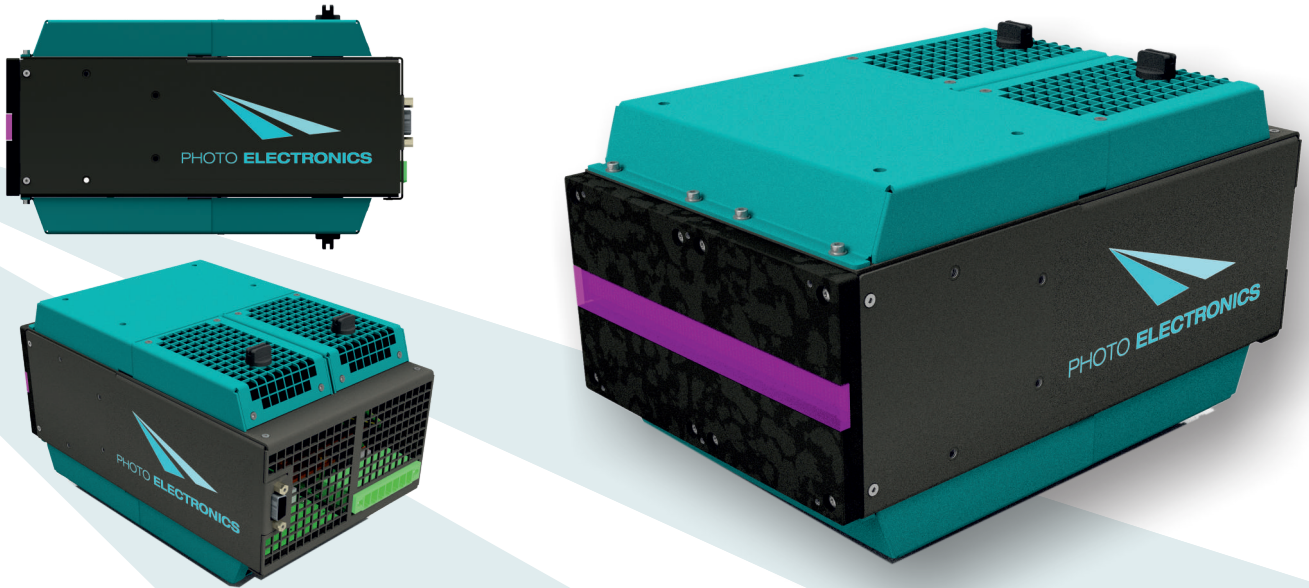


DROLED L70 UV LED Lamps

For UV Curing and Drying



1. DROLED L70 UV LED lamps series - General features

The series of UV LED lamps called Droled L70 represents the key products in terms of performance. These lamps are ideal to use on automatic machines or on production lines with elevated productivity, considering the high value of irradiance and dose emitted. They stand out for their capability to polymerize in depth or in complex conditions, such as in pad printing or silkscreen printing. They are available in Flat Window (standard version) and with Focused Lens optical systems.

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 emission frequencies 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. Models available

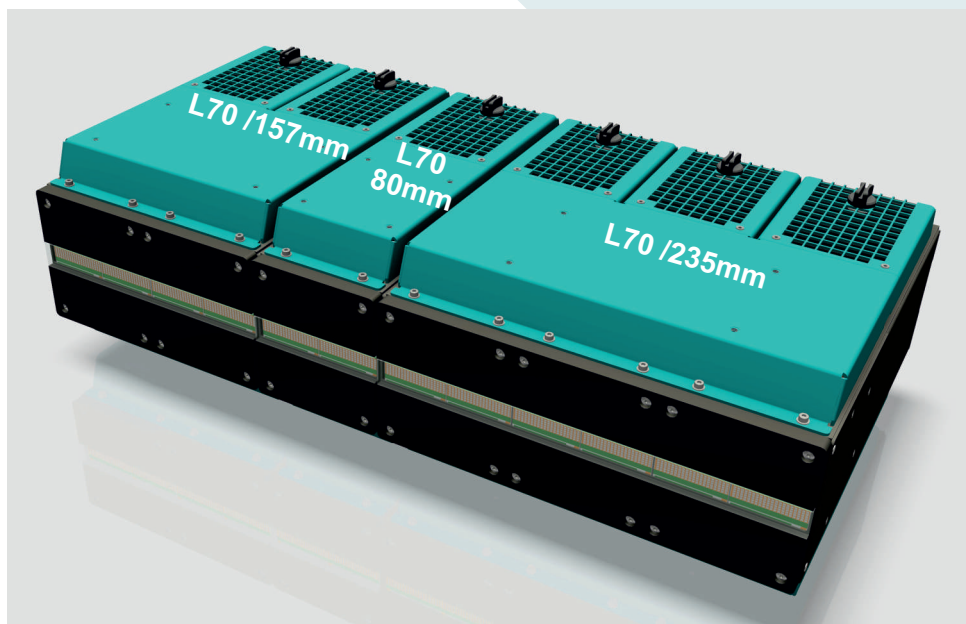
DROLED UV LED lamps L70 series are available in the following models (see table) with circuitry and modular configuration, allowing you to compose the most suitable system.

Standard emission frequencies 365 or 395nm. Frequencies 385 and 405nm available at request.

DROLED L70												
Peak wavelength (nm)	365nm						385 / 395 / 405nm					
Peak Irradiance value (W/cm ²)	8 W/cm ²						8 W/cm ²					
Emitting window width (mm) FLAT WINDOW VERSION	40	80	157	235	313	390	40	80	157	235	313	390
Emitting window width (mm) FOCUSED LENS VERSION	40	80	161	242	323	403	40	80	161	242	323	403
Typical power consumption (48Vin)	180W	350W	700W	1050W	1400W	1750W	120W	240W	480W	720W	960W	1200W
	3,75A	7,3A	14,6A	21,9A	29,2A	36,5A	2,5A	5A	10A	20A	30A	40A
Maximun power consumption (48Vin)	220W	420W	840W	1260W	1680W	2100W	145W	290W	580W	870W	1150W	1450W
	4,6A	8,8A	17,6A	26,1A	34,9A	43,7A	3A	6A	12A	18A	24A	30A

DROLED L70												
Peak wavelength (nm)	385 / 395 / 405nm											
Peak Irradiance value (W/cm ²)	12 W/cm ²						16 W/cm ²					
Emitting window width (mm) FLAT WINDOW VERSION	40	80	157	235	313	390	40	80	157	235	313	390
Emitting window width (mm) FOCUSED LENS VERSION	40	80	161	242	323	403	40	80	161	242	323	403
Typical power consumption (48Vin)	200W	400W	800W	1200W	1600W	2000W	220W	475W	950W	1425W	1900W	2375W
	4,2A	8,4A	16,8A	25,2A	33,6A	42A	4,6A	9,9A	19,8	29,7A	39,6A	45,5A
Maximun power consumption (48Vin)	250W	480W	960W	1440W	1929W	2400W	264W	570W	1140W	1710W	2280W	2850W
	5,2A	10A	20A	30A	40A	50A	5,5A	11,9A	23,8	35,7A	47,6A	59,4A

4. Modular lamps placed side by side to cover 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

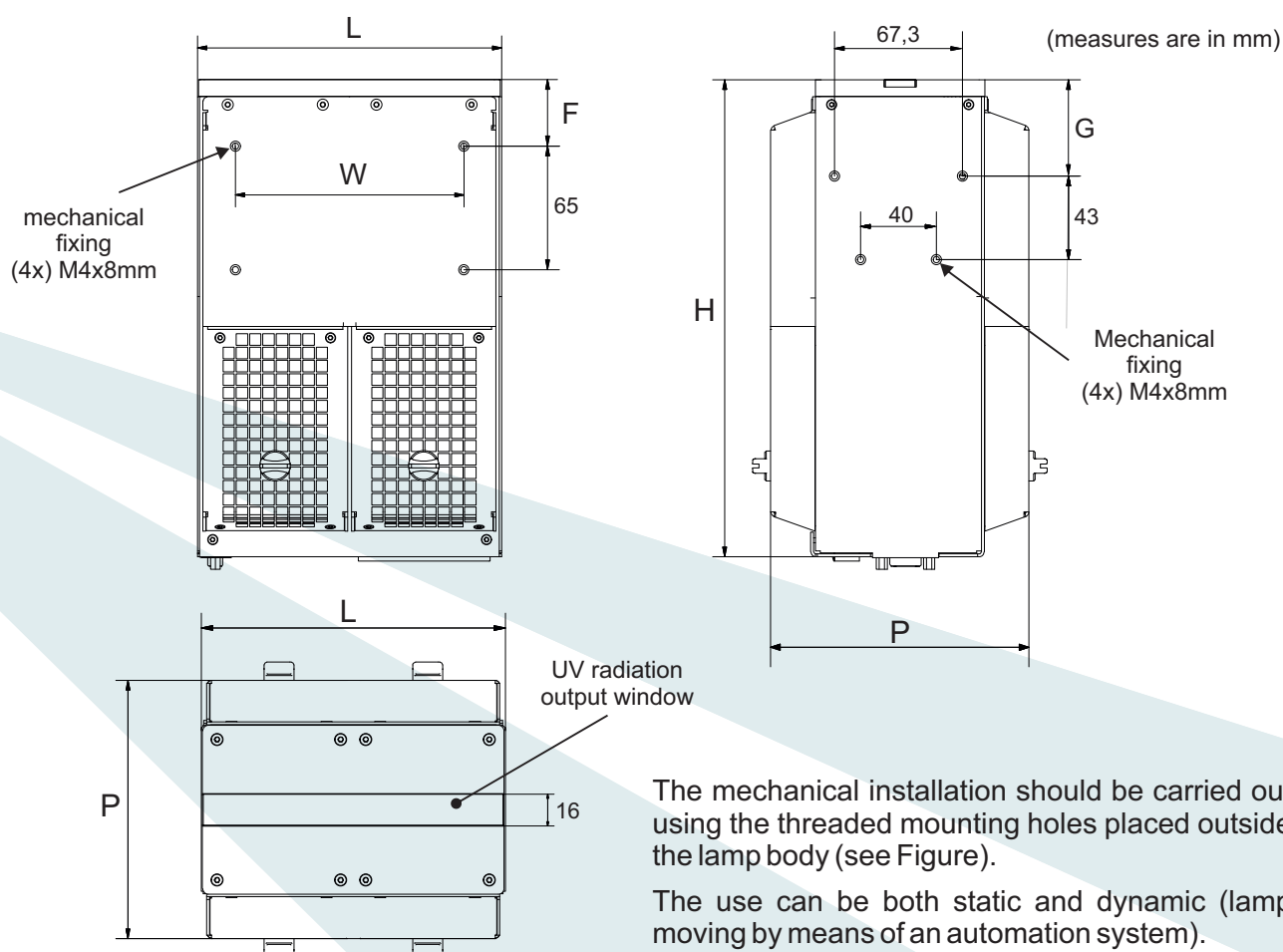
The assembly example is composed by the following lamps (placed side by side):

- Nr.1 L70 157mm width lamp unit
- Nr.1 L70 80mm width lamp unit
- Nr.1 L70 235mm width lamp unit

Possible Irradiation Width:

- Single L70 80mm width
- Single L70 157mm width
- Single L70 235mm width
- L70/235mm + L70/157mm = 392mm
- L70/235mm + L70/157mm + L70/80mm = 472mm

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).

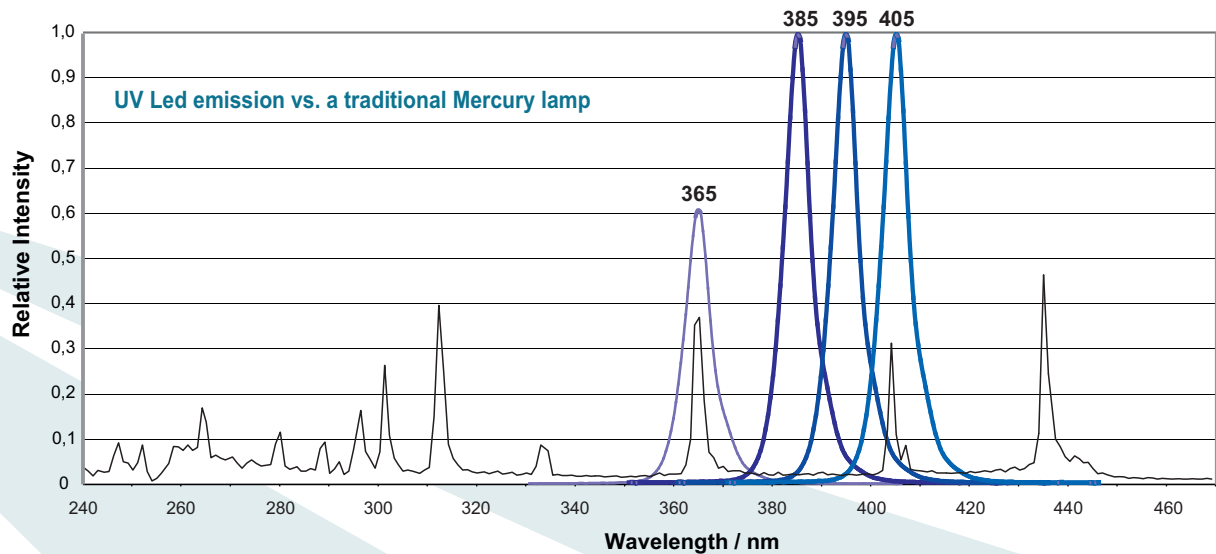
DROLED L70 dimensions

Dimension L = lamp maximum irradiation width

DROLED L70 (Flat Window version)							
Emitting window (mm)		40 x 17mm	80 x 17mm	157 x 17mm	235 x 17mm	313 x 17mm	390 x 17mm
Dimensions	L	40	80	157	235	313	390
	P	136	136	136	136	136	136
	H	289	258	258	258	258	258
	W	20	56	120	120	240	240
	F	35,2	35,2	35,2	35,2	35,2	35,2
	G	51	51	51	51	51	51
	Weight(Kg)	1,05	1,55	2,9	4,4	5,9	7,4
DROLED L70 (Focused Lens version)							
Emitting window (mm)		40 x 17mm	80 x 17mm	161 x 17mm	242 x 17mm	323 x 17mm	403 x 17mm
Dimensions	L	40	80	161	242	323	403
	P	136	136	136	136	136	136
	H	297	266	266	266	266	266
	W	20	56	120	120	240	240
	F	43,7	43,7	43,7	43,7	43,7	43,7
	G	59,5	59,5	59,5	59,5	59,5	59,5
	Weight(Kg)	1,6	3,2	4,8	6,4	8	9,6

5. Emission frequencies available

DROLED L70 UV LED lamps are available in **4 emission frequencies** 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 filtered grids, present on both sides of the lamp, and comes out from the back grid. The internal electronics manages and controls independently 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**.

CONTROL BOARD - PINOUT SIGNALS CONNECTOR DB15-HD SET UP FOR MODBUS

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 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 .
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 advises that the lamp has an anomaly. 0Vdc= fault lamp, 24Vdc= not fault lamp .
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

