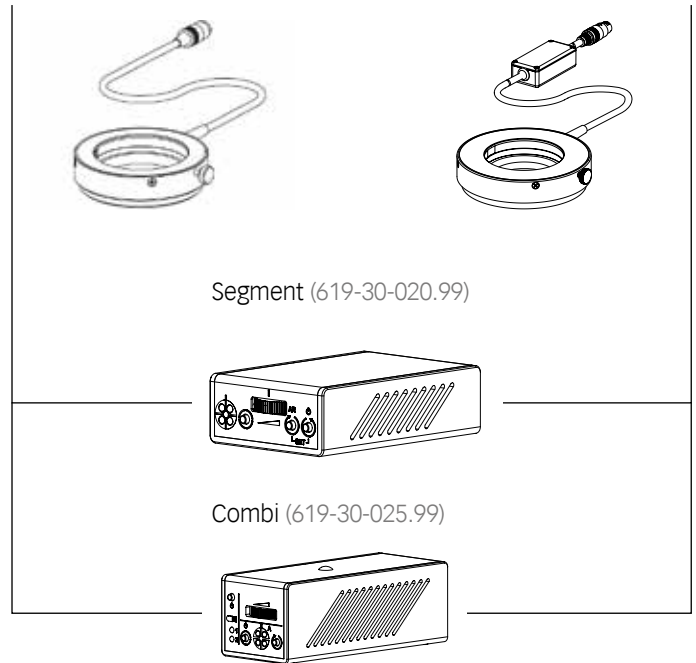
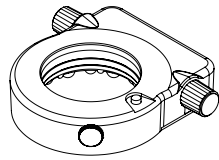
10102 HPRL  
10106 HPRL USB/  
foot switch

### LED Ring Light 66/40

619-20-002

### LED Ring Light 66/80

619-20-060 (35-120 mm)  
619-20-061 (120-300 mm)



## Control Units

## Accessories

Diffuser (10104)



Diffuser 66/40 (619-20-040)



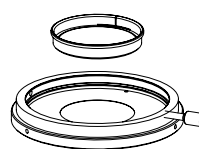
Diffuser 66/80 (619-20-044)



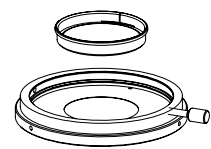
Polarising filter set (10103)



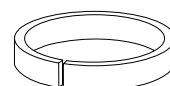
Polarising filter set 66/40  
(595-20-166)



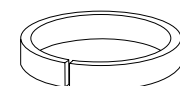
Polarising filter set 66/80  
(619-20-022)



Adapters (see p. 5)



Adapters (see p. 5)



## Sets

incl. control unit as specified and international plug-in power supply 100-240 V

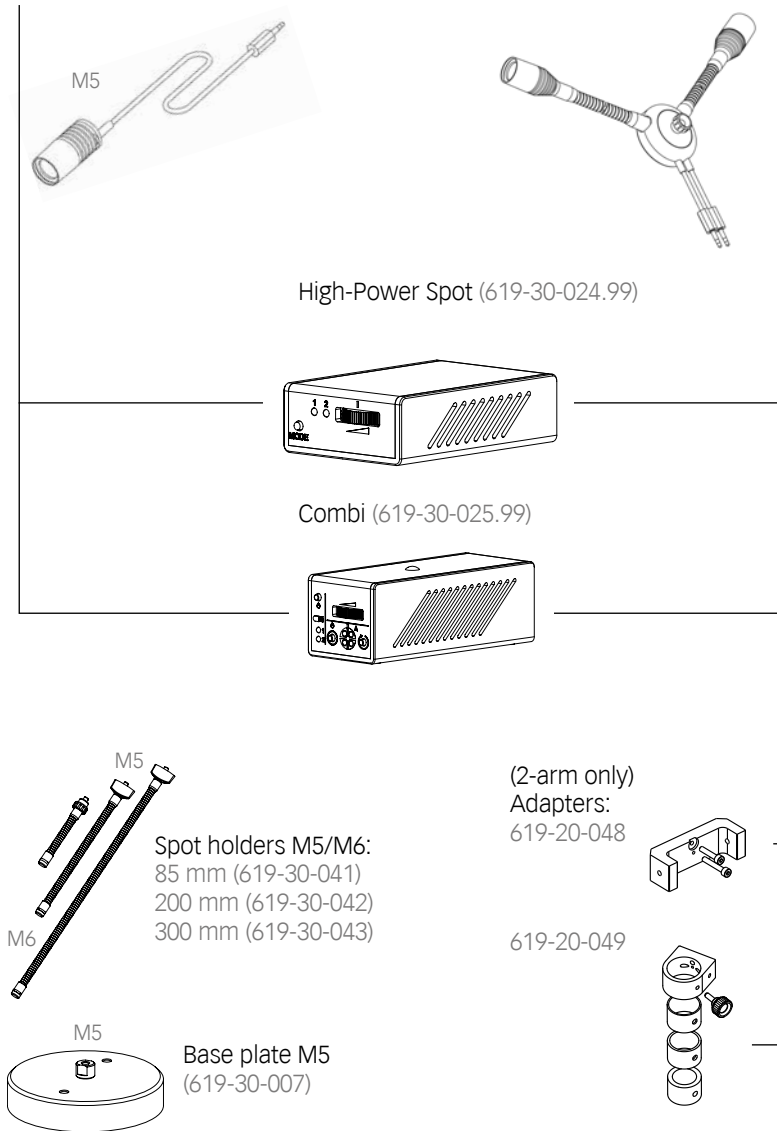
(10049) Set Ring Light 66/40  
Segment  
Working distance 55-120 mm  
incl. segment control unit

(10099) Set Ring Light 66/80  
Working distance 35-120 mm  
incl. segment control unit

(10100) Set Ring Light 66/80  
Working distance 120-300 mm  
incl. segment control unit

### LED High-Power Spot

619-20-037 (5.900 K)  
619-20-053 (4.000 K)

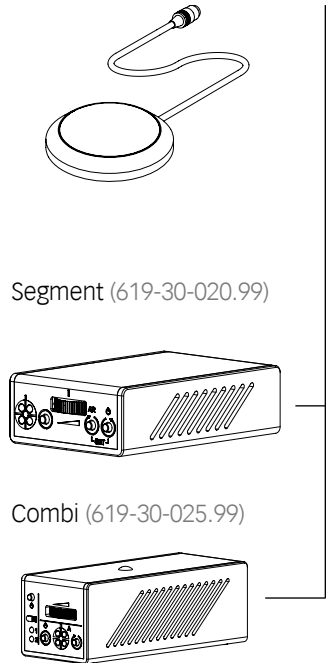


### LED High-Power Spot 2-arm

619-20-057 (5.900 K)  
619-20-055 (4.000 K)

### LED Universal Back Light

619-20-052



Polarising filter (OPP-00007)  
(no illustration)

(10035) Set 1 High-Power Spot 5.900 K

(10037) Set 2 High-Power Spots 5.900 K

(10044) Set 2 High-Power Spots 5.900 K  
incl. 2 spot holders and 2 base plates

all sets incl. High-Power Spot control unit

(10068) Set High-Power Spot 2-arm 5.900 K  
incl. High-Power Spot control unit

(10063) Set High-Power Spot 2-arm 4.000 K  
incl. High-Power Spot control unit

## About PHOTONIC:

**PHOTONIC** – a company of the **WILD** Group – is the illumination specialist for optomechatronic products and offers solutions for industrial, medical and life science applications as well as security technology. The company history dates back to the emergence of the optical industry. With the gathered experience we design and produce universal lighting modules, entire light sources, examination lights and safety-related products of international top class.

**PHOTONIC** stands for functional, economically superior products and invests constantly above average into the development of new products for various applications. This is one of many reasons why the company is among the leading providers worldwide in regard to fibre optics. With **PHOTONIC** as your partner we will find the best solution for your illumination challenge.

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