USPOT & USPOT-WINDOW

Very Powerful UV LED curing spotlight

Full UV range available: UVC, UVB and UVA

Long lifetime & few maintenances thanks to LED technology

Easy-to-use with a PLC thanks to integrated smart electronics.

Made In France

Electronics	Power supply	24 VDC ± 10% (maximal power consumption: 36W)
	Connector	M12 – 5pins male for power and signals
	Illumination mode	Continuous with a direct DIM signal [0-24V]
Optics	Wavelength	UVC: 275 nm - UVB: 305 nm - UVA: 365, 385, 395, 405 nm - VIS: 465 nm
	Irradiance	Up to 6000 mW/cm² in the UVA range Up to 150 mW/cm² in UVC & UVB range
Mechanics	Width x Height x Length	65mm x 65mm x 171mm (x 134mm for the WINDOW version)
	Weight	850 g
	Material	Device body: Aluminum alloy
	IP rating	IP40
Environment	Operation	Temperature: 10°C to 35°C – Humidity: 20% to 80% humidity (with no condensation) – Altitude: Up to 2000m
	Regulations & marking	CE - UKCA - FCC - ICES-3/NMB-3
	Environmental standards	RoHS III Directives - REACH Regulation - WEEE Regulation

10 Avenue de Norvège
Parc des Erables – Bât. B6
91140 VILLEBON-SUR-YVETTE
FRANCE

Tel: +33 (0)9 72 52 70 02
Email: contact@uwave.fr
Web: www.uwave-uv.com

Product reference

Standard USPOT version with optical system:

USPOT - XXX

WAVELENGTH (nm):
- 365
- 385
- 395
(UVA)
- 405
- 465 (BLUE)

WINDOW version without optical system:

USPOT - XXX - WINDOW

WAVELENGTH (nm):
- 275 (UVC)
- 305 (UVB)
- 365
- 385
- 395
(UVA)
- 405
- 465 (BLUE)

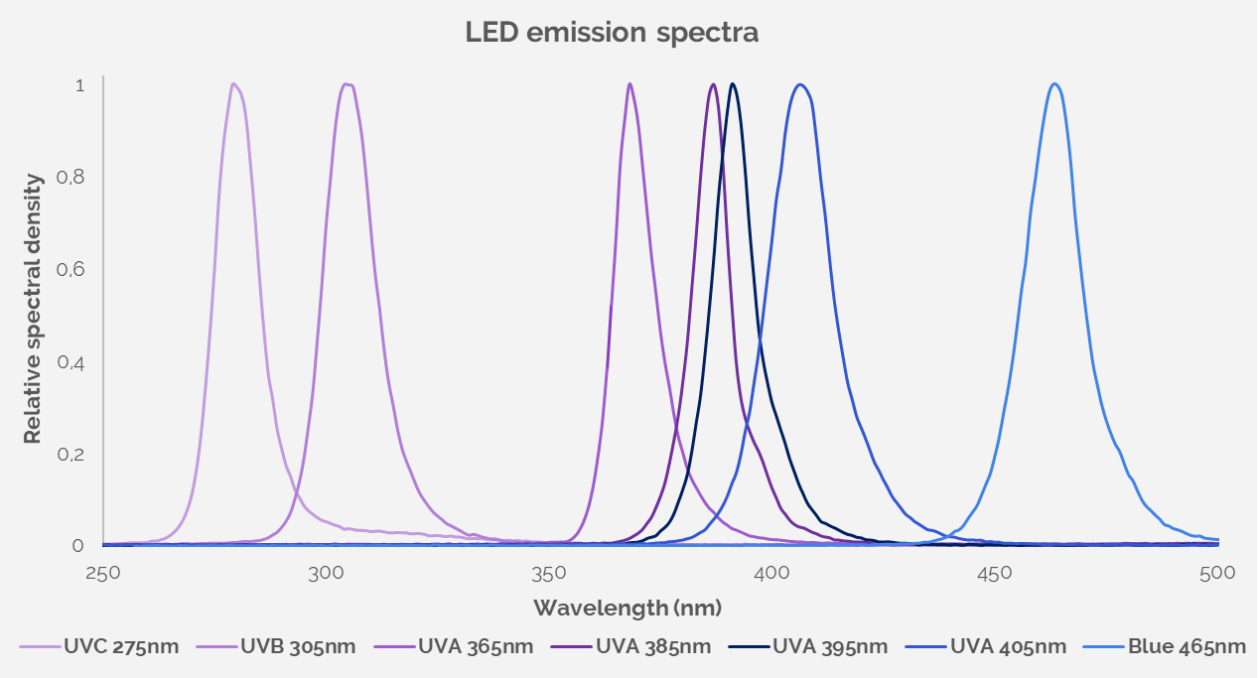
WINDOW version available into a complete KIT for manual use:

KIT - USPOT - XXX - WINDOW

WAVELENGTH (nm):
- 275 (UVC)
- 305 (UVB)
- 365
- 385
- 395
(UVA)
- 405
- 465 (BLUE)

Optical considerations

LED spectra



For other wavelengths (UVC / UVB / UVA / VISIBLE / IR), feel free to ask us!

Optical versions available

Thanks to UWAVE expertise and know-how in UV LED lighting manufacturing, there are two optical versions available: USPOT or USPOT-WINDOW.

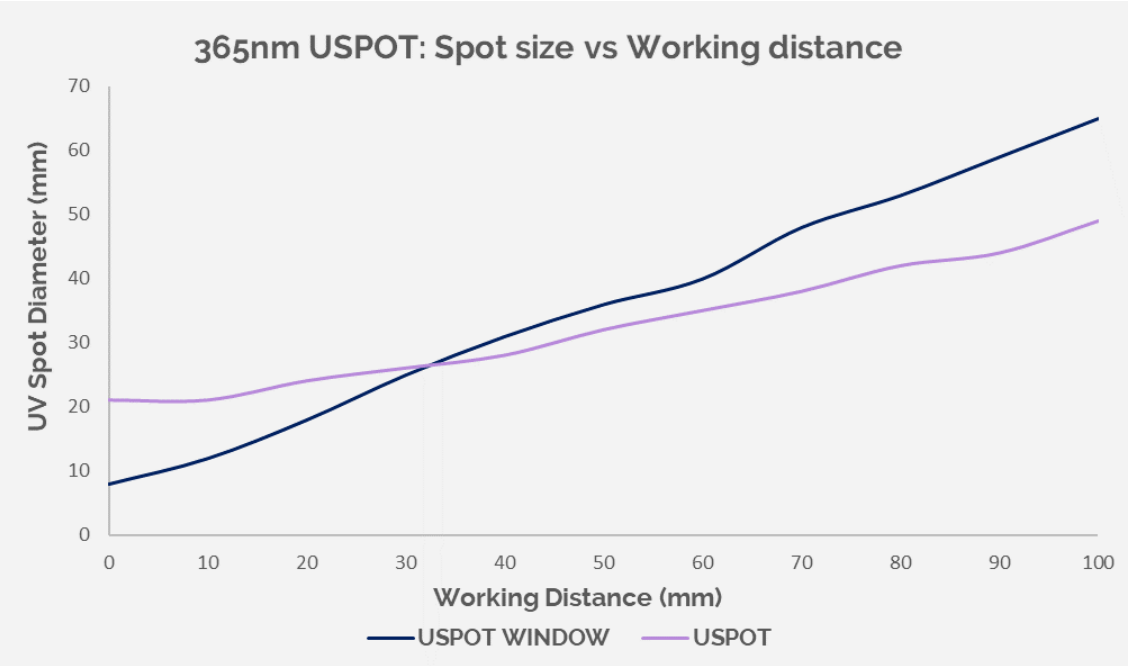
USPOT

Features an integrated optical system to keep a concentrated and powerful UV light on a long working distance.

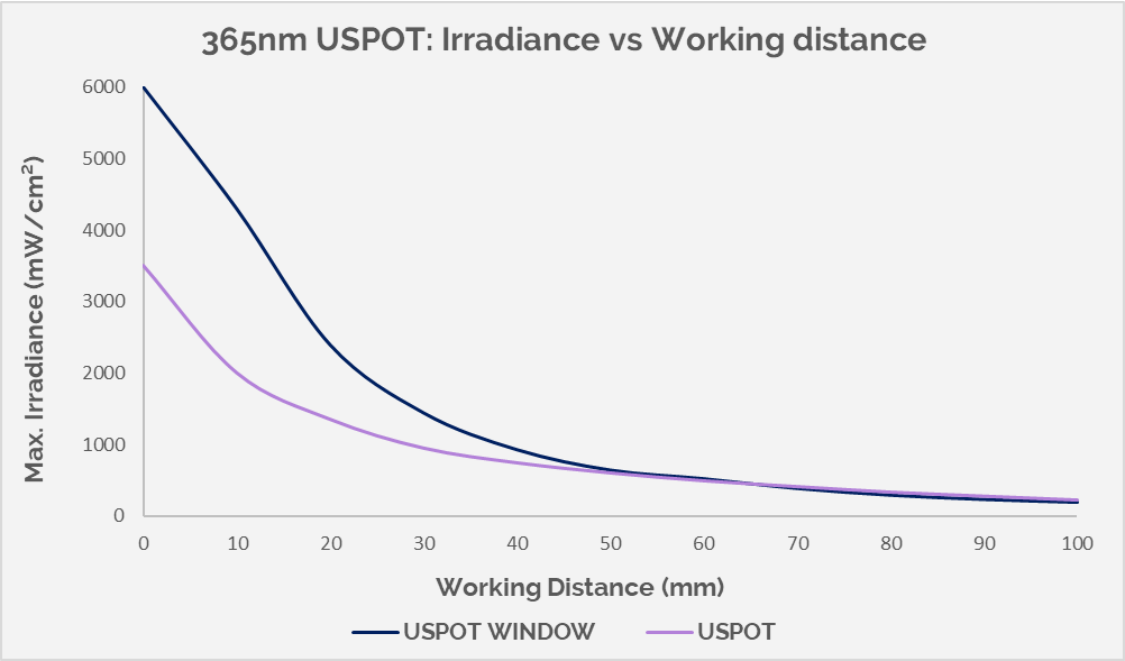
USPOT-WINDOW

Offers a more dispersive light distribution which is ideal to work close when high level of irradiance is needed.

UV spot size



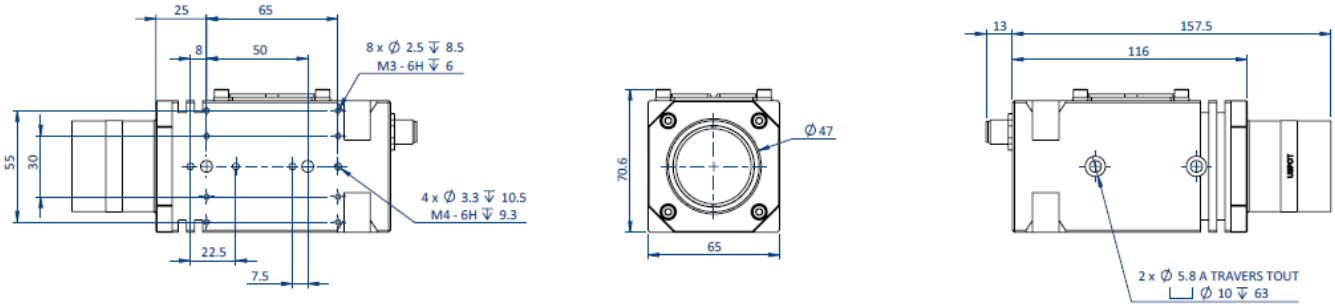
Photometry



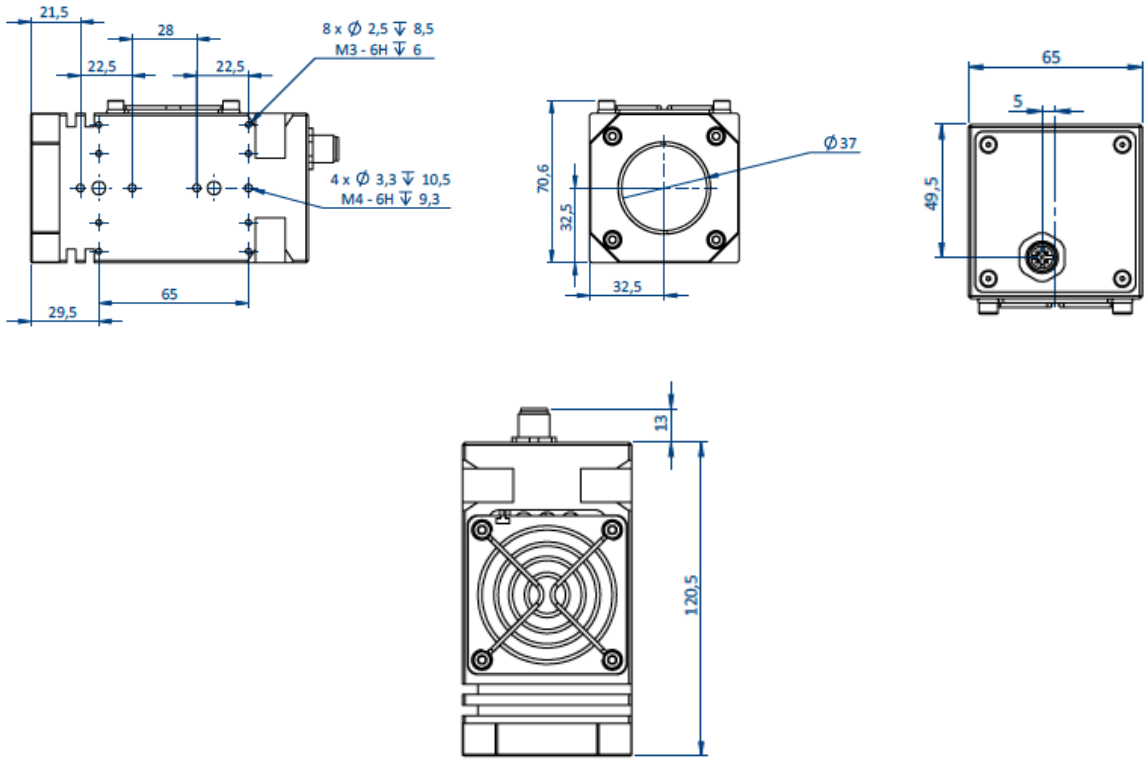
Curve plotted for UVA wavelength. For UVC & UVB irradiance, please divide the irradiance value by a factor of 40. Radiometer: GIGA HERTZ OPTIK RCH-116 (June 2023). For the UV spot graph, the spot size is the exposed area where the irradiance is higher than 50% of the maximum irradiance.

Mechanical considerations (mm)

USPOT-XXX



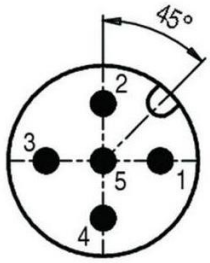
USPOT-XXX-WINDOW



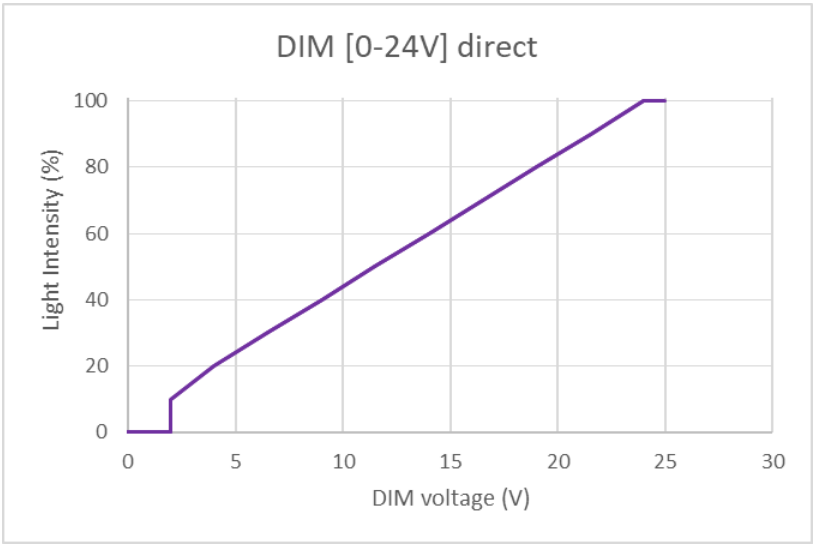
Electronical considerations

Wiring layout

The USPOT requires 24V DC input power. It integrates smart electronical board to achieve stable optical power and exploitable output signals. The USPOT can be managed with a control unit (UPOWER – please refer to accessories part of this datasheet) or without a control unit through PLC wiring.

Contact arrangement	Pin number	Cable color	Designation
 Male M12 5pins	1	Brown	Power supply Input – 24V DC (1,5 A max)
	2	White	UV LED ON output – 24V DC if device is currently emitting UV or 0V DC if UV LED are off.
	3	Blue	Power supply Input – 0V DC (GND)
	4	Black	Dimming Input – [0-24V] direct
	5	Gray	TEMPERATURE ERROR output – 24V DC if LED temperature is correct or 0V DC if device overheats.

Intensity Control (DIM signal)



Other Dimming signals are available upon request: 0-24V indirect, 0-10V direct, 0-10V indirect, 0-5V direct or 0-5V indirect.

KIT

In order to allow facilitated manual use of the USPOT-XXX-WINDOW, UWAVE has developed a complete kit which contains the following components:

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Accessories

UWAVE offers a wide range of accessories to complete its UV LED lighting solution:

Cables 	One side with bare wire (towards PLC): **UCAB - M12 - FD - 5 - D - L A** 2 5 Cable length in meters 10 Both sides connector (power supply link): **UCAB - M12 - FM - 5 - DD - L A** 2 5 Cable length in meters 10
Compact power supply	USPWR-36W-24V-102-EU for ON/OFF control of x1 USPOT.  UDIMMER can be added to manually adjust UV power through dimming signal. 
Easy-to-use power supply	UPOWER-50W-24V-USPOT for control of x1 USPOT. 
Advanced power supply	UPOWER-0200-24-xM12 for simultaneous control of x1, x2 or x4 USPOT. UPOWER-0200-24-xM12-I for independent control of x1, x2 or x4 USPOT.  *For other controlling configurations, please contact directly UWAVE team.*

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UV security

UWAVE products come under the standard DIN EN 62471:2008 which classified sources of optical radiation into risk groups subject to their potential photo biological hazard. Due to the emission of high UV irradiation, our products belong to Risk Group 3 (hazardous even for momentary exposure) therefore special safety measures, detailed in the following, must be observed.

Thanks to its experience and knowledge about UV risks, UWAVE offers to its customer a wide range of UV protections & services:

Eyes protection	UGLASS-02: To protect eyes from direct rays. 	UGLASS-03: To cover all the face. 	
Body protection	UGLOVE-01: to protect hands. 	UV-SHIELD: To protect all workers around. 	
UV measurement	EIT LEDCURE: UV values recording. 	GIGAHERTZ OPTIK: Direct UV value reading. 	
UWAVE expertise	EXPOSURE LIMIT VALUE  According to European Directive 2006/25/EC.	PERFORMANCES QUALIFICATION  Monitoring of all performances of your device.	MAINTENANCE & REPAIR  Preventive maintenance on site & LED repair service.