

**ilumLED – VIS Light Source**

(Article no. 1600000014A )

The ilumLED is a compact LED light source with four integrated LED chips. The four chips can be controlled independently of one another, and are homogenized thanks to special optics in order to avoid visible color fringes.

The ilumLED features the WISPEC-LED, which has been newly developed by IMM Photonics and boasts a continuous spectrum from 400 – 750 nm. Other wavelength combinations are available upon request.



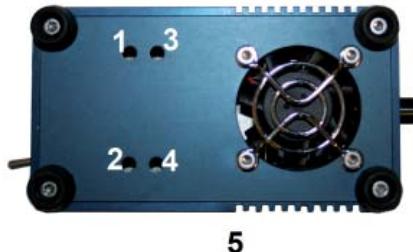
The ilumLED serves as a light source for microscopes and as lighting in places which are difficult to access. It is available with open light distribution or fiber-coupled. In combination with the WISPEC-LED, it serves as a halogen replacement without UV and IR components.

**1. Quick-start**

1. Plug in the 230-V mains plug of the supplied power adaptor
2. Connect the barrel connector of the power adaptor to the white-light source
3. Connect the optical output in an appropriate manner
4. Switch on the white-light source using the switch at the back

**2. Intensity regulation**

With the potentiometers (Illustration 1 / 1 - 4), the power is set separately for each of the four available LEDs:



1. Blue
2. 4500 warm-white
3. 6500 cold-white
4. cyan

Illustration 1: Underside view ilumLED

Using the potentiometer (5), which is accessible from the side, all 4 LEDs (with a dutycycle) are pulse-width modulated. By turning this potentiometer fully to the right, the pulse-width modulation (PWM) is deactivated and the light source is set to continuous working (CW) (as-delivered condition).

### 3. Specifications

The white-light source ilumLED contains the LED white-light module (article no. 1600000014A) as well as the printed circuit board for the LED white-light module (article no. 2000000204A). The source is supplied by the power adaptor 12 V / 2.5 A (article no. 8900000972).

#### Technical specifications LED white-light module (article no. 1600000014A)

Wavelength range	400 nm to 750 nm
Maximum luminous flux	> 100 lm
Max. CRI (Color Rendering Index)	> 90
Adjustable color temperature	2700 K bis 7800 K
Color mixture	Homogeneous dispersion with color-mixing optic
Max. current per chip	1000 mA (blue 700 mA)
Over temperature probe	NTC-resistor thermally connected with the LED

#### PCB for LED white-light module (article no. 2000000204A)

Max. current	1,7 A
Over temperature protection	If the temperature at the LED exceeds approx. 90 °C, the PCB shuts down. To reset the protection, switch off and then switch on the PCB.
Brightness adjustment	The current for the individual LED chips can be separately adjusted using potentiometers (dimming factor 1:20). In addition, the brightness of the entire spectrum can be set using a joint potentiometer via PWM-control (1 kHz), during which the color temperature remains almost constant! (dimming factor 1:200).

#### Power adaptor 12 V / 2.5 A (article no. 8900000972)

Power supply	Power adaptor 12 V / 2.5 A, barrel connector (inside diameter 2.1 mm / outside diameter 5.5 mm)
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#### Casing white-light source entire system

Dimensions	Length = 14 cm x width = 6.5 cm x height = 5.5 cm
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