



UPIN

Compact & Powerful UV LED curing line light

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.

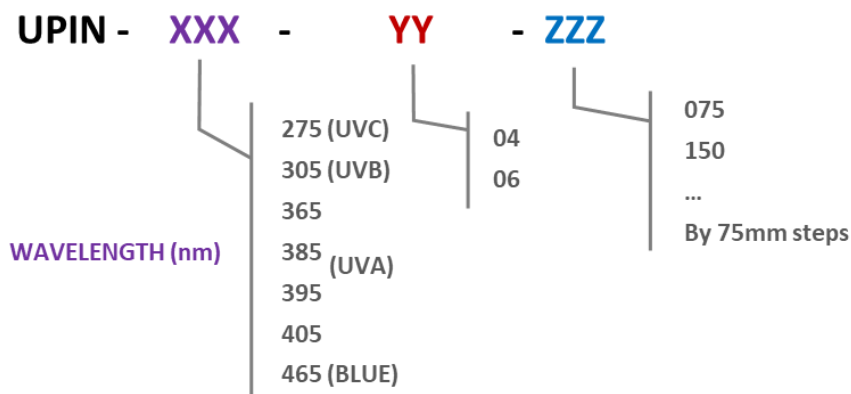


Electronics	Power supply	48 VDC \pm 10% (maximal power consumption: 160W for the 6W/cm ² version)
	Connector	SUBD13W3 – 13pins for power and signals
	Illumination mode	Continuous with a direct DIM signal [0-10V]
Optics	Wavelength	UVC: 275 nm - UVB: 305 nm - UVA: 365, 385, 395, 405 nm - VIS: 465 nm
	Irradiance	Up to 6000 mW/cm ² in the UVA range for the 6W/cm ² version. Up to 4000 mW/cm ² in the UVA range for the 4W/cm ² version. Up to 150 mW/cm ² in UVC & UVB range.
Mechanics	Width x Height x Length	78mm x 41mm x 217mm
	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



Product reference

UPIN standard version without optical system:



YY = Optical power version (4W/cm² or 6W/cm² pic irradiance)

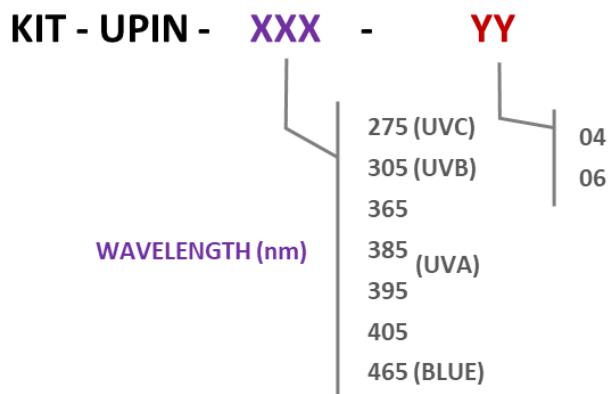
ZZZ = Optical length in millimeters (mm)

UVC and UVB (275nm and 305nm) wavelengths are only available into the 04 version.

Focalization optical system in option:



75mm standard version available into a complete KIT for manual use:



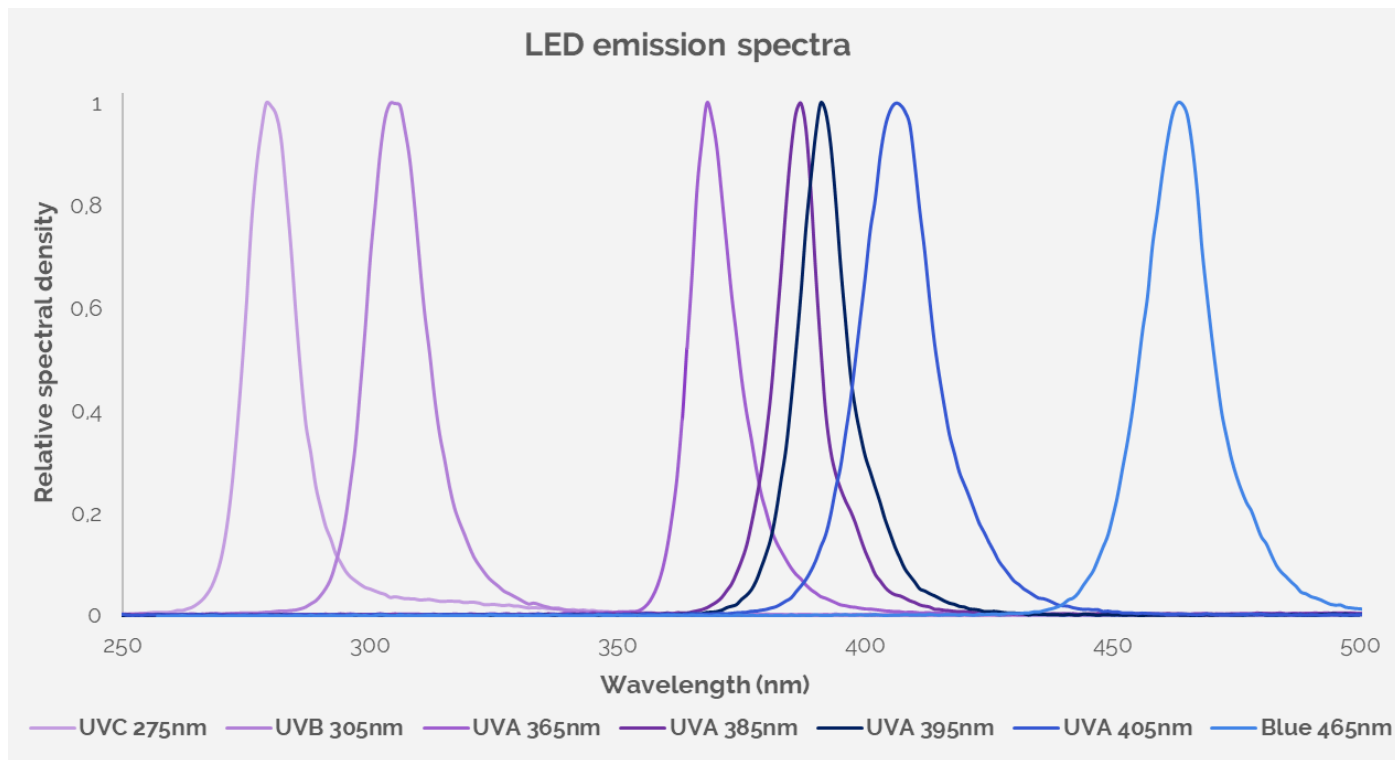
YY = Optical power version (4W/cm² or 6W/cm² pic irradiance)

UVC and UVB (275nm and 305nm) wavelengths are only available into the 04 version.



Optical considerations

LED spectra



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

Focal optics option (-FOC)

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



UPIN

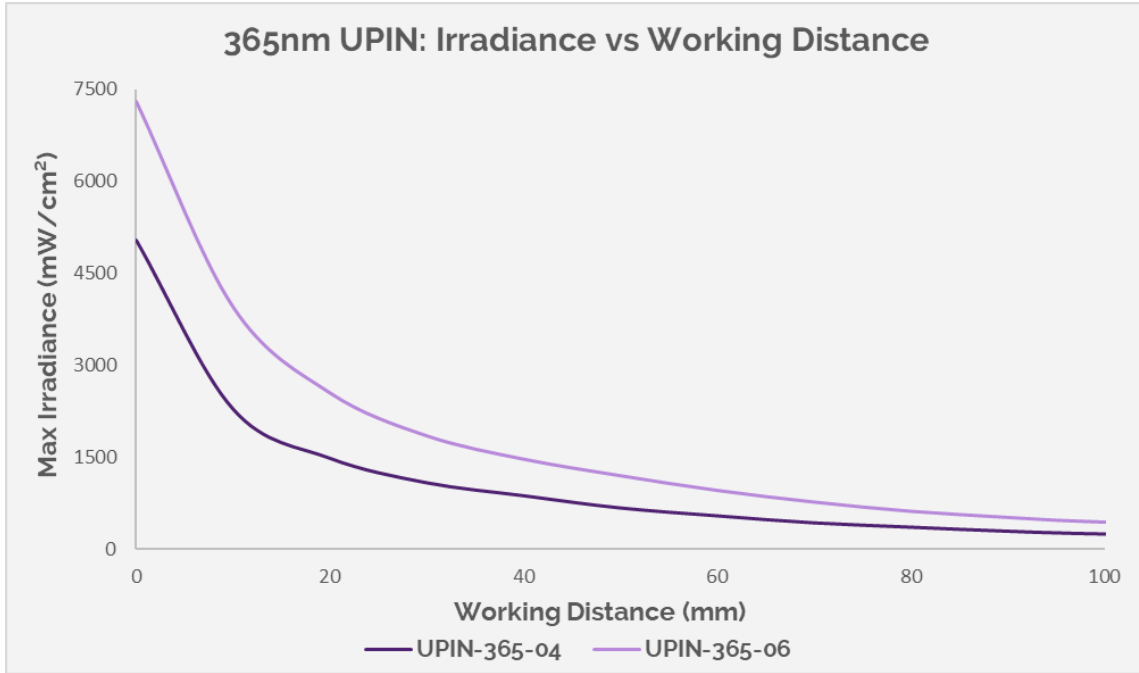
Offers a more dispersive light distribution which is ideal to irradiate on a wider area.



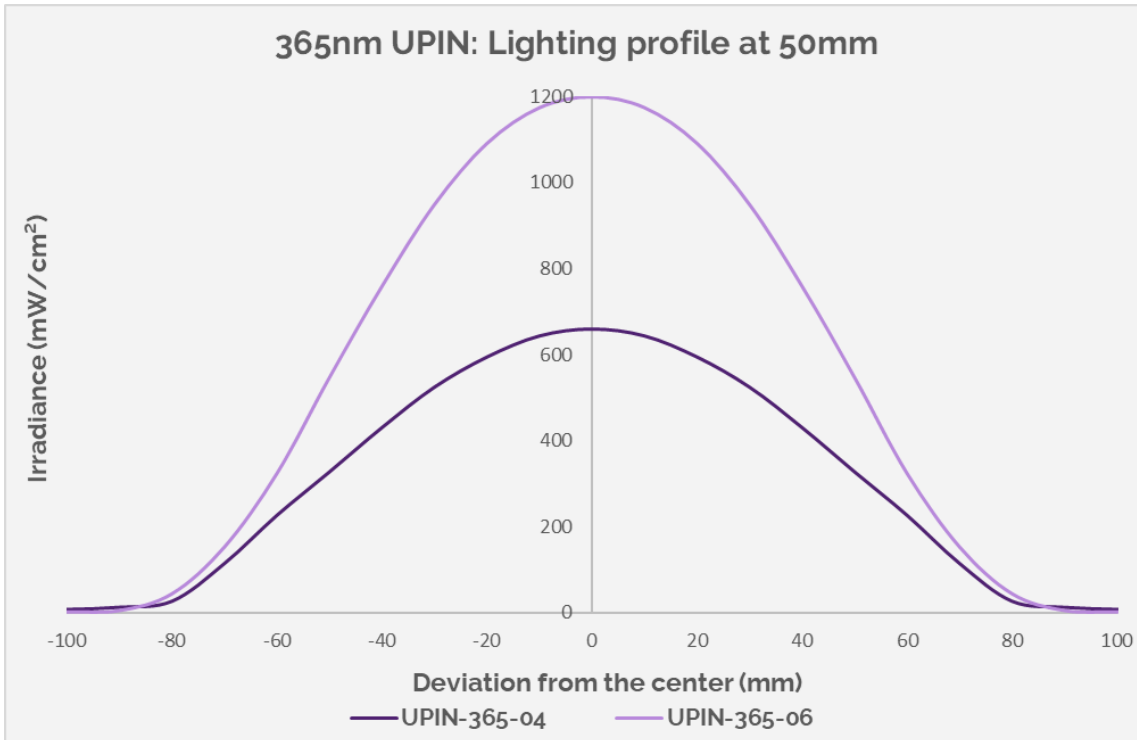
UPIN with optical system FOC

Optional FOC optical system gives a more powerful and thinner UV concentrated line.

Photometry



Irradiation profile

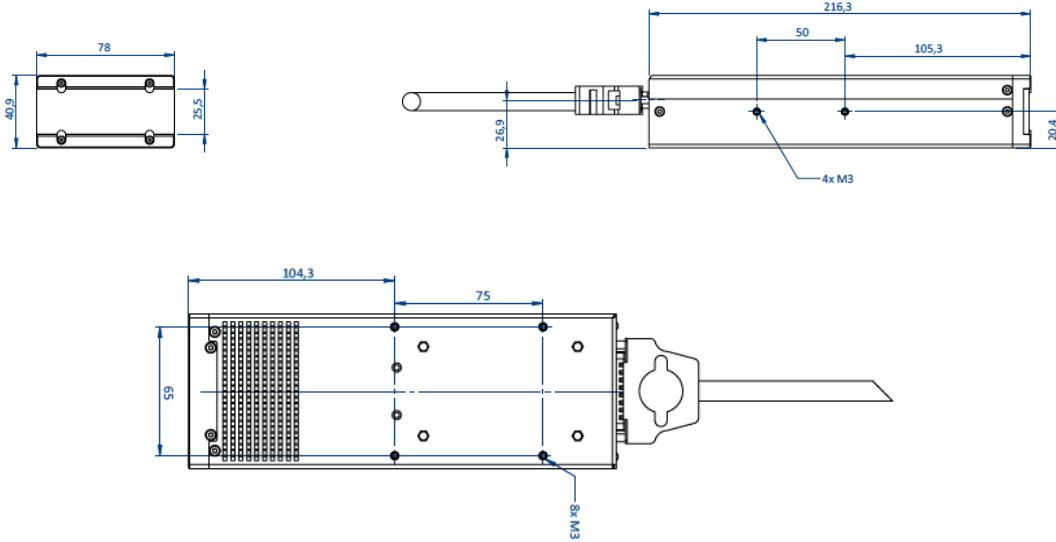


Curve plotted for UVA wavelength. For UVC & UVB irradiance, please divide the irradiance value by a factor of 40. Radiometer: GIGA HERTZ OPTIK RCH-116 (June 2023). For the UV spot graph, the spot size is the exposed area where the irradiance is higher than 50% of the maximum irradiance.

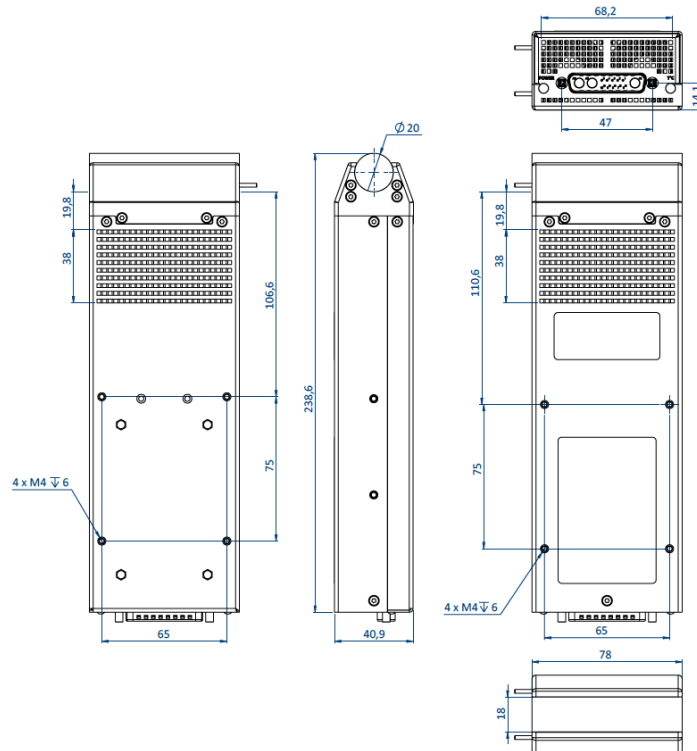


Mechanical considerations (mm)

UPIN standard version:



UPIN with optical system FOC:






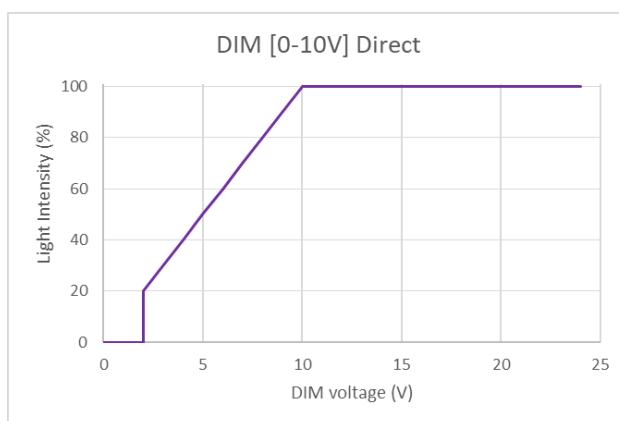
Electrical considerations

Wiring layout

The UPIN requires 48V DC input power. It integrates smart electrical board to achieve stable optical power and exploitable output signals. The UPIN 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
 <p>Male D-SUB 13W3pins</p>	A1	Brown	Power supply Input – 48V DC (3,3 A max per 75mm step)
	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.



KIT






In order to allow facilitated manual use of the UPIN-XXX-YY-075, UWAVE has developed a complete kit which contains the following components:





Accessories

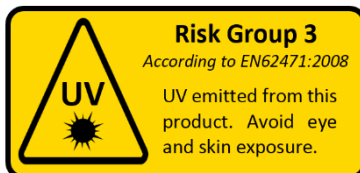
UWAVE offers a wide range of accessories to complete its UV LED lighting solution:

<p>Cables</p> 	<p>One side with bare wire (towards PLC): UCAB - SUBD - FD - 13W3 - D - L A</p>  <p>2 5 Cable length in meters 10</p> <hr/> <p>Both sides connector (power supply link): UCAB - SUBD - FM - 13W3 - DD - L A</p>  <p>2 5 Cable length in meters 10</p>
<p>Advanced power supply</p>	<p>UPOWER-0600-48-2SUBD for simultaneous control of up to x2 UPIN-XXX-YY-075. UPOWER-0600-48-2SUBD-I for independent control of up to x2 UPIN-XXX-YY-075.</p>  <p><i>For other controlling configurations, please contact directly UWAVE team.</i></p>
<p>Compact power supply</p>	<p>USPWR-90W-48V-102-EU for ON/OFF control of x1 UPIN-XXX-04-075. USPWR-160W-48V-102-EU for ON/OFF control of x1 UPIN-XXX-06-075.</p> 











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.