

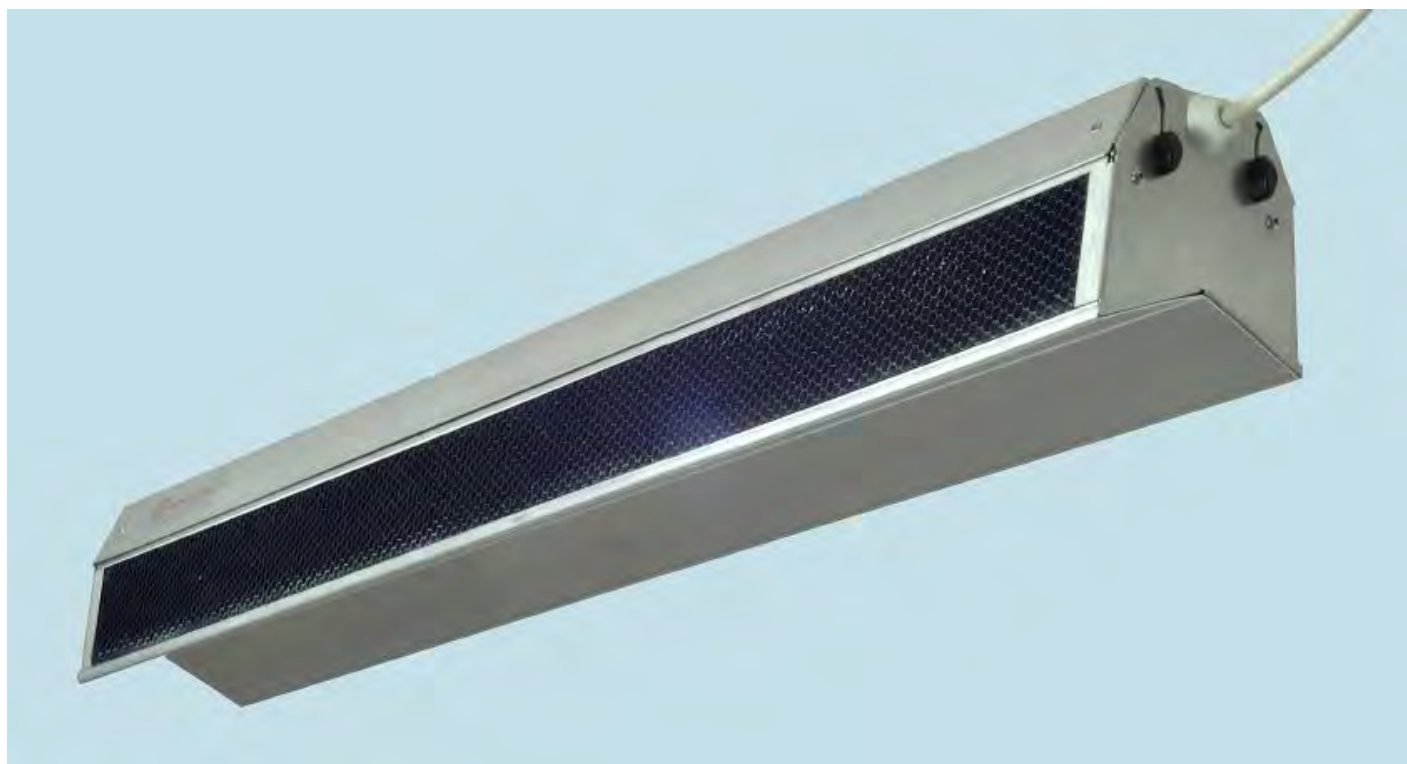
INSTRUCTION

UV-REFLEX ... SC/B-NX

GERMICIDAL UV-C DEVICE FOR COLD STORAGE

MODELS:

UV-REFLEX-E40H-SC/B-NX
UV-REFLEX-E75H-SC/B-NX



SECURITY WARNING

Our 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 and / or distributor 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 main 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, 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 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 NOTICED ON DEVICES



DOESN'T 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 be ever at disposal to consultation; it must follow the device in case of passage of property and accompany the device until its demolition. It is possible to contact Light Progress' technical office to ask for updated instruction manuals and information

DISPOSAL



Do not dispose of these products as unsorted municipal waste but 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

UV-REFLEX ... SC-B is an indirect germicidal irradiation device entirely made of stainless steel AISI 304, designed to prevent contamination of foodstuff inside cold rooms.

Using the properties of the germicidal ultraviolet UV-C lamps with an emission peak of 235.7 nanometers, this unit disinfects the air, by effectively eliminating molds, bacteria and viruses.

The physical process of UV-REFLEX ... SC-B avoids the forming of microbial resistant species and at the same time avoids contamination of the air and of the products stored in the cold room, both unavoidable side effects using chemical disinfectants.

APPLICATIONS AND RESULTS

UV-REFLEX ... SC-B eliminates progressive airborne bacteria and molds avoiding the same microorganisms that are deposited on the surface of the products stored in the cold room.

This prevents microbial colonies which can grow on stored products (colonies can double their number in 20 minutes) allowing a better conservation, aging and appearance of meat and a longer trickle of food commodities.

This system does not affect the normal maturation and storage of products as it removes only the unwanted microorganisms in the air.

OPERATING

UV-REFLEX ... SC-B disinfects the air by using the forced circulation through the evaporator by its fan.

The inside of the device is coated by a mirror polished aluminum to increase reflection, and thus the effectiveness, of the high emission UV-C lamp on all microorganisms,

Laterally, on both long sides of the device, there are two special honeycomb-shaped grids, coated with a black antireflection paint: The grids direct irradiation horizontally on both sides, avoiding direct and reflected irradiation towards the stored products and operators that could enter in the cold room.

By installing UV-REFLEX ... SC-B parallel within the airstream generated by the evaporator, the air that passes through the field of action of UV-C rays results in decontamination and the microbial charge at each passage reaches reductions to 99.99%.

In the case of large areas the planned installation of multiple units is recommended and carried out by referring to the information tables.

BENEFITS AND ADVANTAGES**CONTINUOUS DISINFECTION**

This unit can be turned on 24 hours a day, without any contraindications. Low level of microbial load remains steadily inside the cooling room; on the contrary, by using classic systems of disinfection, you have a level of microbial contamination with ups and downs.

BETTER AGING

The reduction of the microbial load let the temperature of the refrigerator to increase, to improve the aging of the meat, and to diminish the dehydration and the losses due to reduction in weight.

BETTER PRESERVATION

By controlling the microbial load you get less loss of meat waste surfaces, due to the growth of bacterial and molds colonies; you Improve the freshness, flavor and appearance of the meat, with the possibility of extending the storage time.

ELIMINATION OF MICROBES

The food can be treated to significantly reduce the level of microbial load, increasing the shelf-life of the products, without any contraindication.

PHYSICAL ACTION AND ECOLOGICAL PROTECTION

Treatment with UV-C rays is purely physical, allowing constant treatment with the same efficiency; there is no problem with the overdosing of UV rays. In contrast, many methods of chemical treatment rather involve the use of products hazardous and difficult to biodegrade, and can develop microbial resistant forms, with consequent danger to human health.

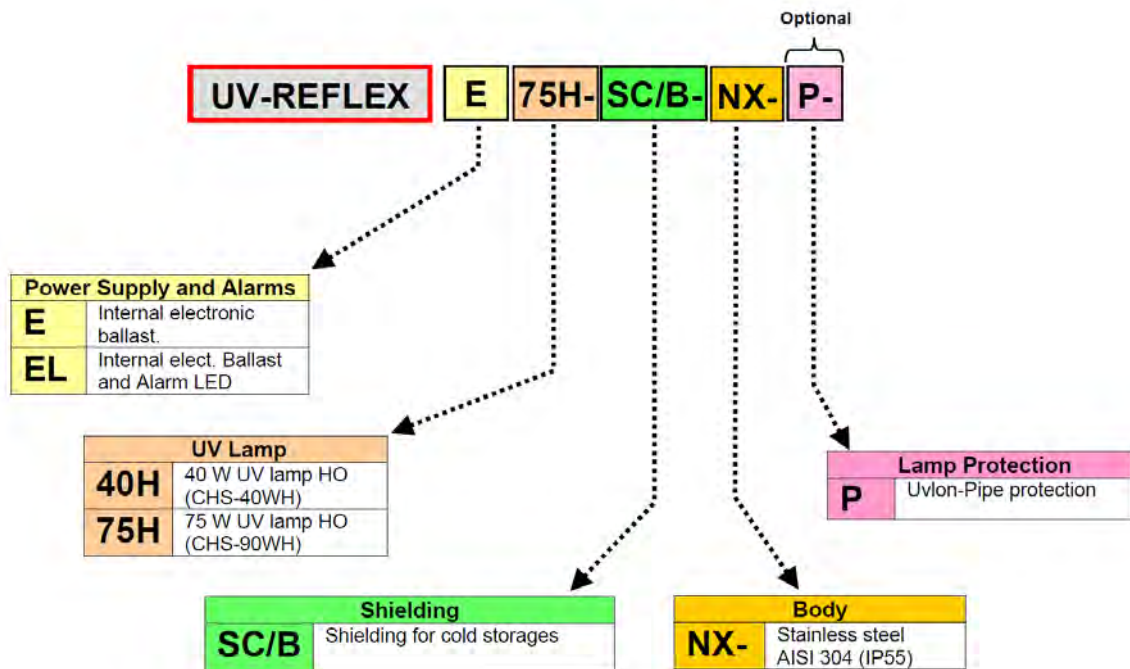
NO CHEMICAL / PHYSICAL ALTERATION

Cold and dry treatment does not cause any alteration to the organoleptic quality of the food.

PRACTICABILITY AND SAVINGS.

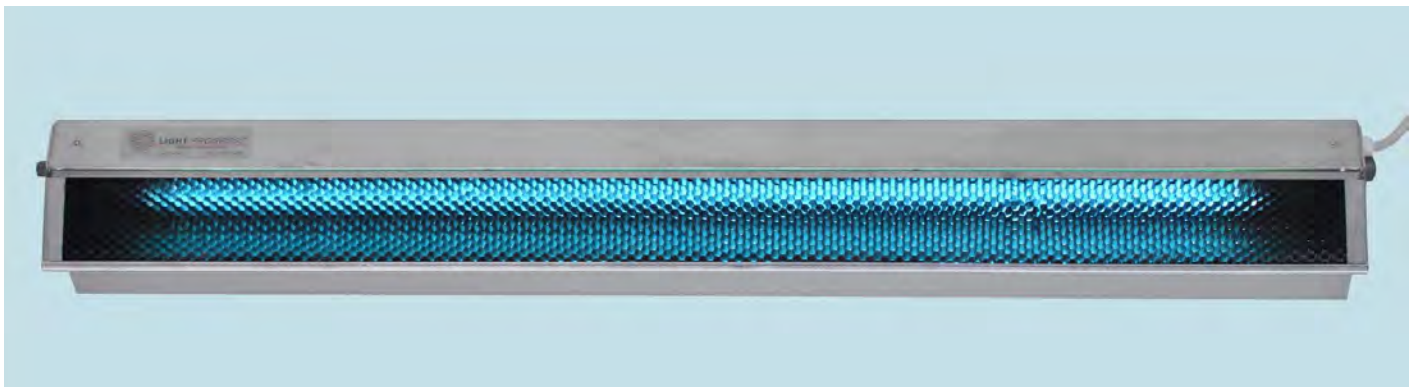
This treatment is immediate and ready for use. The maintenance is minimal with low costs of both energy consumption and repairs.

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 use of the device please READ CAREFULLY THE SECURITY WARNINGS and all other instructions that follow.



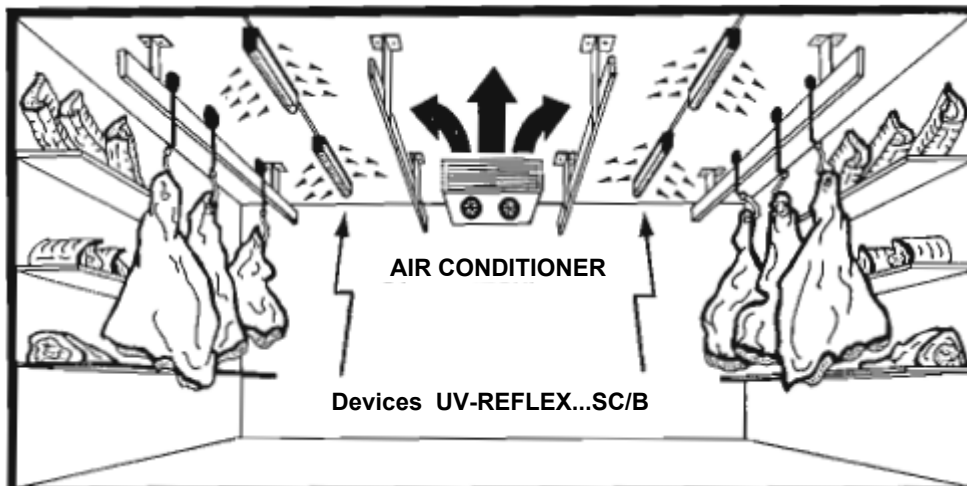
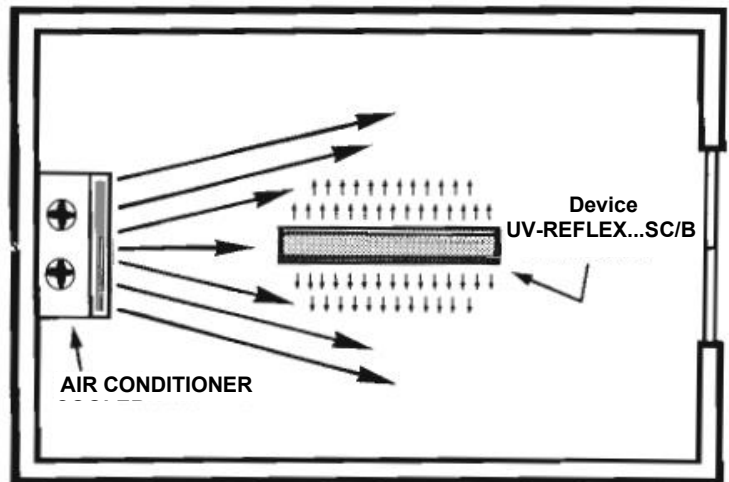
INSTALLATION

Install the device at the ceiling, in a position that is central and parallel to the air flow generated by the heat exchanger. The assembly of one or more devices must be carried out to distribute the air uniformly in the cold room (avoid the hidden areas, such as the corners; **all the indoor air must be treated**) (pic. 2).

The area (or the volume) covered by the UV-REFLEX device is shown in Table n.1. The final absolute result of the disinfection will be correlated to the higher or lower value of the microbial load in the environment outside the cold room.

For installation, use the two supplied stainless steel brackets, anchoring them to the ceiling with screw anchors ($\varnothing 8 \div \varnothing 10$ mm.). For the distance between the two brackets, see figure of Table n.1. After inserting the screw anchors to the ceiling, you must screw the device to the brackets (by supplied stainless steel screws M4x10), before fixing them to the ceiling.

In the case of a very high ceiling, you can tie a chain to the UV device (not supplied) to attach the brackets to the ceiling.



WARNING!!!

Remember to switch on the device ONLY IF there is adequate shielding and no accidental exposure to rays by the personnel.

To avoid exposure to UV-C rays please provide a total shielding of the modules or enable the automatic OFF at the entry doors in the environment treated. There must be no direct irradiation of any personnel.

To shield the device, materials with opaque surfaces such as stainless steel or aluminium can be used, but you can also use transparent materials such as glass, perspex or Lexan®; to have further information please contact us.

To improve safety, we suggest you to add light signs or signboards to report the potential danger.

SCHEDULING

The device can work 24 hours a day, when the refrigerator is on, without the presence of personnel.

ELECTRICAL CONNECTIONS

- We suggest a qualified electrician install this device, following these instructions and electrical scheme, and following the CEI norms.
- Be sure that the device will be installed where it will fit with the existing environmental conditions
- Before connecting the device to the electrical line, be sure that the label data are 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 required an interruption through a multipolar switch
- The connection to the electrical line must be done by the cable 3 x 1 mm² provided
- The use of screws, nuts or other means is necessary to joint it to the line.
- It is recommended to use an hour counter to indicate when the UV lamp has exhausted its life cycle.
- Protect the power supply cable from high temperature, sharp corners, water, oils.



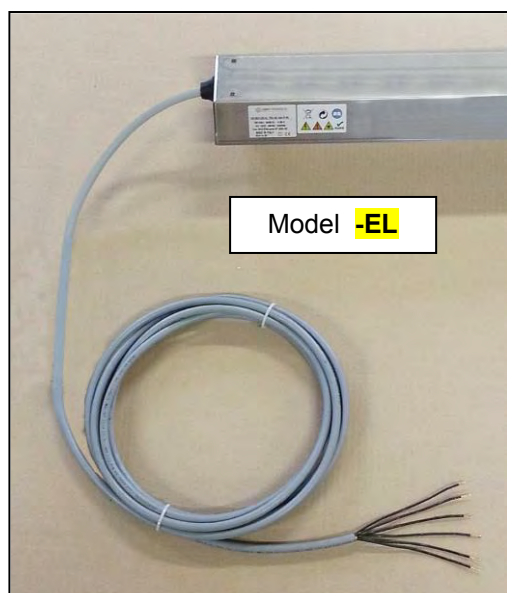
► UV-REFLEX-EL

With the model **-EL** you have the possibility to a remote-control functionality of the UV lamp.

Connected to the device there is a cable with 6 wires: two wires carry the output signal to turn on the LED indicating bulb on the UV lamp (when it's operating); two wires trigger 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); and then there are two input wires to power the device (phase and neutral).

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

For this model see the numbering of the wires on the table below.



In the device <i>UV-REFLEX-EL ...</i>	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 n° 9	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

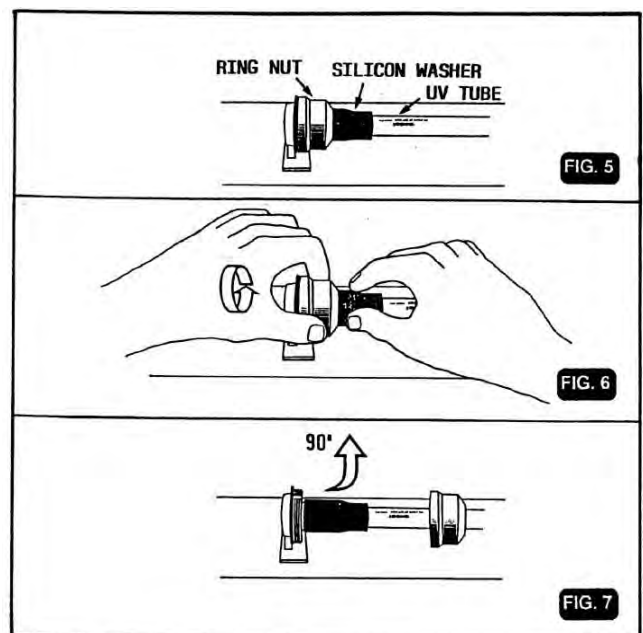
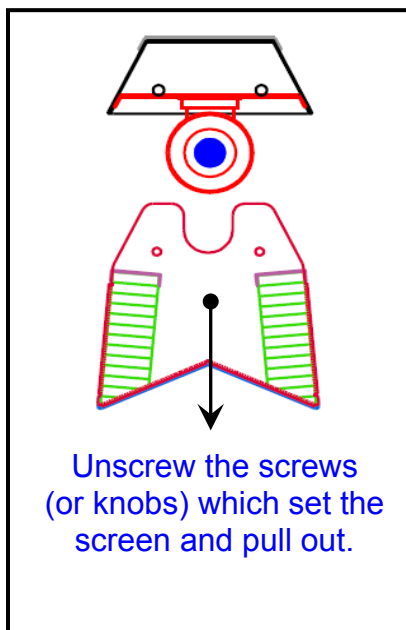
Lamp maintenance is very important because UV-C light emitted by the source is not visible to the naked eye, so although you see the lamp ON, its germicidal effect may not be sufficient to perform disinfection treatment.

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:

1. For each side of the device, unscrew the screws (or knobs) which set the screen and pull out.
2. 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.
3. Repeat steps in reverse to reassemble the new lamp again.



TROUBLESHOOTING

UV LAMP

See MAINTENANCE.

BALLAST

All UV models are supplied with electronic ballasts which guarantees an emission of 15% more if compared with traditional ballasts. Furthermore, lamps are not influenced by environment temperature that reach -20°C. Finally, the illumination is immediate, with no starter and for this reason lamps last longer.

To preserve the original features of original IP protection and isolation class and to maintain all the characteristics that guarantee the lasting of this product, the ballast replacement must be done by qualified technicians verified by Light Progress Snc; in case of necessity please send the device back to our facility for any kind of repairs.

If this is not possible you can order the entire supply channel for replacement (for code, see Table 1).



TECHNICAL FEATURES

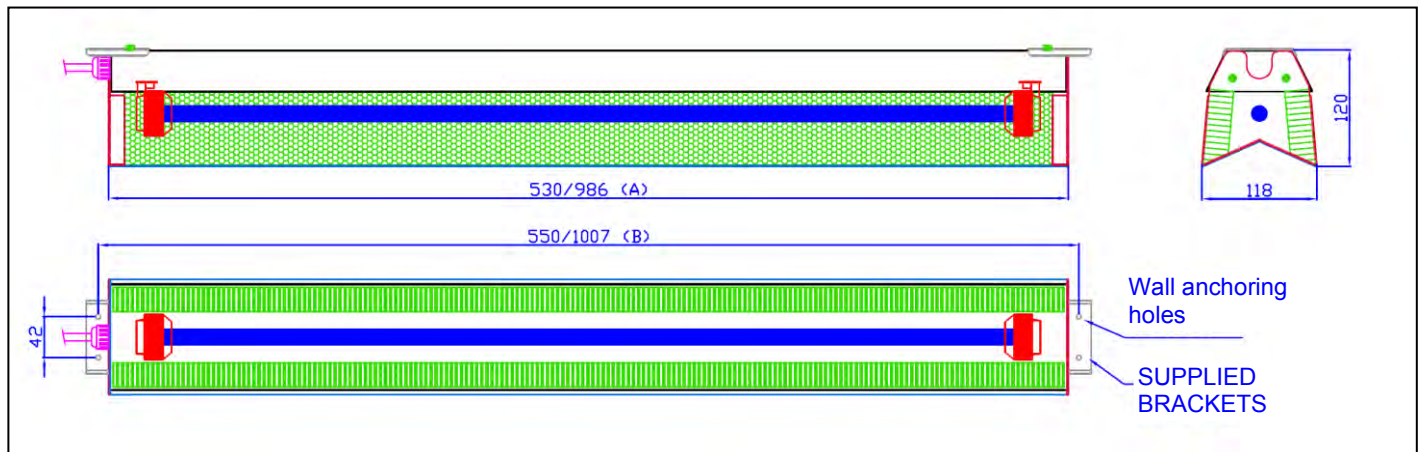


TABLE n°1

UV REFLEX	E40H-SC/B-NX	E75H-SC/B-NX
LAMP LIFE (hour)*	≤ 18.000	≤ 18.000
TOTAL CONSUMPTION (W)	40	75
DIMENSIONS LxSxH (mm.)	530 x 118 x 120	986 x 118 x 120
WEIGHT (Kg.)	2,5	4
TREATED COLD ROOM VOLUME (m³)	da 30 a 40	da 60 a 90
SURFACE TREATED (m²)	da 7 a 10	da 15 a 22
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

- Selective UV C lamp (at 253.7 nm.) high yield, pure quartz.
- Body in Stainless Steel AISI 304
- All materials used are tested for resistance to intense UV-C rays.
- Sealed against dust and water (IP 55).
- Powered with electronic ballasts specific for the use with UV-C rays
- Reflector in extremely pure mirror bright aluminium.
- CE mark (LVD - EMC - MD - RoHS).
- 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



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 with the highest quality materials only. they 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 ensured only by use of products purchased from or recommended 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

RESPONSIBILITY AND COMMITMENTS OF THE MANUFACTURER

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

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 itself 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 REFLEX E40H-SC/B-NX series
UV REFLEX E75H-SC/B-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, 10.19.2020



Responsible for Standards: Dr. Aldo Santi

Notes:

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