



UPIN

Compact & Powerful UV LED curing line light

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.

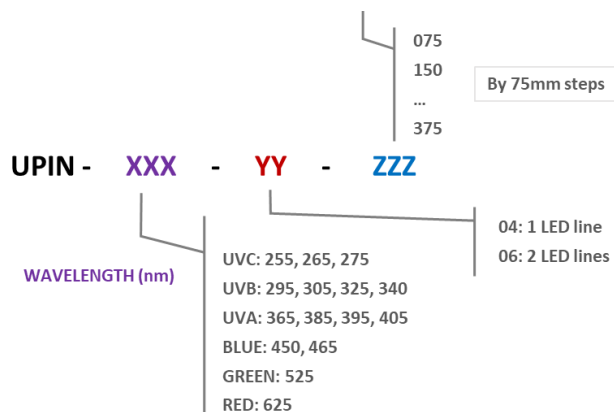


Electronics	Power supply	48 VDC $\pm$ 10% (maximal power consumption: 160W for the 06 version)
	Connector	SUBD13W3 – 13pins for power and signals
	Illumination mode	Continuous with a direct DIM signal [0-10V]
Optics	Wavelength	UVC: 255, 265, 275 nm UVB: 295, 305, 325, 340 nm UVA: 365, 385, 395, 405 nm VIS: 450, 465nm (Blue), 525nm (Green), 625nm (Red), ...
	Irradiance	Up to 6000 mW/cm ² in the UVA range for the 06 version. Up to 4000 mW/cm ² in the UVA range for the 04 version. Up to 200 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

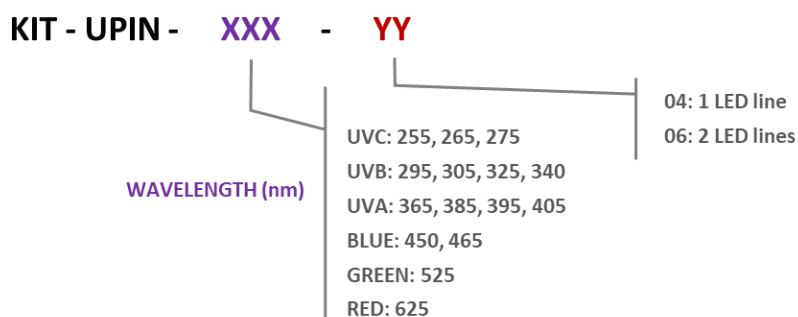
UPIN standard version:



Focalization optical system in option (only available for 04 version):



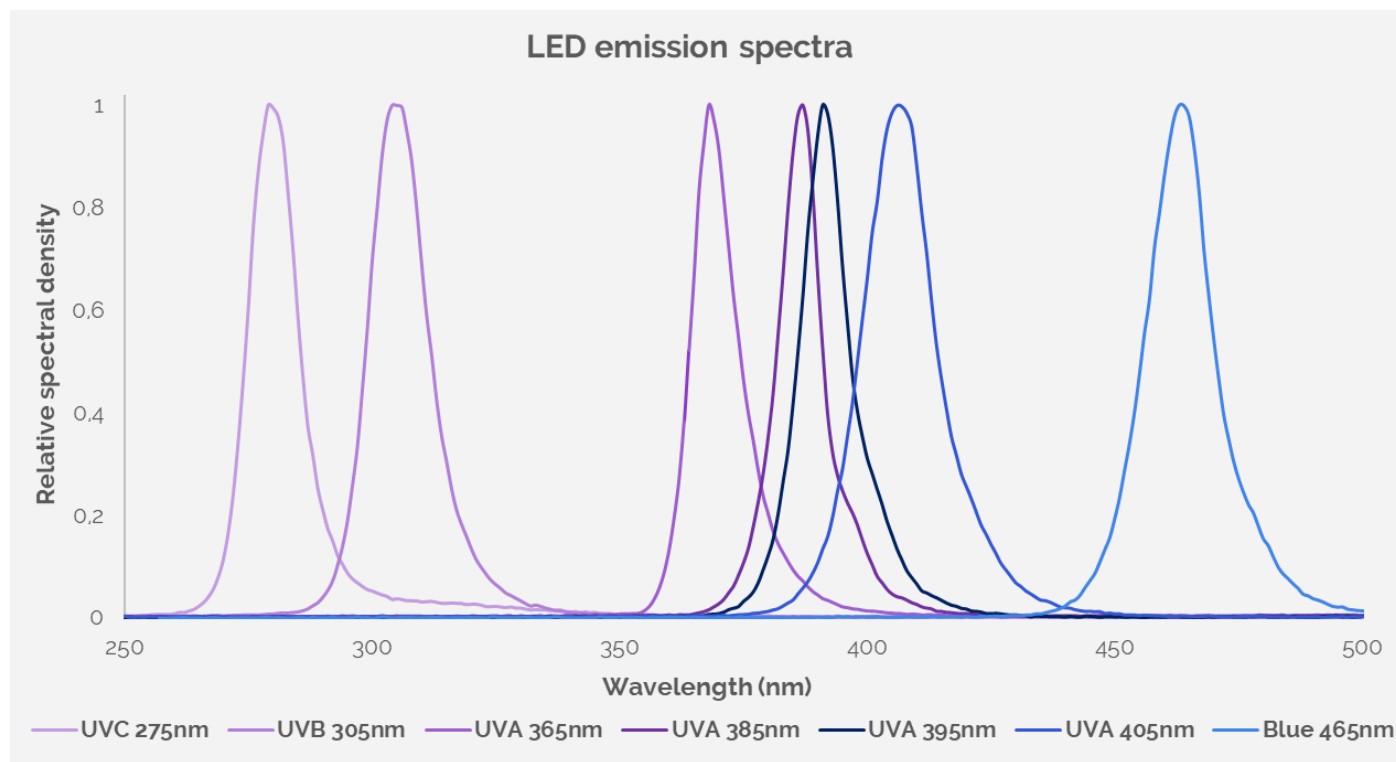
The 75mm version of the UPIN is available in a complete KIT for manual use:





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

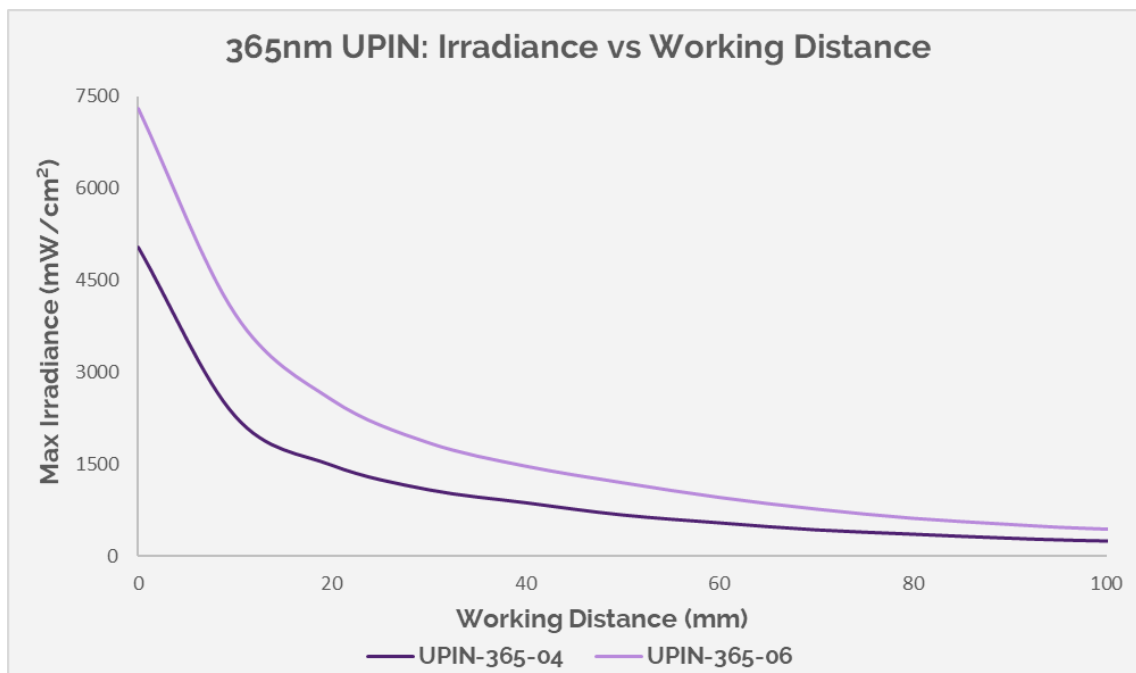
Offers a more dispersive light distribution which is ideal to irradiate on a wider area.



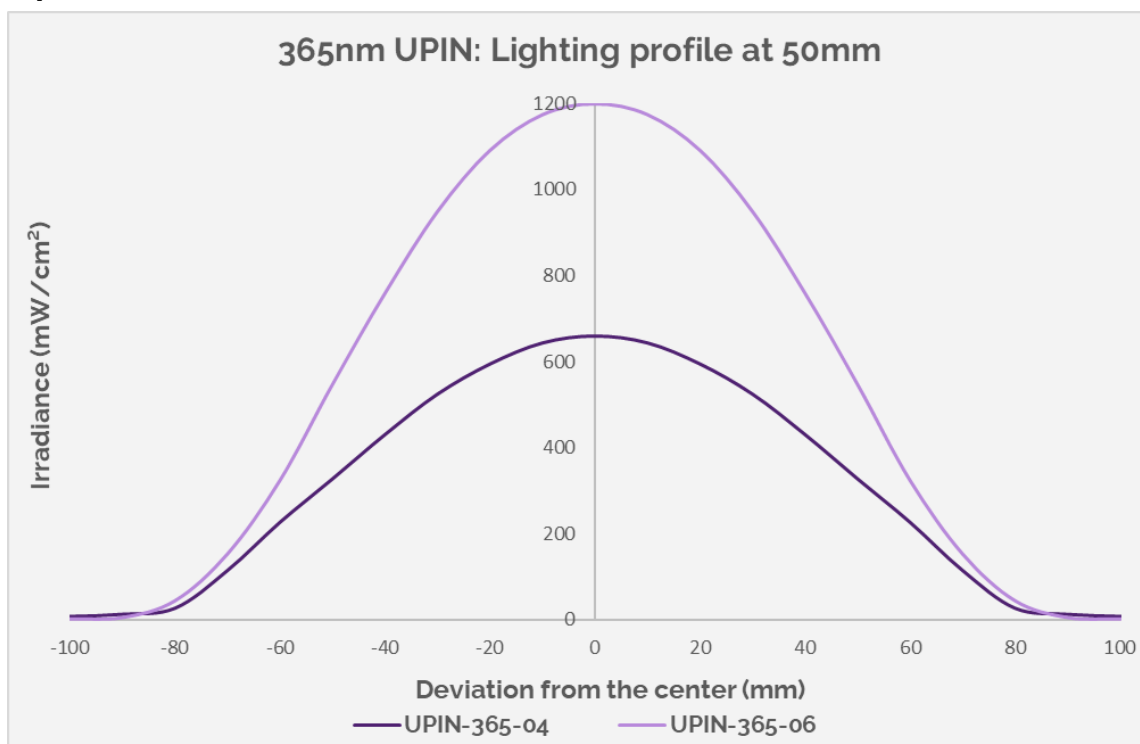
UPIN with optical system FOC

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

Photometry



Irradiation profile

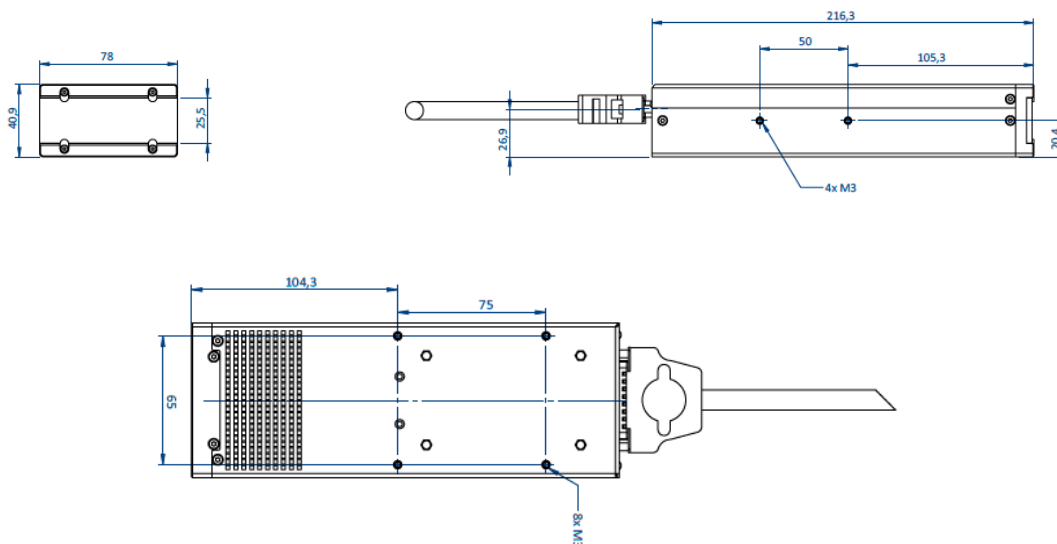


Curve plotted for UVA wavelength. For UVC & UVB irradiance, please divide the irradiance value by a factor of 40. Radiometer: GIGA HERTZ OPTIK RCH-116 (June 2023). For the UV spot graph, the spot size is the exposed area where the irradiance is higher than 50% of the maximum irradiance.

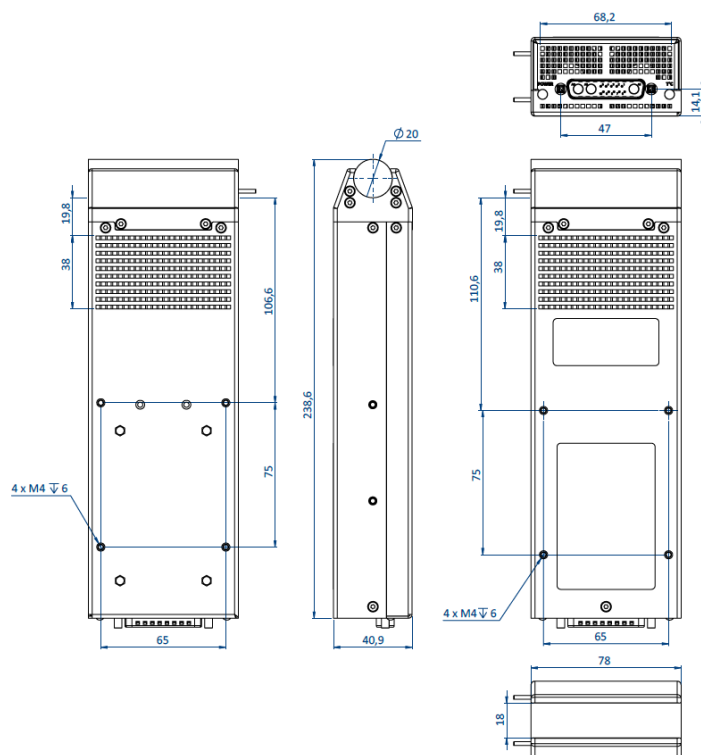


Mechanical considerations (mm)

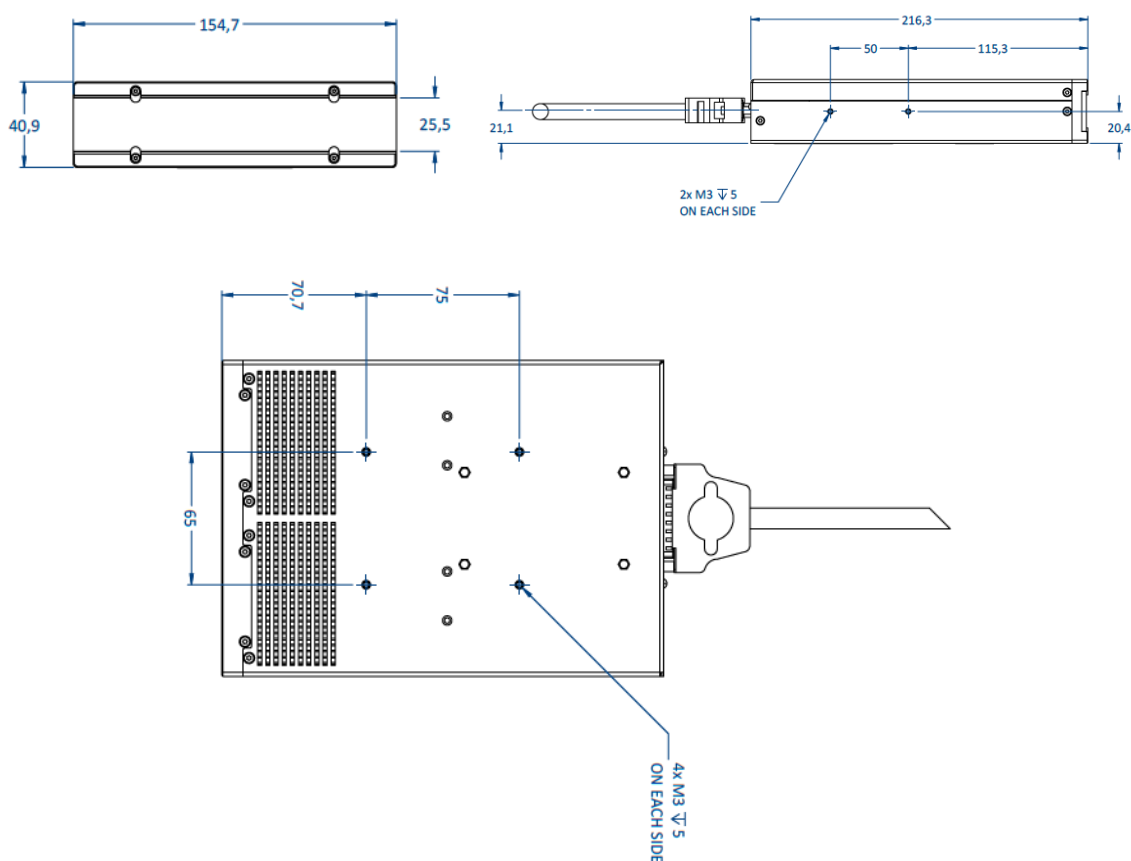
UPIN 75mm standard version:



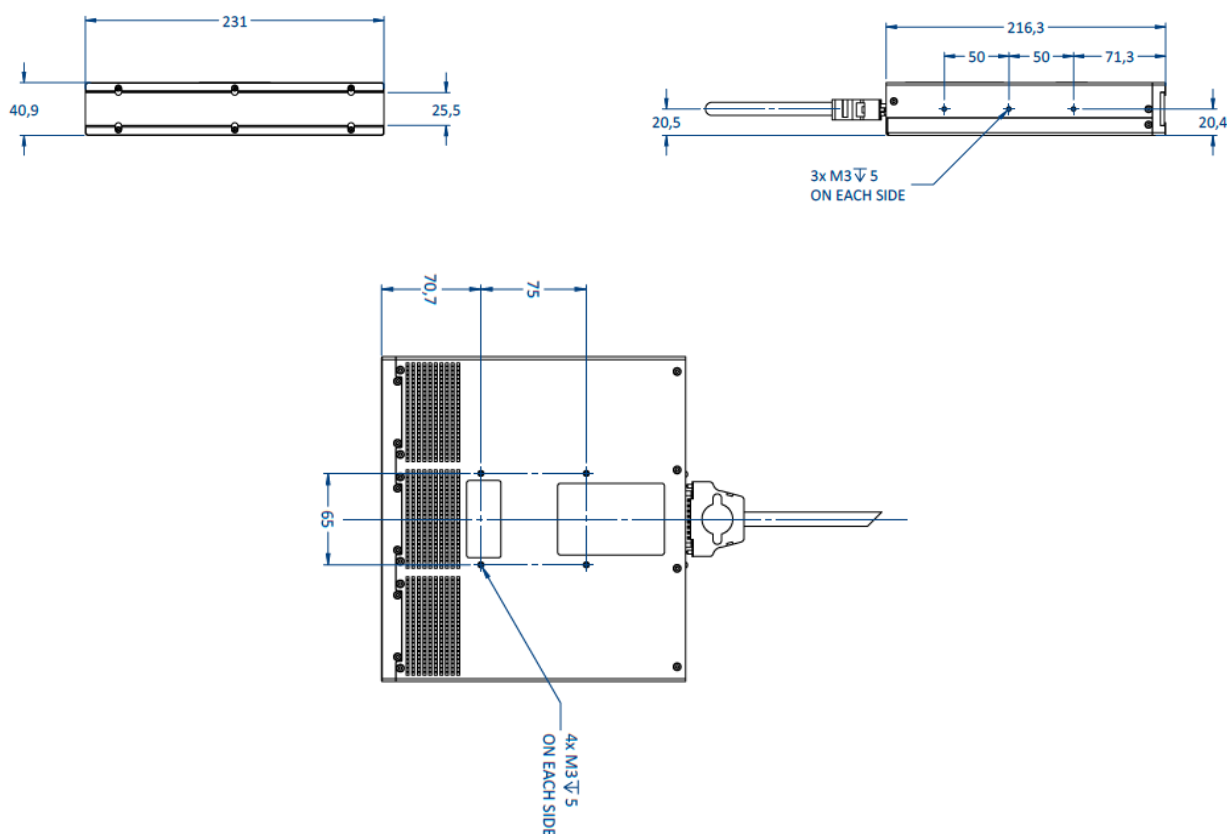
UPIN 75mm with optical system FOC:



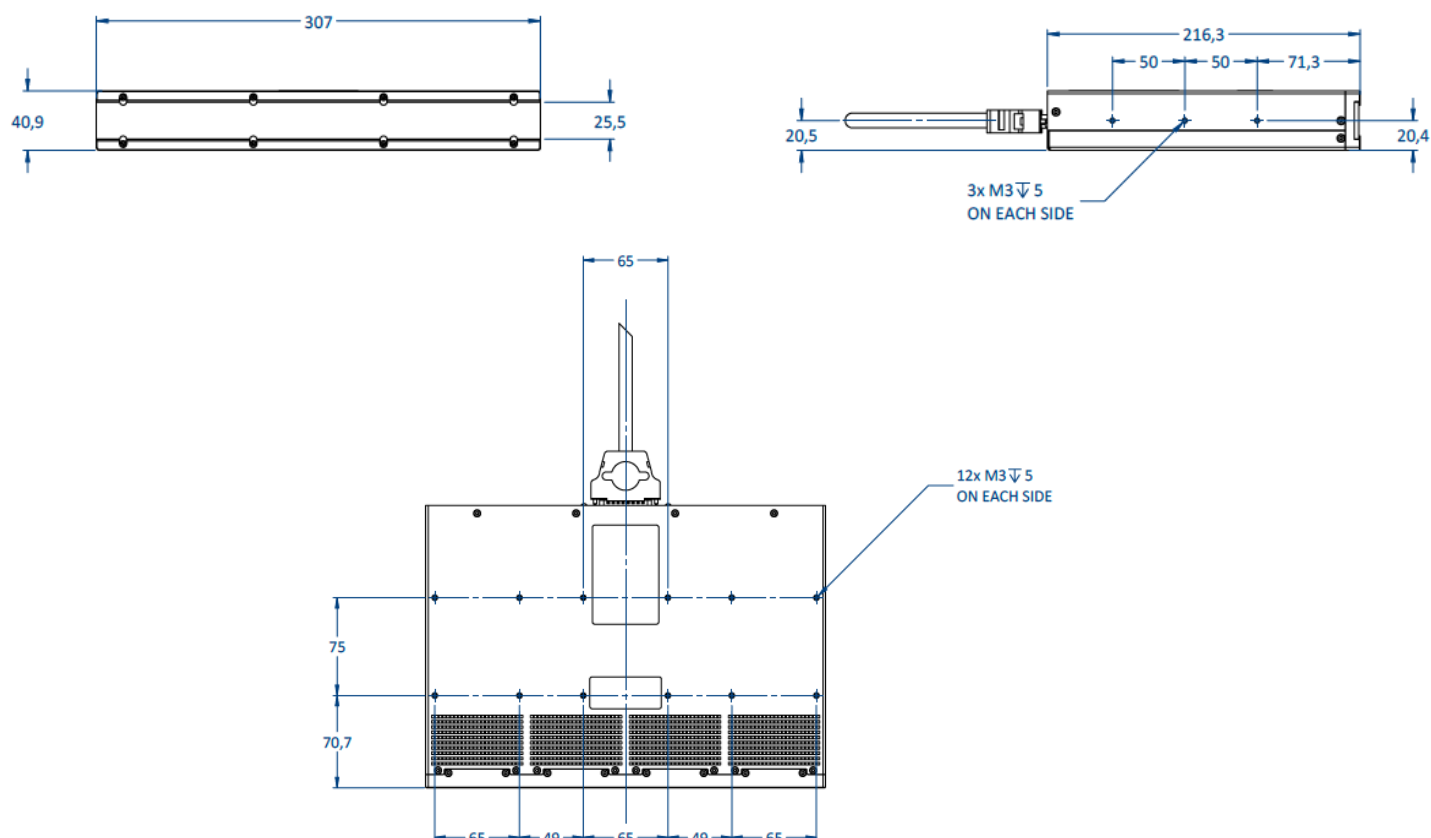
UPIN 150mm standard version:



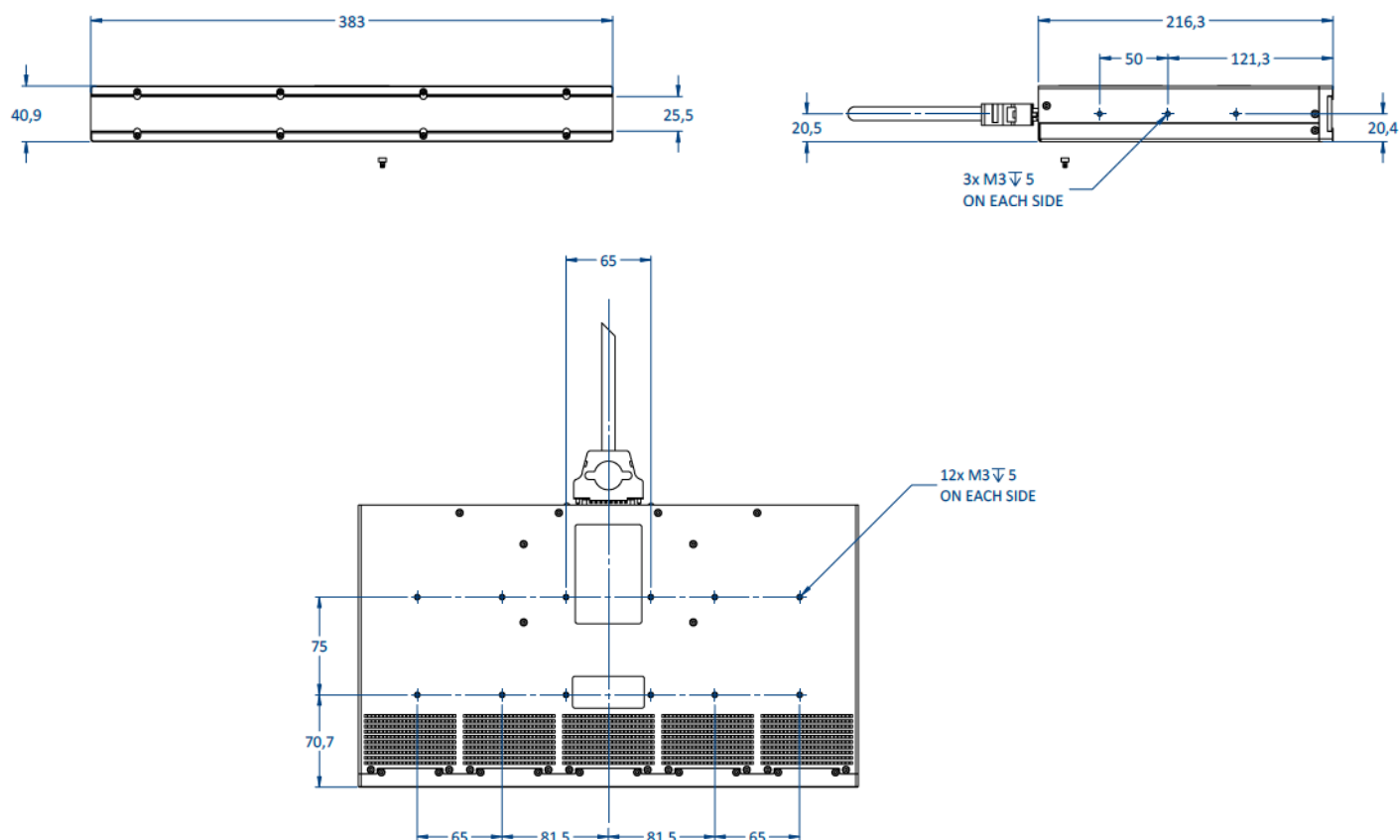
UPIN 225mm standard version:



UPIN 300mm standard version:



UPIN 375mm standard version:





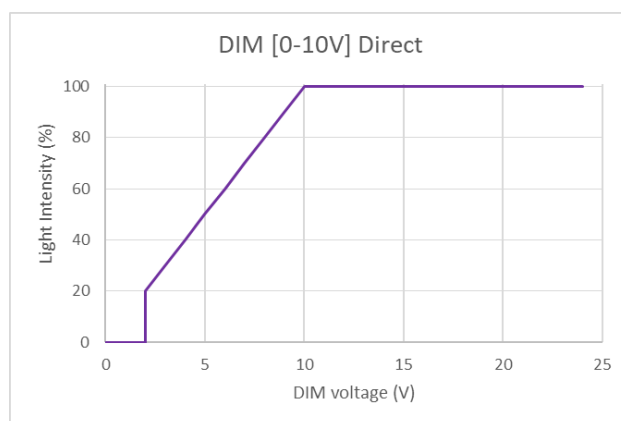
Electronical considerations

Wiring layout

The UPIN requires 48V DC input power. It integrates smart electronical 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
 Male D-SUB 13W3pins	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:

Cables 	One side with bare wire (towards PLC): UCAB - SUBD - FD - 13W3 - D - L A 2 5 10 Cable length in meters Both sides connector (power supply link): UCAB - SUBD - FM - 13W3 - DD - L A 2 5 10 Cable length in meters
Advanced power supply	UPOWER-0600-48 for control of x1 UPIN-XXX-YY-075. UPOWER-1500-48-2SUBD for simultaneous control of x2 UPIN-XXX-04-375.  <i>For other controlling configurations, please contact directly UWAVE team.</i>
Compact power supply	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. 



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		PERFORMANCES QUALIFICATION		MAINTENANCE & REPAIR	
	 According to European Directive 2006/25/EC.		 Monitoring of all performances of your device.		 Preventive maintenance on site & LED repair service.	