

DROLED L74 UV LED Lamps

For UV Curing and Drying



1. DROLED L74 UV LED lamps series - General features

The series of UV LED lamps called **Droled L74** represents **the model with the best relation between performance and size.**

These lamps, thanks to their reduced dimensions and weight, are easily usable when the available spaces are limited.

Ideal for a wide range of applications, among which we can find the inkjet printing process.

2. UV LED Lamps by Photo Electronics - Advantages

CONSUMPTION	Very low power consumption compared to traditional UV Mercury lamps.
INSTANT RELIGHTING	On and off instant switching. No preheating time, the lamp immediately emits 100% UV energy. Repeated starts and stops do not affect the lamp life.
HIGH PERFORMANCE	UV LED modular system, available in different Peak Wavelengths 365, 385, 395 and 405nm and peak powers up to 16W / cm ²
LOW HEATING	Low heat emission. It is possible to treat heat-sensitive substrates, avoiding deformation or thermal alterations
SAFETY	No production of ozone, no emission of UVB and UVC does not need vapour and ozone extraction systems, plastics and metal parts if irradiated do not oxidize.
INTEGRATED ELECTRONICS	Electronics microprocessor managed, integrated and complete. Alarm management and intelligent logic, allows it to be externally and easily controlled via digital / analog signals or via an RS485 bus.
RELIABILITY AND MAINTENANCE	Long emitters lifetime, no replacement lamps need and minimal maintenance. Guaranteed lifetime of 20,000 hours. Power on / off does not reduce lamp life. High reliability even in heavy duty industrial conditions.

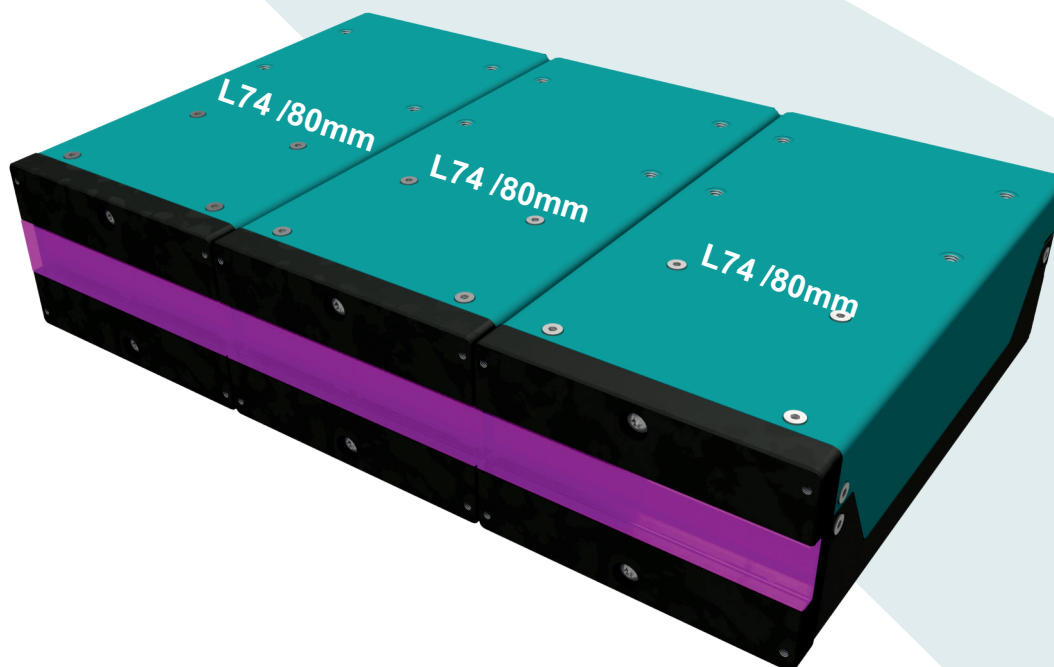
3. Base models available

DROLED UV LED lamps L74 series, are currently available in the following models (see table) with circuitry and modular configuration, allowing you to compose the most suitable system. Standard emission wavelength 365 or 395nm. Wavelength 385 and 405nm available at request.

DROLED L74U (Flat Window)									
Peak wavelength (nm)	365nm			385 / 395 / 405nm					
Peak Irradiance value (W/cm ²)	8 W/cm ²			8 W/cm ²			12 W/cm ²		
Emitting window length (mm)	80	157	235	80	157	235	80	157	235
Typical power consumption (48Vin)	350W 7.3A	700W 14.6A	1050W 21.9A	240W 5.0A	480W 10.0A	720W 20.0A	400W 8.4A	800W 16.8A	1200W 25.2A
Maximum power consumption (48Vin)	420W 8.8A	840W 17.6A	1260W 26.1A	290W 6.0A	580W 12.0A	870W 18.0A	480W 10.0A	960W 20.0A	1440W 30.0A

4. Designed to be placed side by side to cover even large working widths.

All UV LED lamps are designed to be placed side by side in groups, even with different irradiation width, thus obtaining UV Led systems with specific working dimension. The irradiation resulting from more lamps side by side, is always homogeneous across the entire width.



Example of UV Led lamps placed side by side

The assembly example is composed by the following lamps (placed side by side):

3 pcs. L74 80mm width Lamp Units

Possible Irradiation Widths:

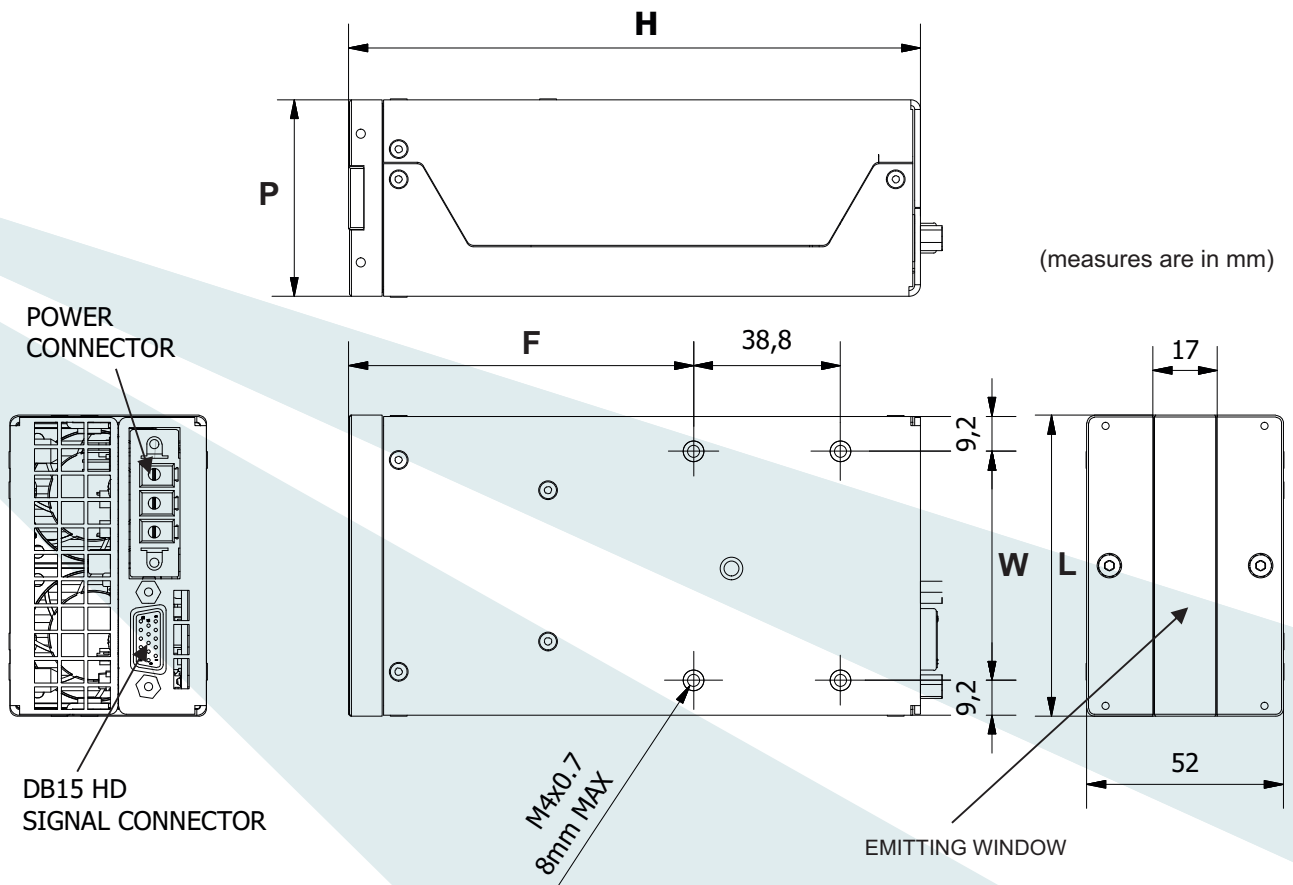
single L74 = **80mm**

L74/80mm + L74/80mm = **160mm**

L74/80mm + L74/80mm + L74/80mm = **240mm**

4. Dimensions, weights and mechanical fixing

The mechanical installation should be carried out using the threaded mounting holes placed outside the lamp body (see Figure). The use can be both static and dynamic (lamp moving by means of an automation system). For more informations, ask for detailed data sheets.



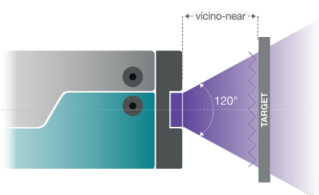
DROLED L74 (Flat Window version)			
Emitting window (mm)	80 x 17mm	157 x 17mm	235 x 17mm
Dimensions (mm)			
L	80	157	235
P	52	52	52
H	151	151	151
W	60,6	136	211,7
F	91,2	91,2	91,2
Weight (Kg)	0,7	1,4	2,1

The table shows DROLED L74 dimensions
The dimension L corresponds to the lamp maximum irradiation width.

5. Optical systems available

FLAT WINDOWS

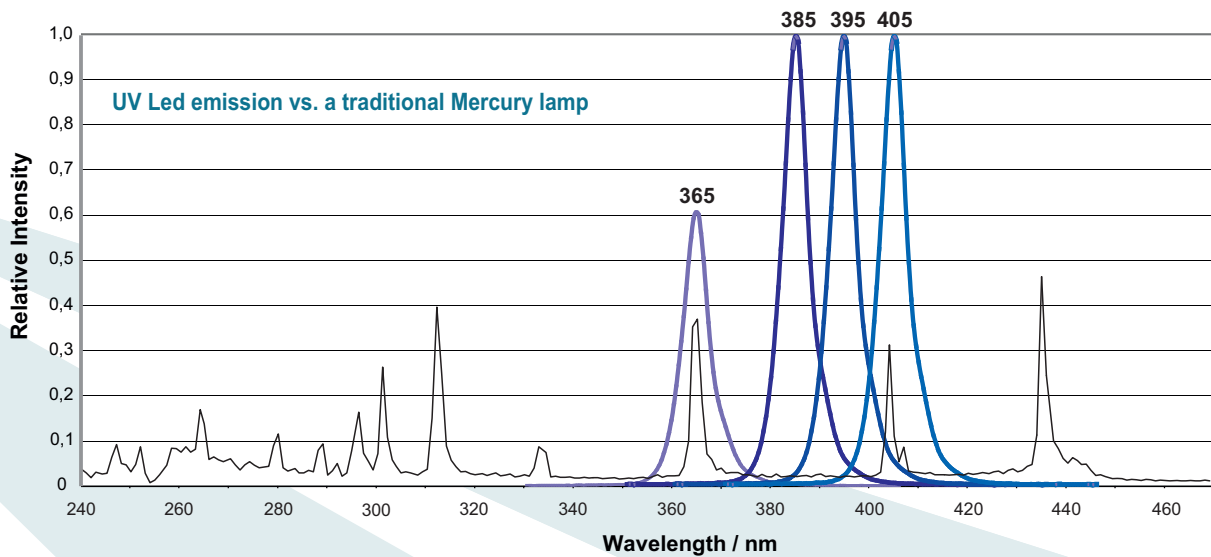
It permits to achieve an high exposure time in the Curing phase.
The radiation comes out with a wide angulation, of about 120°.



Application: Complete polymerization few mm. from the emitting window.

5. Emission frequencies standard available .

DROLED L74 UV LED lamps **are available in 4 peak wavelengths** to best suit the chemistry of the products that must be polymerized.



6. Cooling System and connections

Each UV LED Droled lamp is equipped **with a forced air cooling system**, which is integrated into the lamp housing and it operates independently. Cooling air enters through the back grid and it comes out from the slots placed on the lamp side.

The electronics inside independently manages and controls the cooling system. The lamp has to be powered by standard 48 Volt switching AC/DC power supply available on the market. The lamp can be easily managed through analog/digital signals present on the connector or more evolved through a serial record RS -485.

PINOUT SIGNALS CONNECTOR DB15-HD MODBUS Serial Protocol Version		
PIN	FUNCTION	DETAILED DESCRIPTION
1	VOLTAGE REFERENCE	Voltage reference +10Vdc FIXED, useful for wiring a potentiometer directly on entrance INTENSITY CONTROL (pin.2)
2	INTENSITY CONTROL	Analog input 0-10 Vdc for the lamp intensity control. 1,0V corresponds to 10% and 10,0V corresponds to 100% . The voltage reference can come from an external PLC of the custode or from a potentiometer directly wired on the connector IN case of potentiometer use as reference +10Vdc (pin.1)
3	ENABLING	Digital input 0-24Vdc, push pull type. 0Vdc is interpreted as OFF , 24Vdc is interpreted as ON . Voltage reference can come from an external generator (which it will have the 0Volt connected in common with the GND) or from a switch directly wired on the connector. In this case, for the switch use as reference +24Vdc (pin.6).
4	OUT RS485-	Serial communication OUT RS485-
5	LAMP READY	Digital output 0-24Vdc by NPN transistor. It advises that the lamp is ready to be turned on or it is on and there are no anomalies. 0Vdc= not ready , 24Vdc= ready lamp (via 1.2K Ohm Pull-up resistor).
6	VOLTAGE REFERENCE	Voltage reference +24Vdc FISSO, useful for wiring a switch directly at the entrance ENABLE (pin.3)
7	INTERLOCK	Digital input to use with circuits of external interlock of the custode (ex. Barriers or safeties) Connected to GND = Lamp unlocked (lamp enable, it works). Not connected = lamp locked (disable lamp, it doesn't work). If you don't use safety circuits, connect this pin.7 directly to a GND.
8,10,14	GND	GND
9	OUT RS485+	Serial communication OUT RS485+
11	ALLARM	Digital output 0-24Vdc by NPN transistor. It advises that the lamp has an anomaly. 0Vdc= fault lamp , 24Vdc= not fault lamp (via 1.2K Ohm Pull-up resistor).
12	IN RS485-	Serial communication IN RS485-
13	IN RS485+	Serial communication IN RS485+
15	TEMPERATURE MONITOR	Analog output 0-10 Vdc proportional to the lmap's temperature (convention factor 0,1 Vdc/°C) example 2,0 V = 20°C recorded, 10,0 V = 100°C recorded

