

UV-FLOW ... C-NX

***UV-C Device with Controlled vertical/horizontal Flow
for Barriers against Germs***

MODELS:

UV-FLOW-E40H-C-NX

UV-FLOW-E75H-C-NX



SECURITY WARNING

The Company has ensured that every care is taken in the design and production of its machinery. In order to guarantee, as far as possible, that it is safe when used correctly. However, the laws on accident prevention require all users of the machinery to ensure that whoever is responsible for installation, maintenance, use and sale of these products is shown the instruction provided by our company and is made aware of the precautions to be taken.

According to the circumstances, the appropriate recommendations made in these instructions must be made available, together with any other relative information, to any company or person involved in the installation of LIGHT PROGRESS products.

Only use this appliance for its intended purpose as described in this booklet.

If the appliance is wrongly operated for a purpose other than that for which it is intended, no liability can be accepted for any possible damage. The manufacturer cannot be responsible for any damage to people, animals and objects caused by use or operation of the appliance contrary to these instructions.

As with all electrical appliances the safety information and precautions contained in this booklet must be carefully observed, including following:

Before maintenance or cleaning ensure that the appliance is switched off and unplugged from the mains supply.

Should the appliance become faulty please contact our authorized Service Centre direct and in case of repairs ask for genuine parts.

Improper repairs may damage the appliance and place the user at serious risk.

WARNING



Avoid exposure to UV-C rays emitted by germicidal lamps, even for few seconds, as it may cause severe conjunctivitis and erythema.

Plastic or painted surfaces exposed to direct UV-C rays may progressively yellow, similar to a long exposure to sunlight.

The intended use is as a germicidal lamp for sterilization, any other use is improper and dangerous.

The lamp, as supplied, cannot be modified or designed for use with accessories or tools.

Disclaimer: All responsibilities and warranty will be void due to tampering or lack of maintenance.

- Carefully read the following instruction before use
- Before opening of the UV section, ensure the UVC device is OFF and unplugged in order to avoid exposure to UVC light emitted by the germicidal lamp; It may cause severe conjunctivitis and erythema.
- Remove the protection film from the device before turning on the UV-C lamp.
- This device cannot be operated children and by persons with reduced physical, sensory or mental capacities.
- Ensure all users have the required knowledge and the related instructions about the safe use of the device and the related risks.

Refer to ARPANSA Radiation Standard: Occupational Exposure to Ultraviolet Radiation for additional requirements: <https://www.arpansa.gov.au/sites/default/files/legacy/pubs/rps/rps12.pdf>

CONVENTIONAL SYMBOLS



DISPOSE THIS PRODUCT ON THE UNDIFFERENTIATED WASTE DISPOSING OF THE SUBSTITUTED ITEMS MUST BE PERFORMED RESPECTING THE LOCAL LAWS.



RECYCLE THE STUFFS THAT COMPOSES THIS PRODUCT.



OBLIGATION TO CONSULT THESE INSTRUCTIONS BEFORE USE THIS PRODUCT



DANGER OF ELECTRICAL SHOCK; REMOVE TENSION TO THE SYSTEM BEFORE PERFORMING ANY OPERATION.



GENERIC DANGER.



DANGER OF EXPOSITION TO ULTRAVIOLET UV-C RAYS.



THIS DEVICE RESPECTS THE ROHS NORMS.



USE PROTECTIVE GLOVES



WEAR PROTECTIVE GLASSES

MANUAL



ATTENTION!

This instruction manual must be preserved and must always be kept available for consultation; it must follow the device in case of transfer of ownership and accompany the device until its disposal.

DISPOSAL



Do not dispose of these products as unsorted municipal waste. Collect them separately as a special waste and entrust them to specialized waste disposal companies. Disposal should be in accordance with Legislative Decree No. 151/2005 (WEEE - Italy), or the law of the country where disposal will occur (WEEE - EC). In case of failure to comply with laws or illegal disposal heavy penalties are provided. The apparatus consists of plastic parts, electronic components, metal, UV lamps containing mercury (substances dangerous for the environment and human health). The dealer is available to the withdrawal of the apparatus used

DEVICE DESCRIPTION

The UV-FLOW C-NX is a controlled unidirectional flow device, with a powerful UV lamp inside and a narrow emission peak at wavelength of 235.7 nm. (nanometers), which has a strong germicidal effect against all micro-organisms (molds, bacteria and viruses).

There is also a parabolic, mirror bright aluminum surface, which generates UV ray parallel beams by reflection. These beams pass through a black honeycomb laminated grid that directs UV rays to form a unidirectional flow ("blade UV").

When installed according to the instructions, this device can be used in the presence of people for intensive and continuous air disinfection.

OPERATION

The **UV-FLOW C-NX** must be anchored at the wall and can be oriented so to generate a horizontal flow or a vertical downward flow.

HORIZONTAL FLOW:

This arrangement will create a "zone of intense radiation" below the ceiling, which destroys all airborne microorganisms, due to natural convection of air (see pic. 1)

The air, rich in microbes, is continuously treated and disinfected by the ultraviolet rays; a progressive decontamination of bacteria, viruses and molds is made, decreasing the possibility of bacterial, viral transmissions and contaminations in general.

Continuous operation ensures a permanent progressive healthy environment, especially in hospitals, schools, restaurants, indoor workplaces such as offices, laboratories, etc. An extremely important disinfection activity can be done in hospital intensive cares units, to prevent the spread of diseases such as TB and other transmissible pathologies through air.

VERTICAL FLOW:

This arrangement is positioned above the doors of controlled contamination rooms (clean rooms), with air flow directed downwards. This arrangement generates a vertical air flow which produces a barrier against germs (pic. 2).

For proper use you should create a decontamination area between two adjoining rooms, to be kept under microbiological and hygienic control. This zone can be made simply by a double opening, door and Avant-door, just over the front door wide and about 1.5 to 2 meters deep.

The use of the UV-C-FLOW NX allows intense disinfection of that contaminated air entering microbiologically controlled rooms when doors are opened. It is necessary in healthcare where transmission of bacteria, viruses, and airborne spores is highly probable.

The application is also needed for food production areas, where it is necessary to work in very good microbiological conditions.

BENEFITS AND ADVANTAGES

BLOCK OF GERMS

Blocking the spread of germs from one place to another (in case of using VERTICAL flow). Then you can keep at consistently low levels the entry of germs into "controlled contamination" rooms.

PHYSICAL ACTION AND ENVIRONMENTAL PROTECTION.

Treatment by UV-C rays is purely physical, and always achieves the same effect; Also, there are no problems of over-dose and rooms are safe and practicable (when devices are off). Rather, many methods of chemical treatment involve the use of dangerous products for the environment, and difficult to biodegrade, as well as the risk of contamination of foodstuffs. Whereas, the use of chemicals it is likely to develop resistant microbial forms with consequent danger to human health.

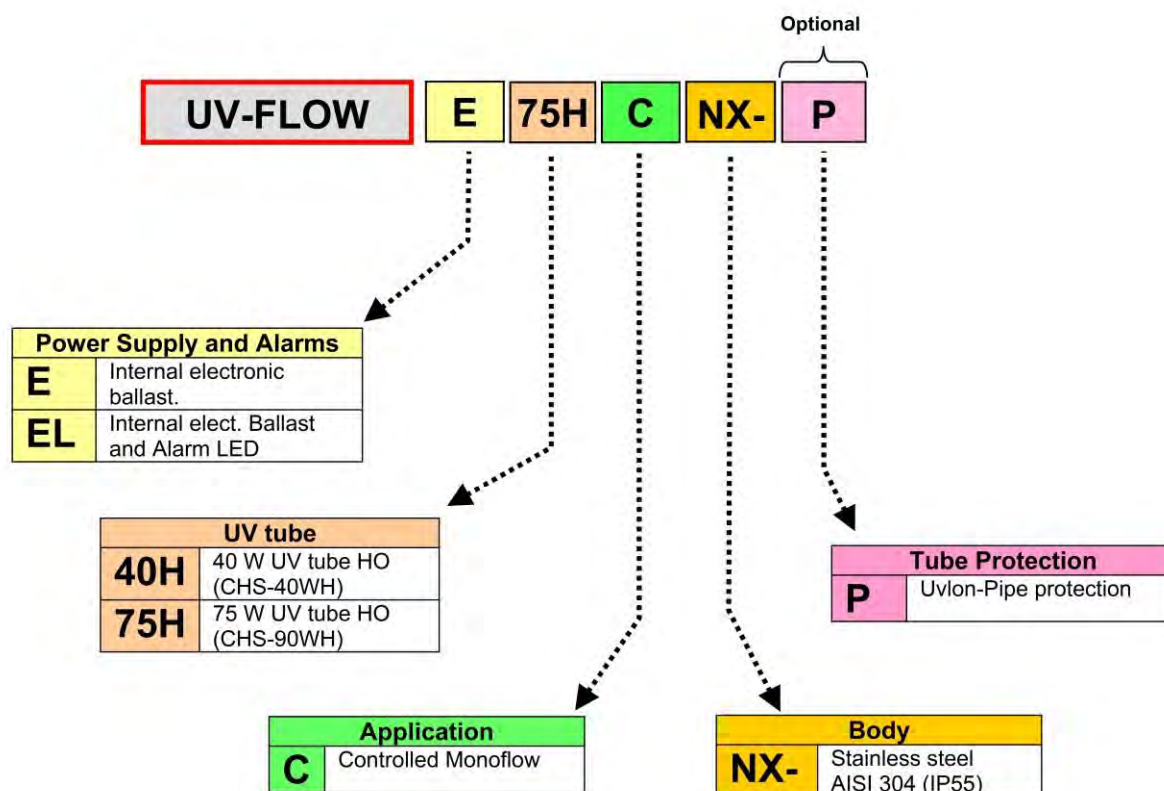
DEEP AND ONGOING DISINFECTION

UV-FLOW can work 24 hours over 24 in the presence of people, thus allowing to maintain a consistently low level of microbial environment.

PRACTICABILITY AND SAVINGS.

The treatment is immediate and ready for use. The maintenance is minimal with low costs of both energy consumption and repairs.

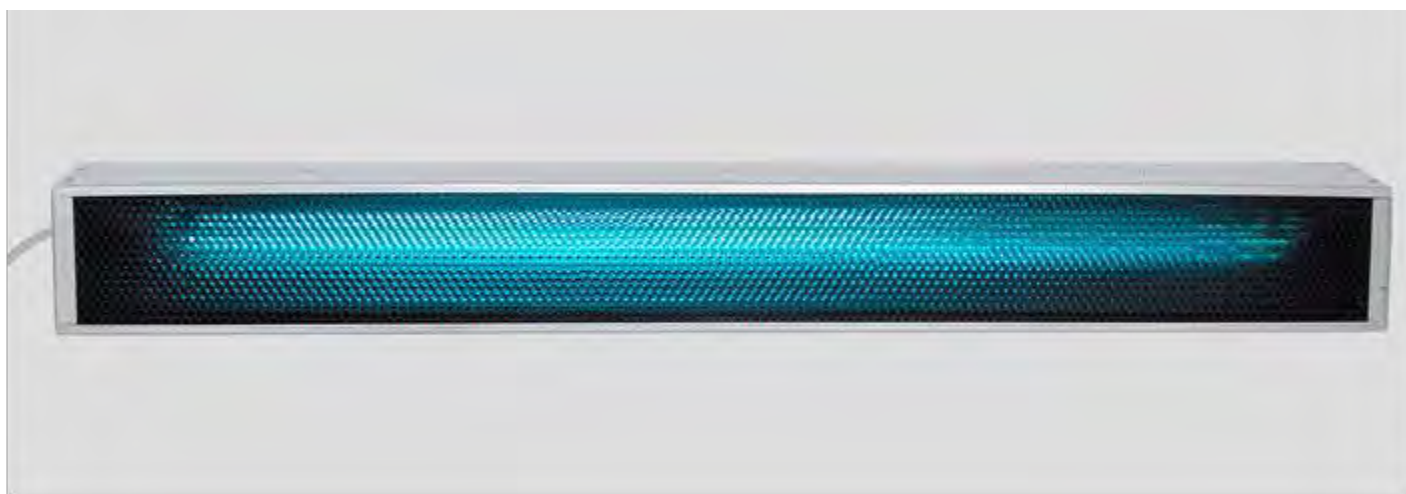
DEVICE CODES



RECEPTION

Handle with care as fragile material. Verify the integrity of the packaging, and please be careful not to damage the contents when using sharp blades or cutters to open the box.

Remove the unit from the box, then inspect it immediately to ensure that no damage has occurred during transport. Before installation and using the device please READ CAREFULLY THE SECURITY WARNINGS and all other instructions that follows.



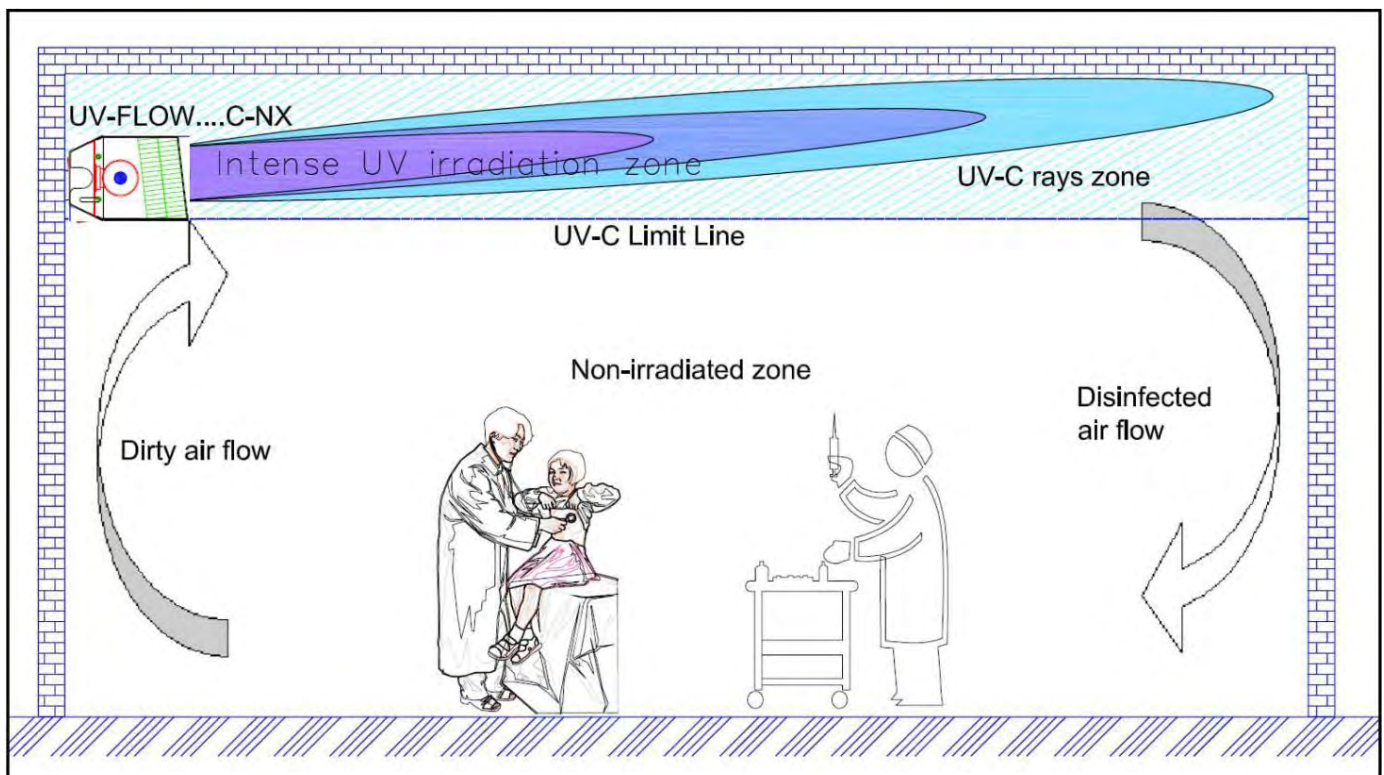
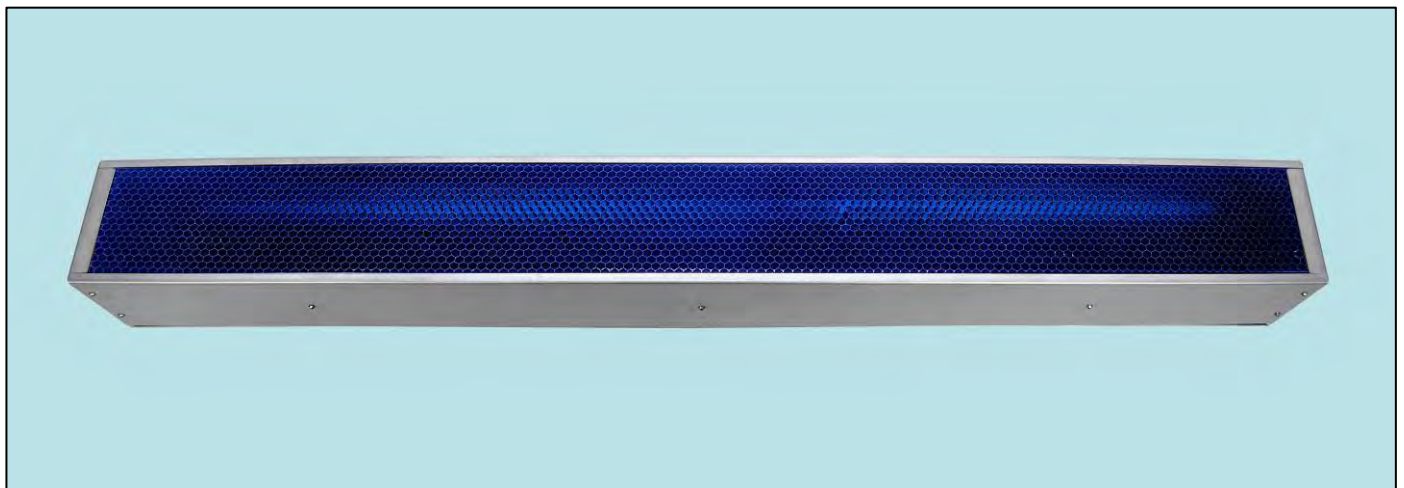
INSTALLATION

Decide the type of orientation to be given to the air flow: horizontal flow or vertical downward flow

HORIZONTAL FLOW:

The installation must be made by placing the brackets at 2.20 meters above the floor. In this way the flow will be slightly upwards, which makes possible the continuous disinfection of the air circulating within the room, because of the natural convective motions.

To cover your device, please refer to Table.1. During the installation phase, avoid directing the air flow towards objects hanging from the ceiling, such as air conditioners, filters, etc., which would prevent its proper operation and could cause unwanted downward reflections.

**PIC.1**

VERTICAL FLOW:

The device must be placed above the doors of the controlled contamination room (clean room), with air flow directed downwards. Use the two supplied stainless-steel brackets, anchoring them to the wall with expansion bolts (\varnothing 8 to \varnothing 10 mm.) or with self-tapping screws.

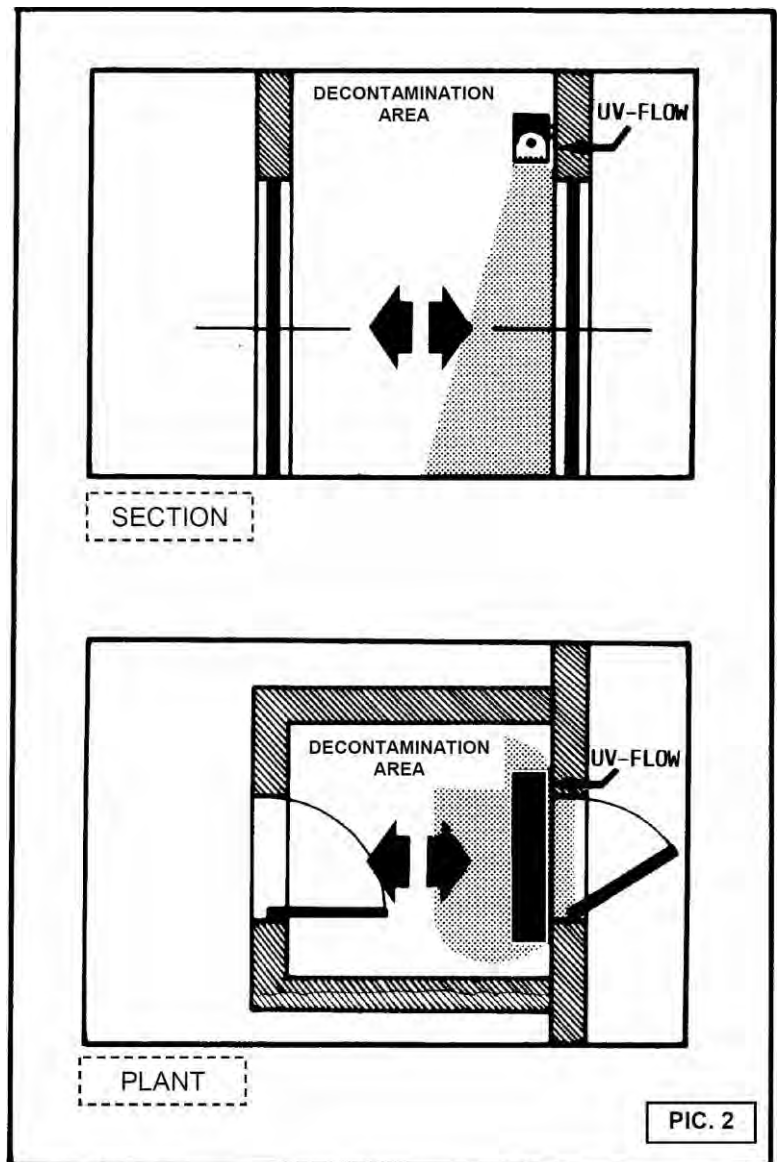
This arrangement generates a vertical air flow which produces barrier against germs (pic. 2).

For proper use you should create a decontamination area between two adjoining rooms, to be kept under microbiological and hygienic control. This zone can be made simply by a double opening, door and Avant-door system, just over the front door wide and about 1.5 to 2 meters deep.

Of course, the doors should be normally closed (preferably equipped with electrical or mechanical locking, spring-return type). Normally, only one port at a time must be opened and when one door is opened, to allow entry of the decontamination area the second door must stay closed; After the entrance, the person will close the first door and, in succession, will open the second closed door.

When a person is within the decontamination area the infrared ray presence detector will switch off the UV-FLOW, to protect personnel from UV irradiation; the sensor will switch on the UV-FLOW again when the person has left the area.

However, it is not required to switch off the UV-FLOW if personnel wear UV-C ray protection clothing, such as hats with visors, and stay within the decontamination area only for the necessary time of passage.



**WARNING!!!**

Follow carefully the instructions for both the HORIZONTAL and VERTICAL position because, although it is a device for controlled radiation, it must be turned on by preventing reflected radiation to affect people. For example, reflections on ceiling or walls surfaces may cause eye irritation and skin erythema.

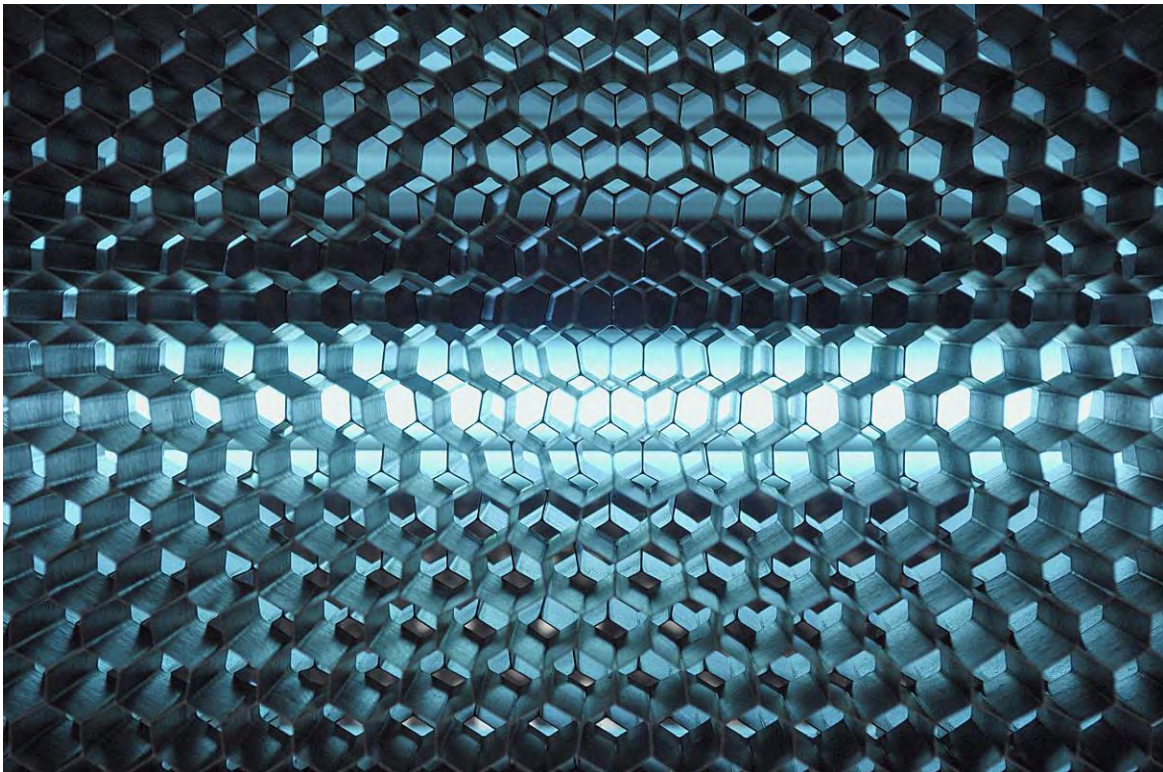
In order to avoid accidental exposure to UV radiation, provide an accurate control of the context in which the device is applied. Provide warning lights and / or pictograms to indicate the presence of such devices.

SCHEDULING

UV-FLOW can work 24/7 with no pause.

ELECTRICAL CONNECTIONS

- We recommend that a qualified electrician installs this device, by following these instructions, the electrical scheme and the CEI norms.
- Be sure that the device is installed where it will fit with the existing environmental conditions
- Before connecting the device to the electrical line, be sure that the labelled data is the same as the one on the supply line; we remind you that the electrical supply of this device is 220-240V, 50/60Hz.
- Be sure that the electrical system fits the supply required by the device (please see the label).
- The connection requires interruption through a multipolar switch
- The connection to the electrical line must be installed with the cable provided - 3 x 1m²
- The use of screws, nuts or other means is necessary to joint it to the line.
- We suggest the use of hour-counters to know exactly the life of UV lamps and to remember when replace them
- Protect the power supply cable from high temperature, sharp corners, water, oils.



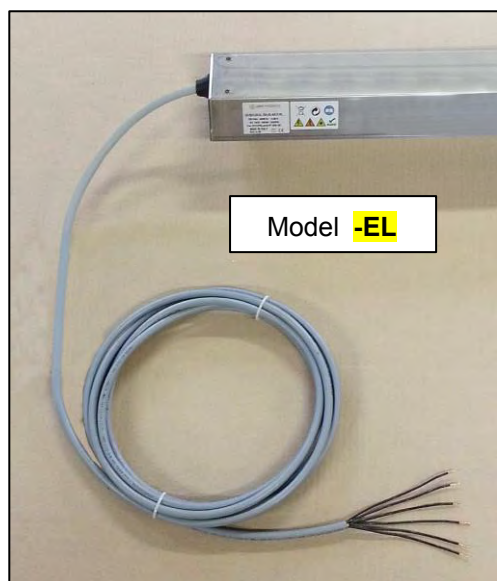
► UV-FLOW-EL

Model **-EL** Gives you the possibility of remote-control functionality of the UV lamp.

Connected to the device there is a cable with 6 poles: a couple of poles carrying output signal to turn on LED indicating the UV lamp (when on); another couple of poles triggers a voltage-free contact to be activated when a lamp stops working (alarm function: open contact if at least one lamp UV is not working); in addition, there are two input wires to power the device (phase and neutral).

The faulty lamp alarm contact can be powered by max. 500mA of current and 24V of tension, and can be connected to an electronic panel as the "MASTER-ST" control unit.

For the -EL models refer to the numbering of the wires on the table below.



In the device UV-FLOW-EL ...	Multi-pole plug and socket	Wire	Meaning
Black wire for LED	terminal n° 1	Wire n°1	1- anode LED } for synoptic 2- cathode LED } MASTER-ST.....
Red wire for LED	terminal n° 2	Wire n°2	
Power line 230V-50Hz - phase	terminal n° 3	Wire n°3	3- Line 230V-50Hz (Phase)
Power line 230V-50Hz - Neutral	terminal n° 4	Wire n°4	4- Line 230V-50Hz (Neutral)
Electrical ground	terminal Y/G	Wire Y/G	Y/G- Ground terminal
Alarm board faulty lamp	terminal n° 5	Wire n°5	5-6- open contact = faulty lamp (free contact without tension, max 500 mA-24V)
	terminal n° 6	Wire n°6	

MAINTENANCE

UV LAMP



USE
PROTECTIVE
GLOVES



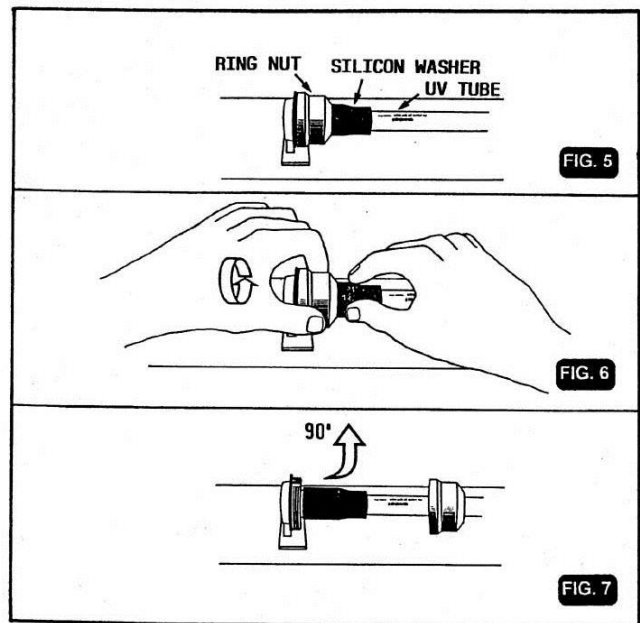
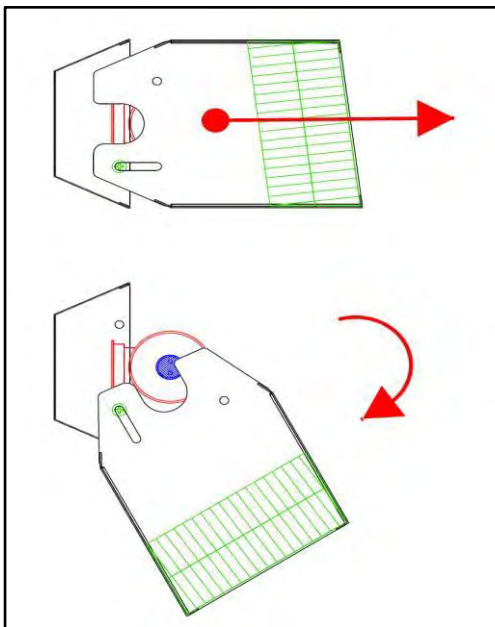
WEAR
PROTECTIVE
GLASSES

Lamp maintenance is very important because UV-C light emitted by the source is not visible to the eye, so, although you see the lamp ON, its germicidal effect may not be sufficient to perform disinfection treatment.

Before reaching the lamp, **ALWAYS** switch off power supply

If UV-C lamp gets dirty (or gets dusty) clean it with a clean cloth and alcohol, and avoid touching the glass part with hands. To check UVC lamp life number of hours, correct product code of the spare UV lamp please refer to [table 1](#). The lamp, once it has reached the timing for replacement, must **be replaced**, this operation is carried out as follows:

- For each side of the device, unscrew one screw (or knob) which sets the screen and rotate it 90 degrees.
- Loosen the nuts of the holder and slide them along the lamp, grab the lamp from the 2 ends and pull it in a direction parallel to the unit.
- Repeat steps in reverse to reassemble the new lamp again.



TROUBLESHOOTING

UV LAMPS

See MIANTENANCE

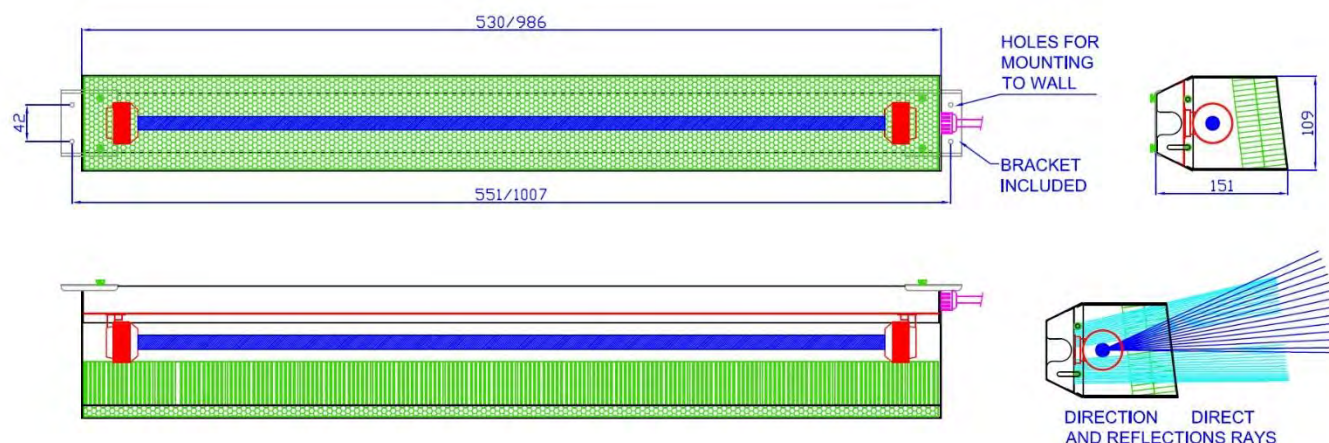
BALLAST

All UV models are supplied with electronic ballasts which guarantee an emission of 15% more if compared with traditional ballasts. Furthermore, lamps are not influenced by environment temperature, ($< -20^{\circ}\text{C}$). Finally, the switching on is immediate, with no starter, and for this reason lamps last longer.

To preserve the original characteristics of IP sealing and insulation, in order to keep intact all the characteristics necessary to ensure the long-lasting life of the product, the replacement of the electronic ballast must be carried out only by trained personnel with requirements recognized by LIGHT PROGRESS; if necessary, you should return the product to the company for repair.

Alternatively, you can purchase the entire power supply duct for substitution (for code see Table n.1).

TECHNICAL FEATURES


TABLE n.1

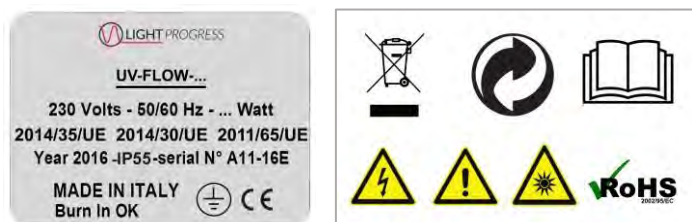
UV-FLOW	E40H-C-NX	E75H-C-NX
LAMP LIFETIME (hour)*	≤ 18,000	≤ 18,000
POWER (W)	40	75
DIMENSIONS LxSxH (mm)	530 x 109 x 151	986 x 109 x 151
WEIGHT (Kg)	3	5
TREATED AIR (m³) (horizontal flow)	20 to 25	35 to 50
TREATED SURFACE (m²) (horizontal flow)	6 to 8	12 to 15
DOOR WIDTH (cm) (vertical flow)	60	100
SPARE PARTS		
UV LAMP Code	n°1 CHS-40WH	n°1 CHS-90WH
SUPPLY CHANNEL Code (complete)	n°1 CpE-40H	n°1 CpE-75H




* continuous operation

- Highly efficient selective UV-C lamp (at 253.7 nm), pure quartz.
- Stainless steel AISI 304 body.
- All used materials are tested to resist to intense UV-C radiation
- Specific electronic ballast for UV-C ray lamps.
- Protected against dust and water (IP55).
- Pure bright mirror aluminum reflector.
- CE trademark (LVD 73/23 - EMC 89/336 - MD 93/42).
- Complies with the noise standards of Directive 2006/42/EC
- Values measured according to UNI EN ISO 3746
- Non-detectable and non-transmissible vibration values
- Suitable for class 1 installations - protected areas

LABEL AND SYMBOLS

Example:



SYMBOL			
MEANING	Warning! Check the attached documentation	GROUND TERMINAL (The unit must always be connected to the ground)	Device with CE certification.

WARRANTY

All products made by LIGHT PROGRESS are manufactured using only materials of the higher quality, and are subjected to rigorous testing, and are guaranteed to be free of factory faults according to current law and regulations. Minimum requirements for warranty validity

Warranty will be considered valid only in case of possession of the purchase document.

Warranty limits

Warranty excludes:

- Damages caused by not following the instructions that accompany the product at purchase.
- Periodical controls, maintenance, repairs or replacements of parts due to normal wear.
- Consumable parts.
- Use of incompatible spare parts or consumables; Compatibility is assured only by use of products purchased from or recommend by **Light Progress**.
- Damages caused by modification of device / system without **Light Progress**' previous consent.
- Improper use of the product, falling or crashes.
- Modifications or repairs made by unauthorized personnel.

For defective materials return, you must request the return merchandise authorization (RMA) sending an email to info@lightprogress.it or calling the number +39.0575.749255.

Once you receive the module, it has to be filled up in every part and sent via email to info@lightprogress.it or via fax to +39.0575 789929 to obtain the RMA number that will authorize the shipments of the goods to Light Progress warehouse. Only authorized goods will be accepted, otherwise it will be refused and sent back to the sender on ex-works conditions. The packages must be sent on DDP (Delivery Duty Paid) with packaging suitable for transport. RMA number is valid up to 10 working days from release date.

Europe:

Loc. San Lorenzo, 40 - 52031 ANGHIARI (AR) - ITALIA

TEL. 0575 / 74.92.55 - FAX 0575 / 78.99.29

Http: www.lightprogress.it

E-mail: info@lightprogress.it

Australia / NZ:

LAF Technologies Pty Ltd

12 Royan Place

Bayswater North VIC 3132

E: sales@laftech.com.au

T: 1300 306 002

W: www.laftech.com.au

MANUFACTURER RESPONSIBILITY AND COMMITMENTS

Light Progress do not assume any responsibility for any damage to persons or property, due to failure to follow these instructions. We recommend you to carefully read all the given instructions.

The manufacturer agrees with the buyer to provide, upon request, schemes of circuits, component parts lists, instructions for calibration of lamps and other information, which are useful to repair those parts that the manufacturer considers repairable.

The company reserves the right to make changes without prior notification or public notice.



DECLARATION OF COMPLIANCE

We, LIGHT PROGRESS S.r.l., hereby declare under our own responsibility that the following units of own production:

UV-FLOW....C-NX series

- ☐ are in accordance with EEC directive 2014/30/EU (Electromagnetic Compatibility)
- ☐ are in accordance with EEC Machinery Directive dispositions 2006/42/EU
- ☐ are in accordance with EEC Low Voltage Directive 2014/35/EU
- ☐ are in accordance with EEC (RoHS) 2011/65/EU (D.Lgs 4 Marzo 2014, n.27)

TECHNICAL STANDARDS APPLIED

UNI EN ISO 12100:2010	Safety of Machinery - Basic Concepts, General Principles for Design - Risk assessment and risk reduction
UNI EN ISO 13857:2008	Safety of Machinery - Safety Distances to prevent danger zones being reached by the upper and lower limbs (2008)
ISO 14120:2015	Safety of Machinery - Guards - General Requirements for the Design and construction of fixed and movable guards
UNI EN ISO 13849-1:2016	Safety of Machinery - Parts of the Control System related to the Safety – Part 1: General Design Principles
UNI EN ISO 14119:2013	Safety of Machinery - Interlocking devices associated with guards - Principles for design and selection
CEI EN 60204-1:2016	Safety of Machinery - Electrical Equipment of Machines. Part 1: General Rules (2010)
EN 61439-1:2011	Low-voltage Switchgear and Control Gear Assemblies. Part 1: General rules

FURTHER TECHNICAL STANDARDS APPLIED:

IEC EN 60335-1 "Safety of household electrical appliances and similar"
Electronic Ballasts for the control of the lamps in accordance with the standard EN 60928.
Germicidal UV-C Lamps in accordance with EN 61199.
Electrical Protective Measures in accordance with IEC 70-1, EN 60229.

Anghiari, 8.14.2020



Responsible for Standards: Dr. Aldo Santi

Notes:

[illegible]

[illegible]



Call: 1300 306 002 www.laftech.com.au