

UFLUO-LINE DATASHEET

Flexible UV LED line light for fluorescence and curing applications

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	24 VDC ± 10% (Maximal power consumption: Depending on the number of LED)
	Connector	M12 – 5pins for power and signals
	Illumination mode	Continuous with a direct DIM signal [0-24V]
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), Other on request.
	Irradiance	Up to 100 mW/cm² in UVA & BLUE range Up to 5 mW/cm² in UVC & UVB range
Mechanics	Width x Height x *Length*	51mm x 49mm x *Depends on the amount of LED*
	Weight	60g + 60g per LED
	Material	Device body: Aluminum alloy Window: Special PMMA for UVA & BLUE range. Quartz for UVB & UVC range.
	IP rating	Standard version: IP54 "IP" version: IP67
Environment	Operation	Temperature: 10°C to 35°C – Humidity: 20% to 80% humidity (with no condensation) – Altitude: Up to 2000m
	Regulations & marking	CE - UKCA
	Environmental standards	RoHS III Directives - REACH Regulation - WEEE Regulation

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Product reference

UFLUO-LINE- **AA** – **BBB** – **XXX** – **CC** - A**ZZ** – **AAA** – **BBB**

Power supply type
Ø = 24V DC with DIM [0-24V] direct
SEC = Direct supply 230VAC

Window type
PM = PMMA (Standard for UVA)
BO = Borosilicate (Option)
QA = Quartz (Standard for UVB/C)

LED emission angle
A35 = 35°
A65 = 65° (Standard)
A120 = 120°

LED density
Ø = LED every 20mm (standard)
L2 = LED every 40mm (Option)

Mechanics - IP level
Ø = IP54 (standard)
IP = IP67 (option)

Optical length (cm)
10 / 20 / 30 … 120

Wavelength (nm)
UVC : 255 / 265 / 275
UVB : 295 / 305 / 325 / 340
UVA : 365 / 385 / 395 / 405
VIS : 450 / 465 (Blue), 525 (Green), 625 (Red)
IR: 780 / 850 / 940 (Other on request up to 1650)
WHITE: 000

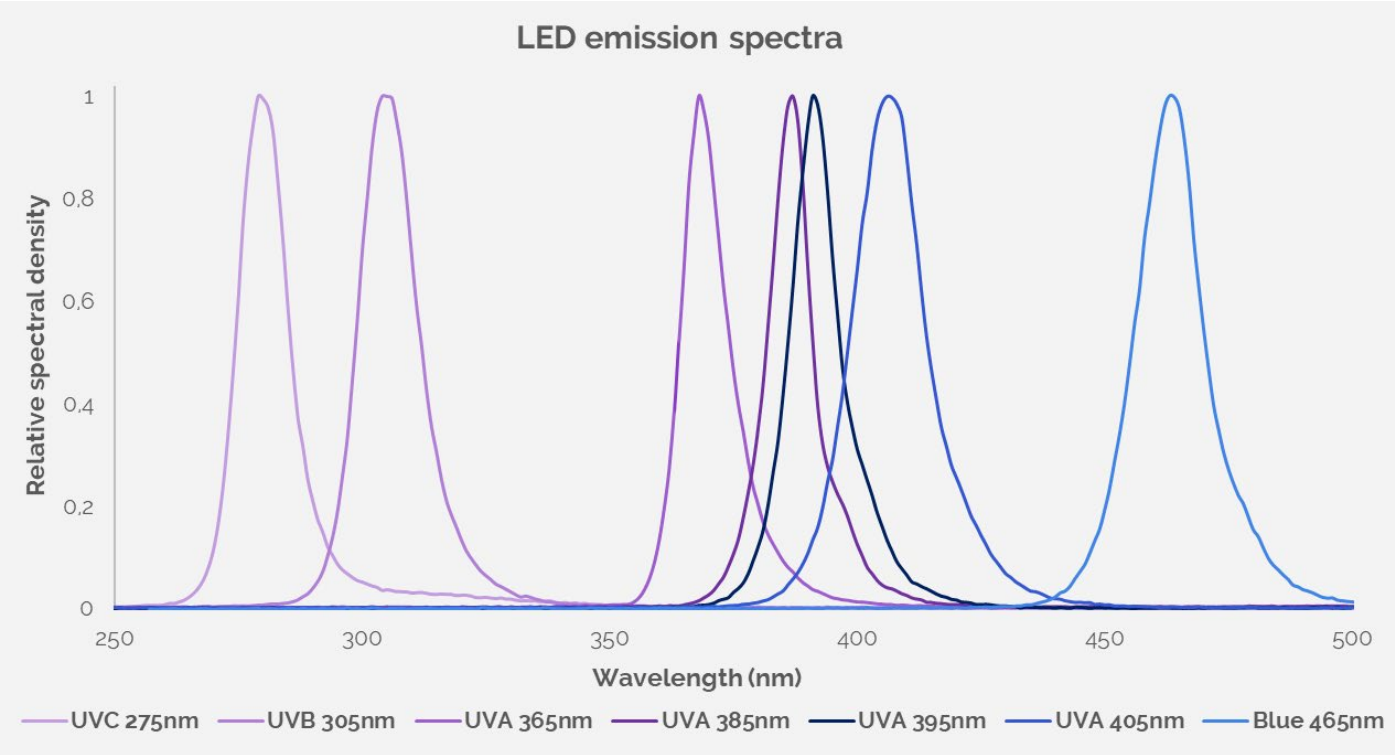
Other options (at the end):
-ASTM (formerly -PUV)
Optical filter for ASTM E3022-18
-C (customization)

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Optical characteristics

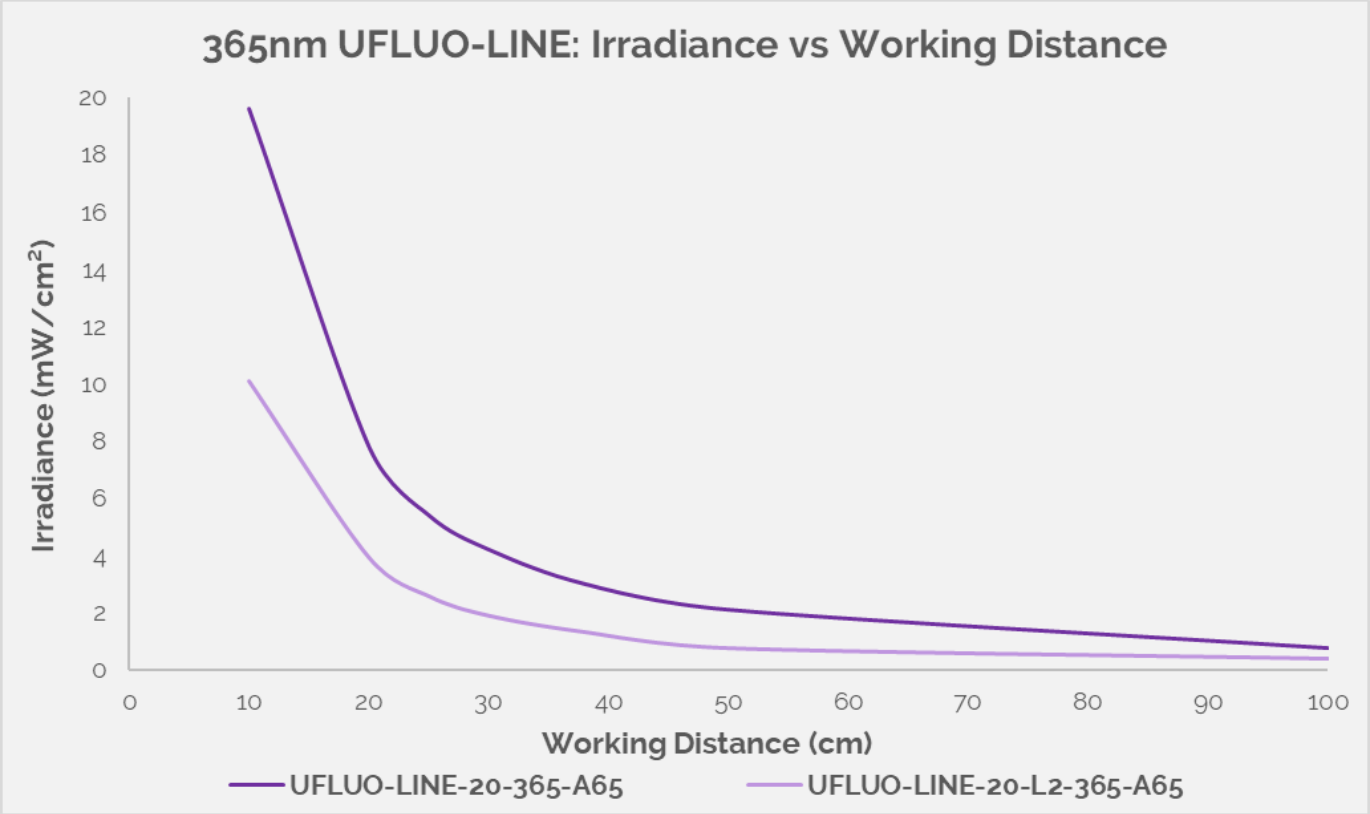
LED spectra



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

All 365nm UFLUO-LINE versions presented into this datasheet are compliant with the international standard ISO 3059-12.

Photometry

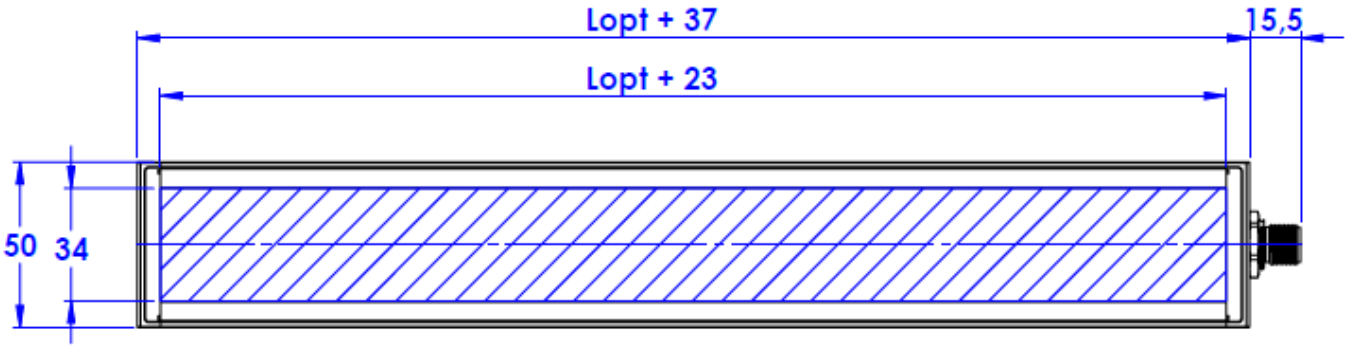


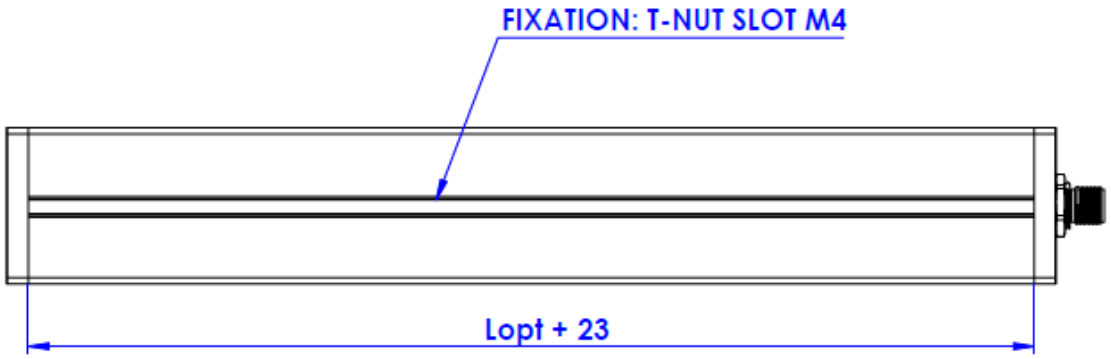
Curve plotted for UVA wavelength. For UVC & UVB irradiance, please divide the irradiance value by a factor of 20. Radiometer: GIGA HERTZ OPTIK RCH-116 (June 2023). For the UV spot graph, the spot size is the exposed area where the irradiance is higher than 50% of the maximum irradiance.

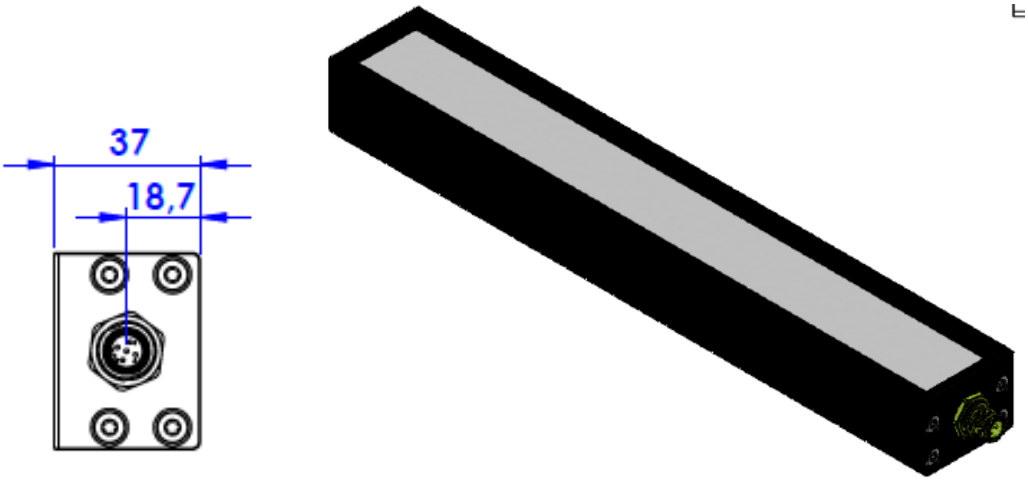
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Mechanical dimensions



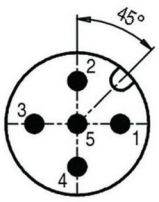




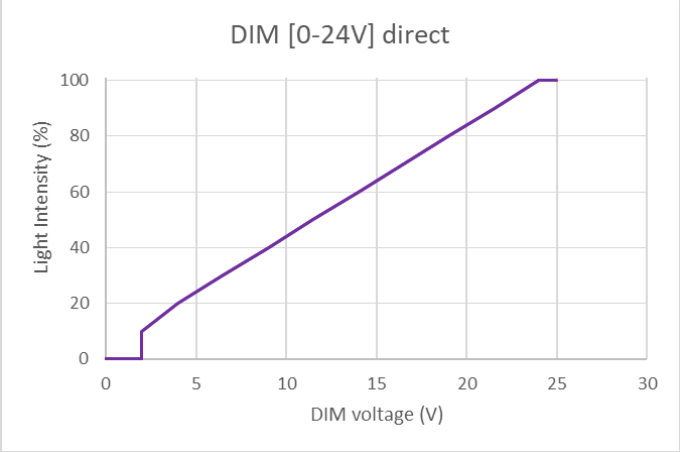
Electronical considerations

Wiring layout

The UFLUO-LINE requires 24V DC input power. It integrates smart electronical board to achieve stable optical power and exploitable output signals. The UFLUO-LINE 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	Not used
	3	Blue	Power supply Input – 0V DC (GND)
	4	Black	Dimming Input – [0-24V] direct
	5	Gray	Not used

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.

Power consumption

Number of LED	5	10	15	20	25	30	35	40	45	50
Max power consumption (W)	7	14	21	28	35	42	49	56	63	70

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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 UFLUO-LINE (up to 20 LED). The 90W version of the USPWR is available for UFLUO-LINE with up to 50 LED.  UDIMMER can be added to manually adjust UV power through dimming signal. 
Easy-to-use power supply	UPOWER-50W-24V-USPOT for simultaneous control of up to x2 UFLUO-LINE (30 LED maximum). 
Advanced power supply	UPOWER-0200-24-xM12 for simultaneous control of up to x2 or x4 UFLUO-LINE (or 120 LED maximum). UPOWER-0600-24-xM12 for simultaneous control of up to x2, x4 or x6 UFLUO-LINE (or 360 LED maximum).  *For other controlling configurations, please contact directly UWAVE team.*

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	URAD-LK: Wireless UV measuring device 	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.