



## MODELS

**CLS 6000      CLS 9000**

**THE NEW GENERATION OF  
LED HIGH-PERFORMANCE COLD LIGHT SOURCES**



INTELLIGENT LIGHTING SOLUTIONS



# OUR NEW LED HIGH-PERFORMANCE COLD LIGHT SOURCES

## ZLED CLS 6000 AND ZLED CLS 9000

COLD LIGHT SOURCES ARE THE PERFECT SOLUTION FOR APPLICATIONS REQUIRING INTENSIVE, INFRARED-FREE LIGHTING IN WHICH THE LIGHT IS SELECTIVELY GUIDED TO THE OBJECT VIA FIBRE-OPTIC COMPONENTS. TODAY, INNOVATIVE COLD LIGHT SOURCES USE LEDS INSTEAD OF HALOGEN LAMPS.

WITH OUR NEW LED HIGH-PERFORMANCE COLD LIGHT SOURCES ZLED CLS 6000 AND ZLED CLS 9000, WE ARE ABLE TO GENERATE LIGHT WHICH IS AKIN TO DAYLIGHT AND OFFERS VERY HIGH LUMINOUS FLUX VALUES. IN THE PROCESS, THE ZLED CLS 9000 DELIVERS UP TO 900 LUMEN TO THE OUTPUT OF A FLEXIBLE LIGHT GUIDE WITH AN ACTIVE DIAMETER OF 9 MM. THE BRIGHTNESS CAN BE CONTROLLED VIA THE INCREMENTAL ENCODER OR ELECTRONICALLY VIA ONE OF THE INTEGRATED USB, CAN OR RS232 INTERFACES.

THIS LIGHT SOURCE IS IDEAL FOR USE PARTICULARLY IN THE AREAS OF MICROSCOPY, MACROSCOPY, MACHINE VISION, AS A LIGHT SOURCE FOR INDUSTRIAL AND MEDICAL ENDOSCOPY AND FOR ALL APPLICATIONS REQUIRING FLEXIBLE LIGHT TRANSPORTATION.



### MENU AND LCD DISPLAY

The menu navigation is displayed on the LCD display. Within the menu, users can program individual intensity settings to 6 memory locations and then recall them by repeatedly pressing the incremental encoder. In addition, the brightness control can be freely varied from fine increments of 1% up to larger steps of 5%. The display also shows if, for example, no light guide has been connected to the ZLED CLS („Light Guide!") or if the light has been switched off by means of the footswitch („Standby").

### INTERFACES

Both light sources are equipped with a USB interface. The ZLED CLS 9000 also comes with a CAN interface and an RS232 port. With the aid of these interfaces the light source can be connected to a PC, from where the light intensity can then be controlled. A footswitch can be connected to both types of light sources via another interface and can be used to switch the light on and off easily.





## COLOUR AND CONVERSION FILTERS

The three positions of the filter slider enable quick changes between the white light of the LED and up to two colour or conversion filters.

## ACCESSORIES

- Annular ring light (Ø 66/68.5 mm) including reduction ring, with an active light guide Ø of 9 mm
- Annular ring light (Ø 66 mm), with an active light guide Ø of 9 mm
- Gooseneck light guide, 2 arms, active Ø 4.5 mm per arm, length 600/600 mm
- Gooseneck light guide, 2 arms, active Ø 4.5 mm per arm, length 800/800 mm
- Gooseneck light guide, 2 arms, active Ø 4.5 mm per arm, length 600/800 mm
- Flexible light guide, 1 arm, active Ø 5 mm, length 1000 mm
- Flexible light guide, 1 arm, active Ø 9 mm, length 1000 mm
- Flexible light guide, 2 arms, active Ø 4.5 mm per arm, length 1000/1000 mm
- Colour filters: red, green, blue, yellow
- Conversion filter, "daylight", approx. 5600 K
- Conversion light filter, "halogen", approx. 3200 K
- Footswitch
- Focussing lens for light guides up to an active Ø of 5 mm
- Focussing lens for light guides up to an active Ø of 9 mm
- Polariser for light guides up to an active Ø of 5 mm
- Polariser for light guides up to an active Ø of 9 mm
- Polariser/analyser for split ring
- Various holders, articulating arm, base for articulating arm



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# CLS 6000

# CLS 9000

## ALL OF THE PRODUCT ADVANTAGES AT A GLANCE

- Brighter output than a 150 W (ZLED CLS 6000) or 250 W (ZLED CLS 9000) halogen cold light source with up to 70% lower running costs
- Maintenance-free; no necessity to change the light source due to the long service life (> 50,000 h)
- For additional user safety, the light is automatically switched off if the light guide is disconnected during operation
- Controllable via USB, CAN or RS232
- Filter slider with three settings
- Ultra-low-noise fan (assessed sound power level 36 dB(A))
- Device can be used anywhere in the world thanks to the internal wide-range power supply (100–240 V)
- The luminous flux of all devices is calibrated prior to shipment.

## TECHNICAL DATA

	ZLED CLS 6000	ZLED CLS 9000
Order number	4000.0000	4010.0000
Dimensions (WxHxD)	192 mm x 111 mm x 236 mm	
Weight	3.1 kg	
Cooling	Active cooling via ultra-low-noise axial fan (assessed sound power level 36 dB(A))	
Operating voltage, frequency	100 – 240 V $\pm$ 10%, 50 – 60 Hz	
Max. power draw	70 W	80 W
LED service life	> 50,000 h <sup>1)</sup>	
Luminous flux	ca. 650 lm <sup>2)</sup>	ca. 950 lm <sup>2)</sup>
Colour temperature	ca. 6200 K	
Max. usable active diameter of the light guide	9 mm	
Identification labelling/test mark	CE , eUL <sub>us</sub>	
EMC emission class	B	

<sup>1)</sup> Reduction of the light output to 70%

<sup>2)</sup> At the output of a ZLED light guide, 1 arm, flexible, active  $\varnothing$  of 9 mm, length 1000 mm



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