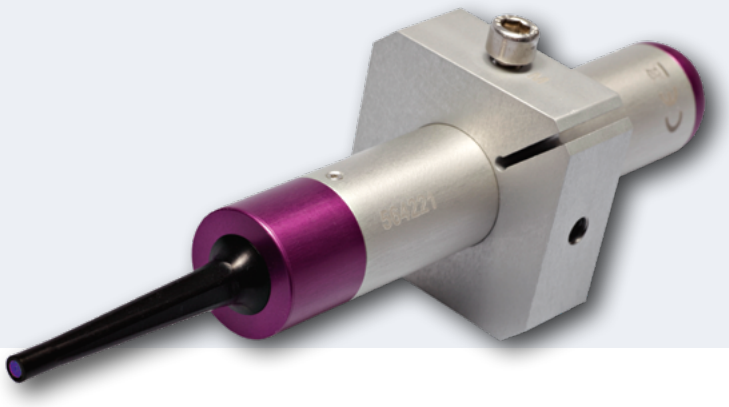
imm photonics

ilumCURE industrial



ilumCURE industrial is a USB interface controlled LED illumination system for curing of UV adhesives reproducibly with high intensity at a central wavelength of 365 nm or 405 nm.

In automated manufacturing processes up to 127 ilumCURE devices are controlled individually from a single PC to perform punctual or wide area exposures with adjustable intensity and duration.

The operating states of the devices can be monitored remotely to detect issues within automated production. Reproducible hardening processes are ensured by a controller-operated LED current measurement and by an overheat recognition. The longevity of the devices is ensured by a robust aluminum housing, an adequate thermal management and an electronic surge protection.

With the available accessories the devices of ilumCURE industrial Series are highly customizable to existing production environments. The provided Software Development Kit allows easy integration of the devices functionalities into your process-specific automation programs.

Wavelength	**365 nm**	**405 nm**
Art. No.	**1600000070**	**1600000077**
LED		
UVA Power	250 mW (typ.) at 100 % adjusted intenity	290 mW (typ.) at 100 % adjusted intenity
Lifetime	> 7000 h at 80 % LED emission	
Control		
Interface	USB 1.0 - USB 3.0, USB 3.0 preferred	
Supported Windows Versions	XP (32 bit), 7 (32 and 64 bit), 8 (32 and 64 bit), 10 (32 and 64 bit), 11 (32 and 64 bit)	
Max. number of devices per PC	127	
Communication	Via functions of ilumCURE.dll file	
High Power LED (PC writing)	1 = on, 0 = off	
Illumination time (PC writing)	1.0 s - 120.0 s, resolution 0.1 s	
Intensity (PC writing)	10 % - 100 %, CW dimmed, 10 % resolution	
Beep signal (PC writing)	1 = on, 0 = off, at end of illumination	
High Power LED status (PC reading)	1 = on, 0 = off, polling	
Settings actual (PC reading)	Illumination time, intensity, beep	
Device data (PC reading)	Serial number, firmware version	
Interface data (PC reading)	Virtual COM port, number of devices	
Software and interface errors (PC reading)	Differentiated, 8 errors	

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Power management		
Supply	USB 5 V / ≥ 500 mA, permanently connected	
Maximum on time of UV LED	50 % of the time, intensity ≤ 100 %, tested with cable length 1.5 m	
Buffer battery	Buffers LED current, Li-Ion 3.6 V / 2250 mAh, exchangeable	
Safety features		
High Power LED excess temperature	Switch-off at LED temperature > 50 °C	
LED current	Intensity 10 % - 30 %: Switch-off if nominal current value is exceeded by ±15 % Intensity 40 % - 100 %: Switch-off if nominal current value is exceeded by ±5 %	
Error indication	Beeping for 10 s: LED current error Beeping as long as LED too hot: excess temperature	
Buffer battery	Overvoltage and undervoltage, overcurrent, excess temperature	
General information		
Total device dimensions	Length 185 mm, diameter 25.0 mm	
Lighting tip dimensions	Total length of tip 53 mm, diameter at the outlet 5 mm	
Weight / material	Approx. 108 g / full-metal housing, anodised aluminium	
Operating / storage temperature	+5 °C to +45 °C / -10 °C to +70 °C	
Humidity	5 % to 95 % relative humidity (non-condensing)	
CE conformity	Approved	
Included in delivery scope	USB cable type A / B (1.5 m) USB flash drive with Software Development Kit and LabVIEW programming example	
Available accessories	Variolens W (Art. No. 1600000064) Variolens N (Art. No. 1600000071) Moun-ting clamp M6, UNC ¼-20 (Art. No. 1600000055)	

Subject to technical modifications. As per April 2022.

STRAIGHTFORWARD CONTROL

- High Power LED is switched on or off via software
- Illumination time and intensity is adjustable
- Status requests (parameterization, LED on / off and others)
- Easy integration in various source codes (e.g. from Labview, C#, Python or other windows compatible programming languages)

SECURE MOUNTING

- Mount by direct clamping of the round device sleeve
- Mount alternatively with optional available holding clamp (screwable with M6 or ¼ -20 UNC, adequate heat transfer)

EXCHANGEABLE OPTICS

- Punctual illumination with standard optics
- Homogeneous illumination of wide areas using the optional available, focusable Variolenses

NOTES

The above product specifications are subject to change without notice.
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