



UFLEX DATASHEET

Flexible UV LED line light for fluorescence and curing applications

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.

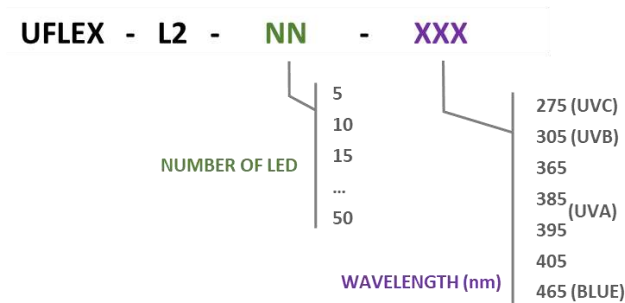
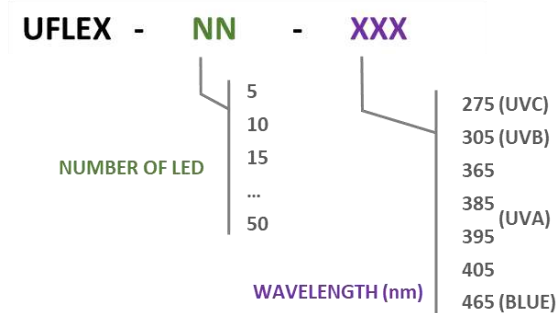


Electronics	Power supply	24 VDC $\pm$ 10% (Maximal power consumption: Depending on the number of LED)
	Connector	M12 – 5pins for power and signals
	Illumination mode	Continuous with a direct DIM signal [0-24V]
Optics	Wavelength	UVC: 275 nm - UVB: 305 nm - UVA: 365, 385, 395, 405 nm - VIS: 465 nm
	Irradiance	Up to 100 mW/cm ² in UVA & BLUE range Up to 5 mW/cm ² in UVC & UVB range
Mechanics	Width x Height x Length	51mm x 49mm x <i>Depends on the amount of LED</i>
	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 Compact 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

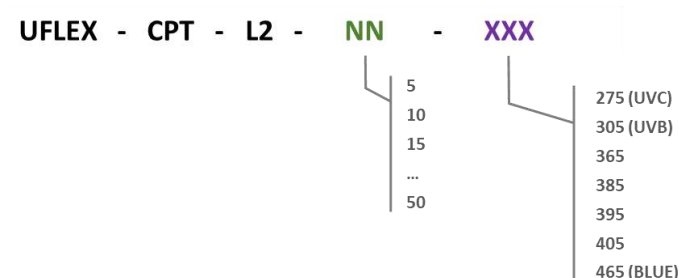
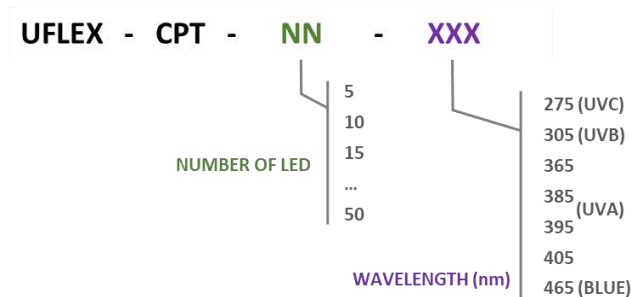


Product reference

IP54 version:



IP67 version:

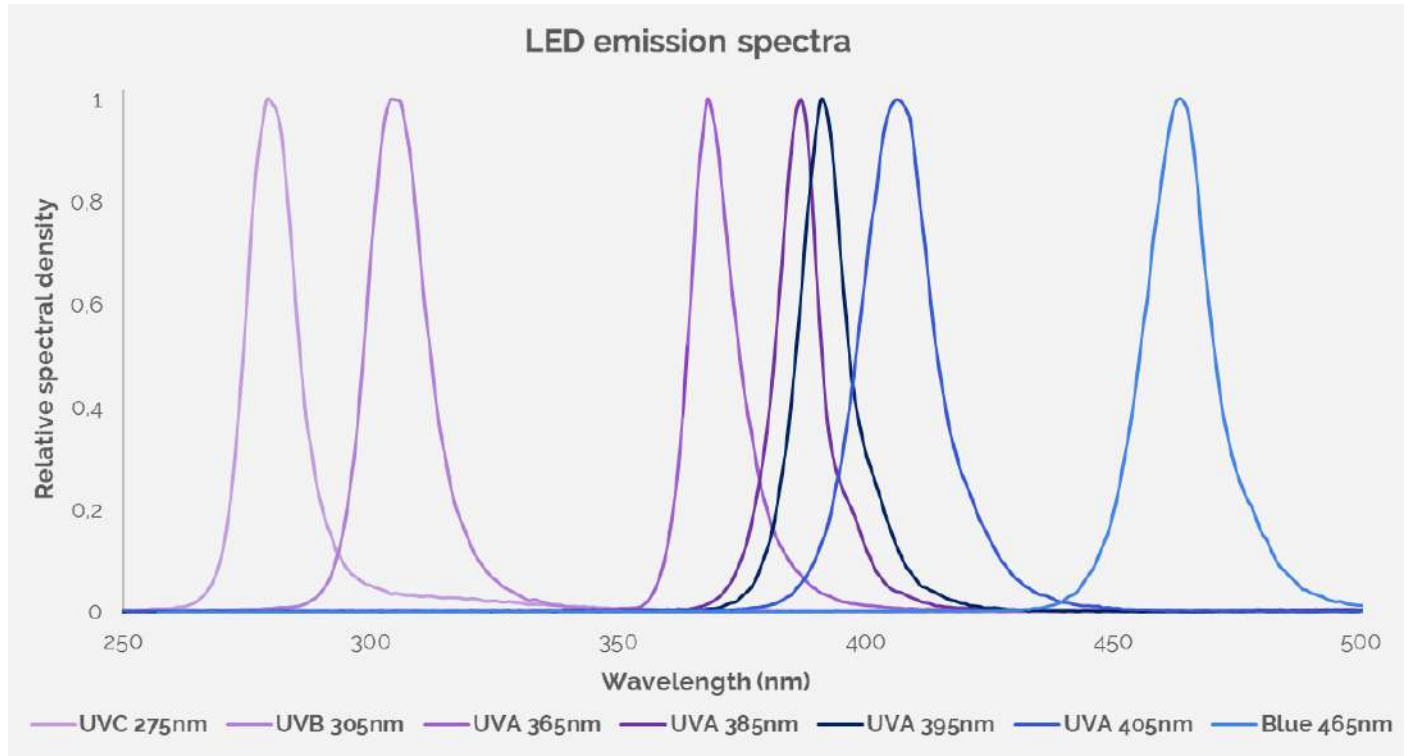


"Pure UV" option for high contrast fluorescence applications: Add **-PUV** at the end of the reference. Only available for 365nm UFLEX (IP54 and IP67 versions).



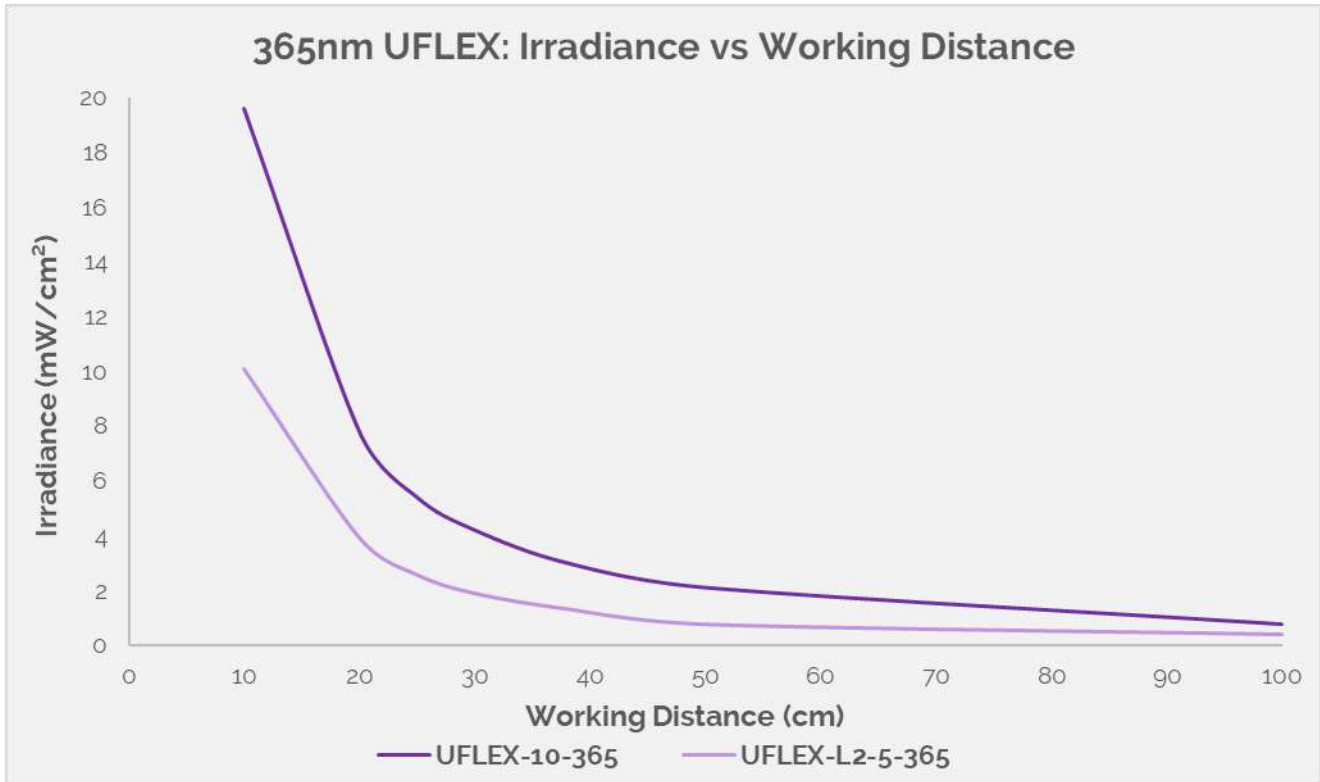
Optical characteristics

LED spectra



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

Photometry



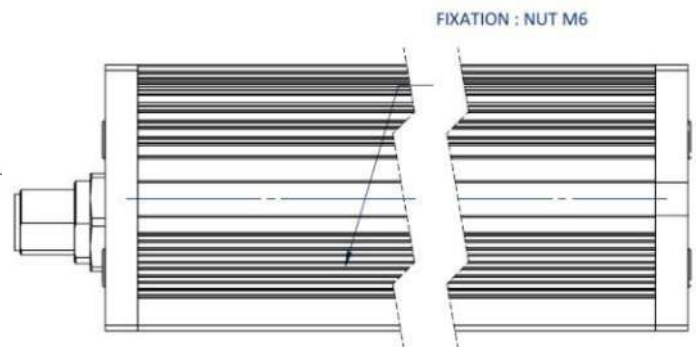
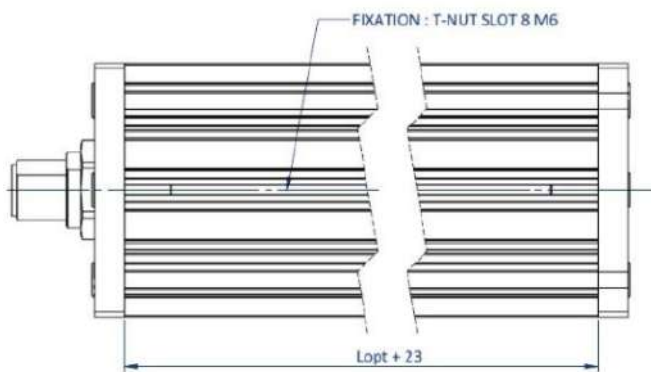
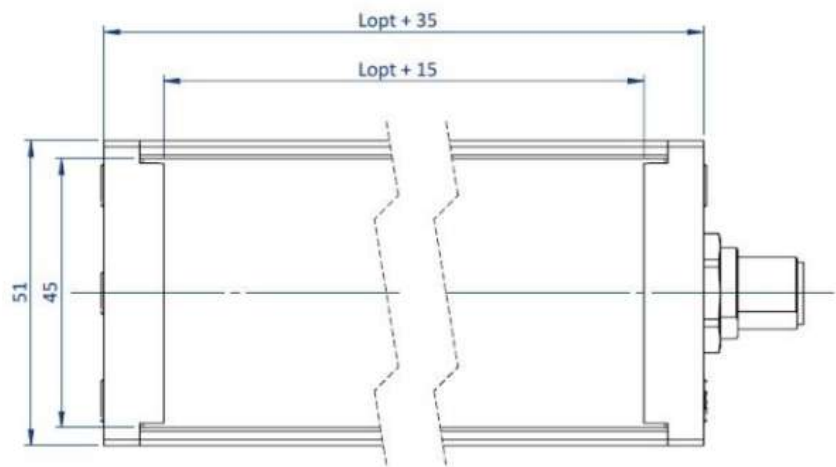
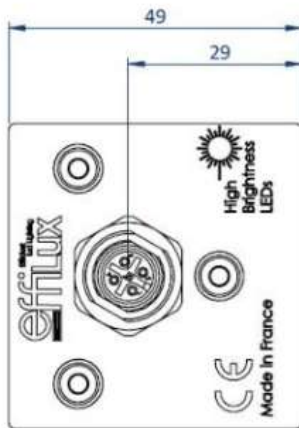
Curve plotted for UVA wavelength. For UVC & UVB irradiance, please divide the irradiance value by a factor of 20. Radiometer: GIGA HERTZ OPTIK RCH-116 (June 2023). For the UV spot graph, the spot size is the exposed area where the irradiance is higher than 50% of the maximum irradiance.



Mechanical dimensions

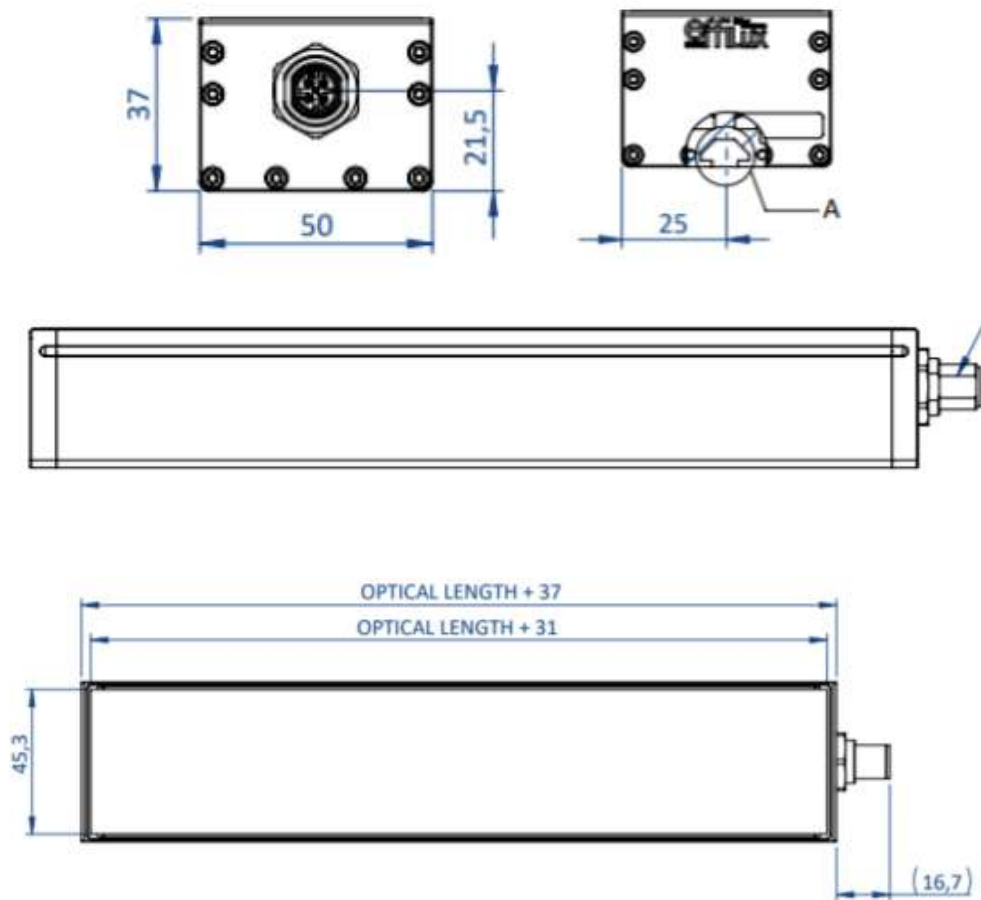
Standard version IP54

Standard Version	Number of LED	5	10	15	20	25	30
L1 version 1 LED every 20mm	Mechanical length (mm)	135	235	335	435	535	635
	Optical length (mm)	115	215	315	415	515	615
L2 version 1 LED every 40mm	Mechanical length (mm)	235	435	635	835	1035	1235
	Optical length (mm)	215	415	615	815	1015	1215



Compact CPT version IP67

Compact Version	Number of LED	5	10	15	20	25	30
L1 version 1 LED every 20mm	Mechanical length (mm)	137	237	337	437	537	637
	Optical length (mm)	131	231	331	431	531	631
L2 version 1 LED every 40mm	Mechanical length (mm)	237	437	637	837	1037	1237
	Optical length (mm)	231	431	631	831	1031	1231

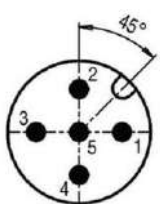




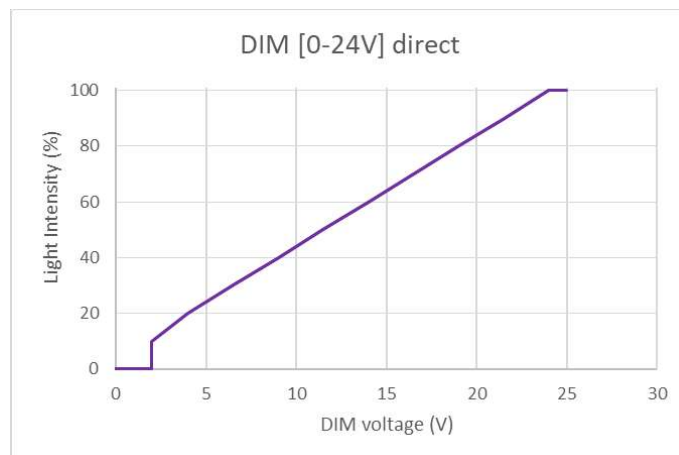
Electronical considerations

Wiring layout

The UFLEX requires 24V DC input power. It integrates smart electronical board to achieve stable optical power and exploitable output signals. The UFLEX 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



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 10 Cable length in meters Both sides connector (power supply link): UCAB - M12 - FM - 5 - DD - L A  2 5 10 Cable length in meters
Compact power supply	USPWR-36W-24V-102-EU for ON/OFF control of x1 UFLEX (up to 20 LED). The 90W version of the USPWR is available for UFLEX 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 UFLEX. 
Advanced power supply	UPOWER-0200-24-xM12 for simultaneous control of x1, x2 or x4 UFLEX. UPOWER-0200-24-xM12-I for independent control of x1, x2 or x4 UFLEX.  <i>For other controlling configurations, please contact directly UWAVE team.</i>



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	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.