UCUBE-15 DATASHEET

Very Powerful UV LED curing floodlight

Full UV LED 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	48 VDC ± 10% (maximal power consumption: 260W)
	Connector	SUBD13W3 – 13pins for power and signals
	Illumination mode	Continuous with a direct DIM signal [0-10V]
Optics	Wavelength	UVC: 255, 265, 275 nm UVB: 295, 305, 325, 340 nm UVA: 365, 385, 395, 405 nm VIS: 450, 465 nm (Blue), 525 nm (Green), 625 nm (Red), Other on request.
	Irradiance	Up to 2000 mW/cm² in the UVA range Up to 100 mW/cm² in UVC & UVB range
Mechanics	Width x Height x Length	174mm x 174mm x 183mm
	Weight	4,0 kg
	Material	Device body: Aluminum alloy
	IP rating	IP4X
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

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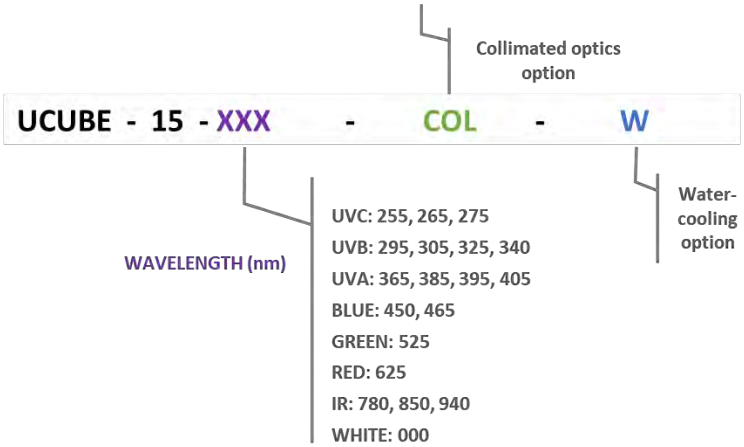
Tel: +33 (0)9 72 52 70 02
Email: contact@uwave.fr
Web: www.uwave-uv.com

Product reference

UCUBE-15 version:



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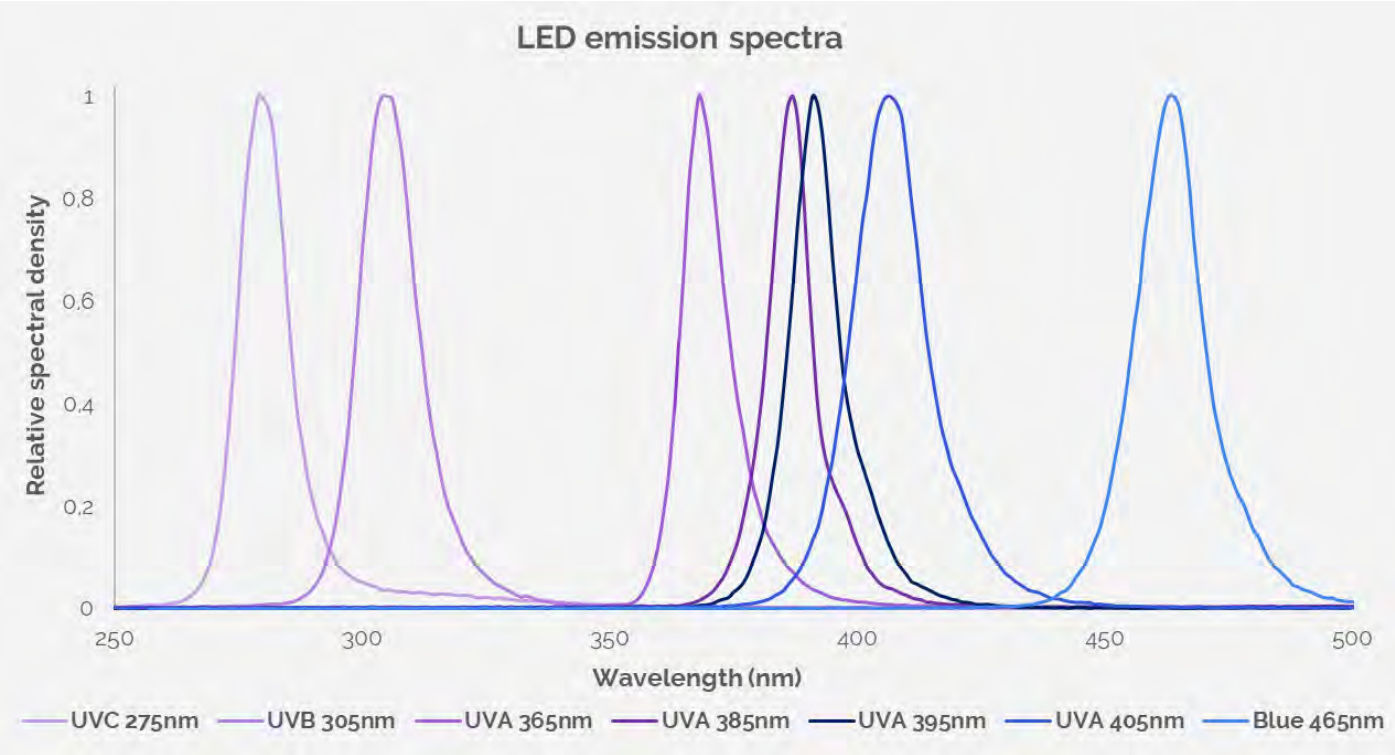
Optical characteristics

LED spectra



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

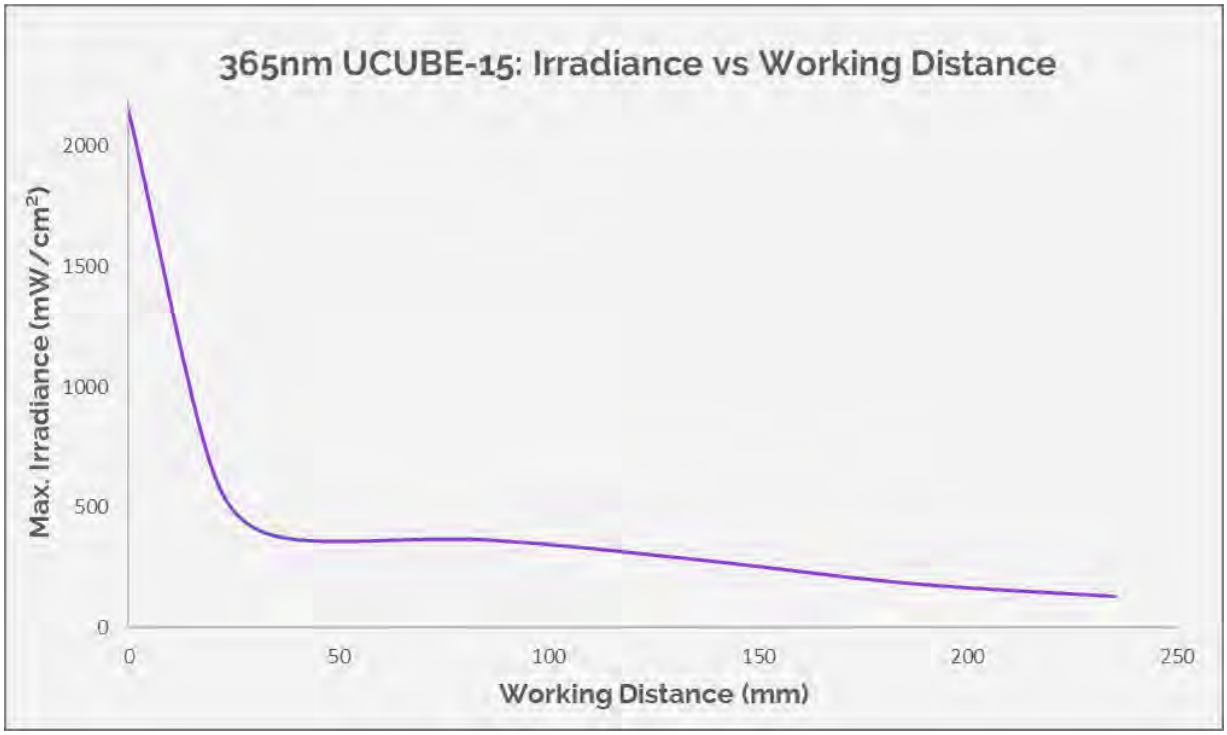
Collimation optics option (-COL)

The UCUBE-10-XXX and the UCUBE-10-HP-XXX have a dispersive UV illumination, but an optional collimation optical system (6° light beam) can be added to strongly increase irradiation uniformity.

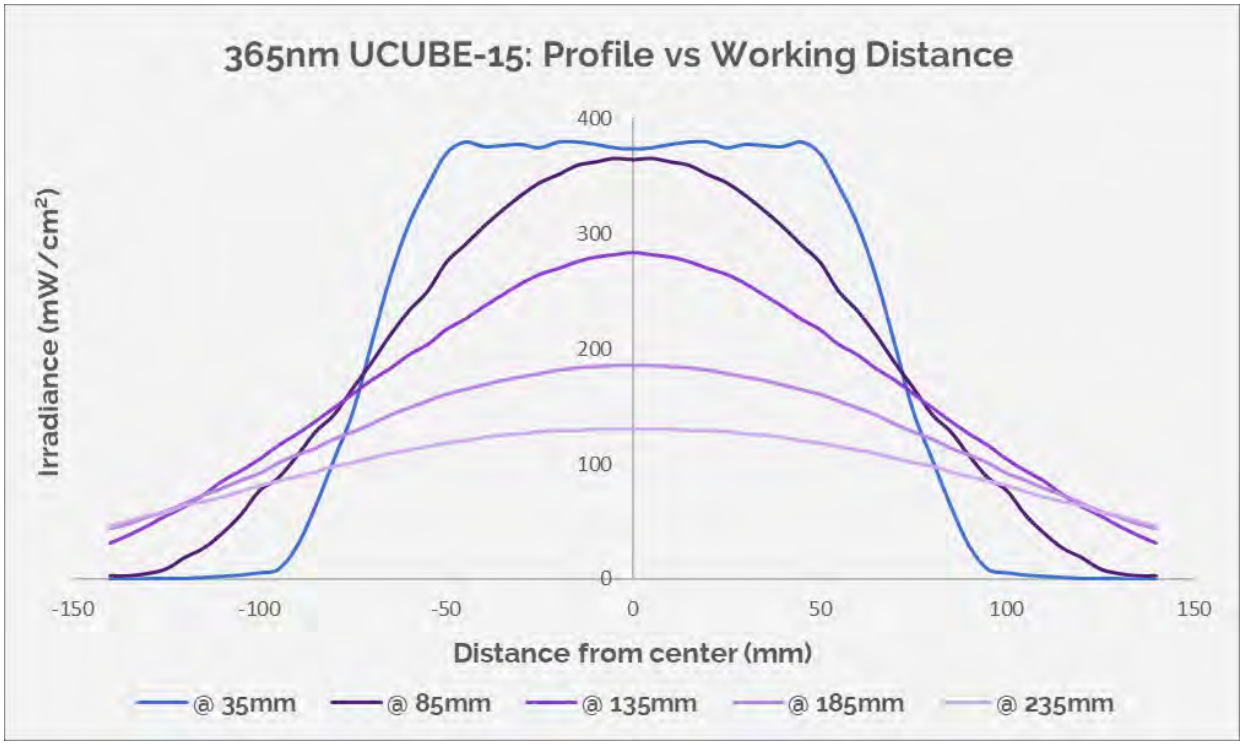
1 Without COL option

2 With COL option

Photometry



Irradiation profile



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.

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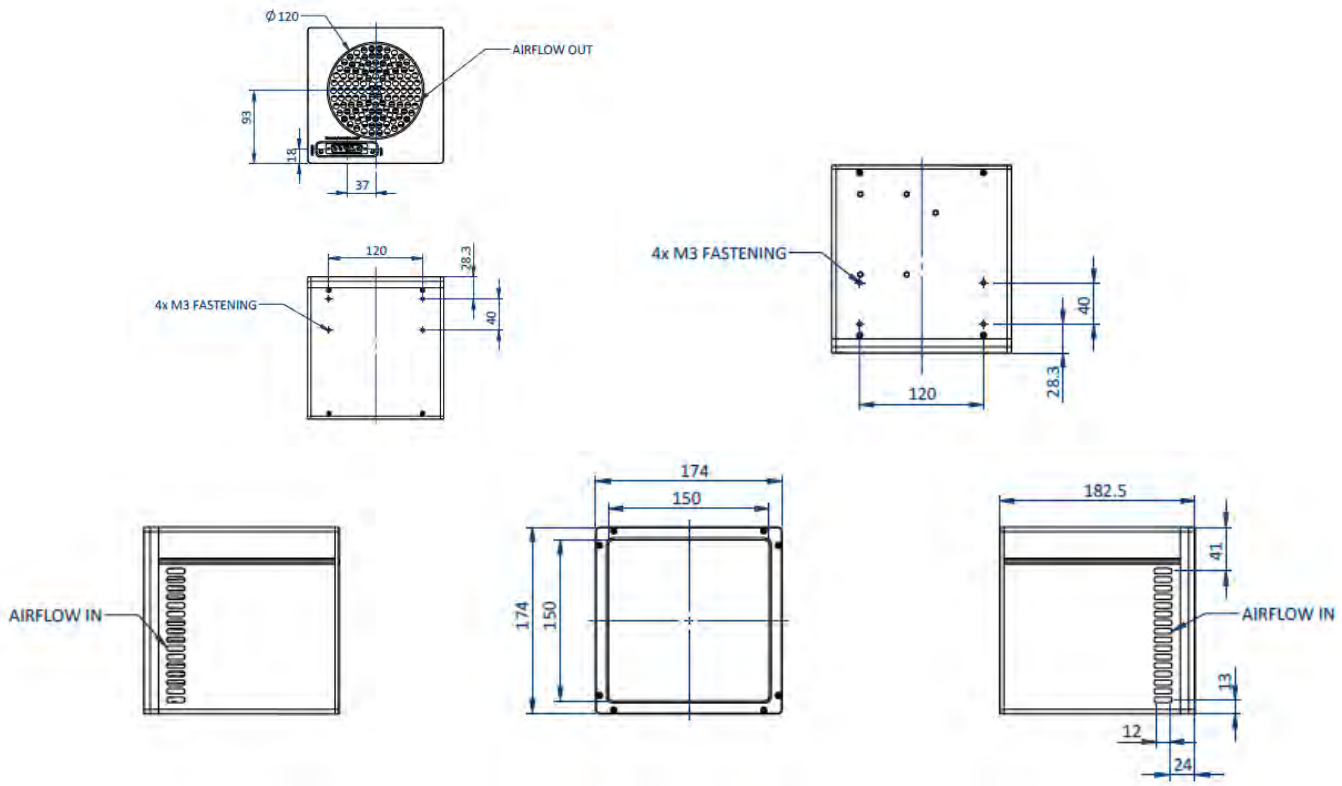
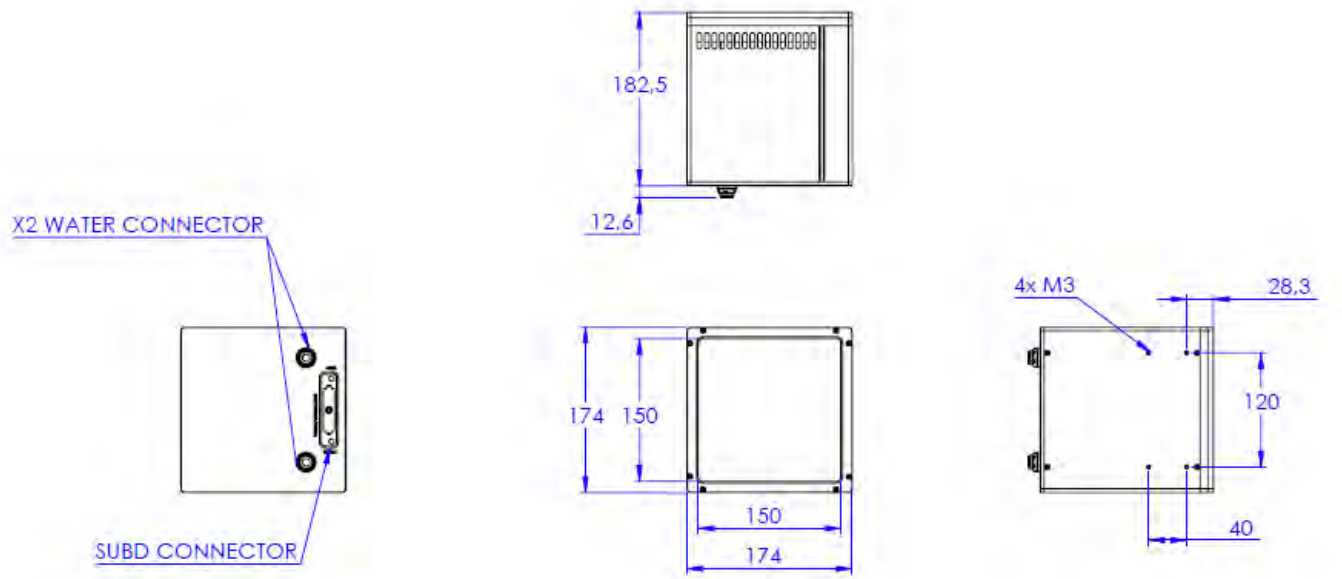
Mechanical dimensions

UCUBE-15 version:



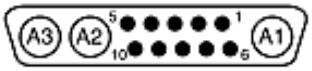
UCUBE-15 with WATER option:



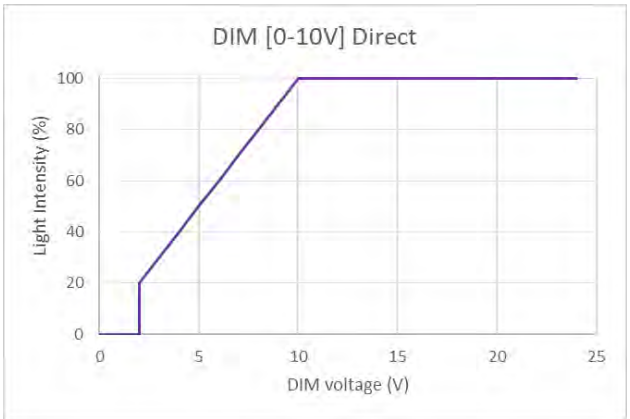
Electronical considerations

Wiring layout

The UCUBE requires 48V DC input power. It integrates smart electronical board to achieve stable optical power and exploitable output signals. The UCUBE 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 D-SUB 13W3pins**	A1	Brown	Power supply Input – 48V DC (5,3 A max)
	A2	Yellow & Green	Protective ground
	A3	Blue	Power supply Input – 0V DC (GND)
	1	White	Dimming Input – [0-10V] direct
	2	Blue	COMMON_OUT – Allows dry contact with pin 3, 6 and 7. 40mA maximum per contact.
	3	White	UV LED ON output – dry contact with pin 2 if device is currently emitting UV or opened if UV LED are off.
	4	Blue	Enable + (dry contact with pin 5 to allow UV insolation)
	5	White	Enable – (dry contact with pin 4 to allow UV insolation)
	6	Blue	TEMPERATURE ERROR output – dry contact with pin 2 if device is overheating or opened if LED temperature is OK.
	7	White	DRIVER ERROR output – dry contact with pin 2 if there is a driver issue is detected or opened if drivers are OK.
	8	Blue	Power supply input – 0V DC (GND)
	9 & 10	-	Not used

Intensity Control



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

Accessories

Cables 	One side with bare wire (towards PLC): **UCAB - SUBD - FD - 13W3 - D - L A** 2 5 Cable length in meters 10 Both sides connector (power supply link): **UCAB - SUBD - FM - 13W3 - DD - L A** 2 5 Cable length in meters 10
Advanced power supply	UPOWER-0600-48 for control of x1 UCUBE-15. UPOWER-600-48-2SUBD for simultaneous control of x2 UCUBE-15.  *For other controlling configurations, please contact directly UWAVE team.*
Easy-to-use oven with UCUBE-15 integrated on top	CHAMBER-15 to protect operators and to work in hidden time. A tray inside can be placed at different working distances from the UV light.  *For further information about CHAMBER-15, please refer to CHAMBER datasheet.*

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.

Knowing 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	LEDCURE: UV values recording. 	URAD-PR: 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.