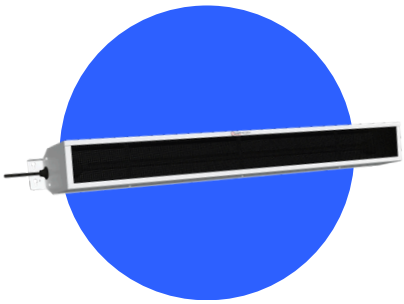
PRODUCT SPECSHEET

UV-FLOW-WH

LEADING THE CLEAN AIR REVOLUTION



The expertly designed UV-FLOW series delivers a **perfect balance of efficacy and safety** making it one of the **most energy efficient** sources eACH on the market.
When **sustainability**, improved **indoor air quality**, and **low** maintenance **costs** matter, consider the UV-FLOW. It is offered in different power levels each allowing a **tailored fit** to any size environment.

We deploy an industry leading **commissioning** and **validation** process to be assured customers are receiving exactly what is needed at each installation. Once installed, the UV-FLOW can operate silently and continuously 24/7 in **populated environments**.

KEY PRODUCT FEATURES

- **Take it To The People**, designed for a wide variety of environments including healthcare facilities, schools, offices, and other shared spaces.
- **Increased Disinfection Performance** with High-Output UV-C lamps (253,7 nm) and parabolic mirror-bright aluminum reflector, this is the ultimate design for the most demanding performance and safety requirements.
- **UV-C Where You Need**, proprietary honeycomb grid redirects UV rays into a unidirectional flow, creating a "UV beam" that cleans the air abovepeople occupying a space.
- **Safety Comes First** with visible indicator on the power switch and an automatic shut-off when the cover is opened.
- **Built to Last**, designed and constructed from the ground up with high-quality coated aluminum and durable UV-resistant materials.
- **UVLON™ shatterproof protective sleeve always included** to prevent the release of glass fragments in the event of accidental lamp breakage.
- **Leave It On**, when properly installed, the device can deliverpersistent disinfection 24/7 for up to 18,000 before replacing the Light Progress UVC Lamps. Replace lamps without disinstall the unit.


HEALTHCARE


HVAC


PROCESS INDUSTRY


HOSPITALITY


SHARED SPACES


PUBLIC VENUES

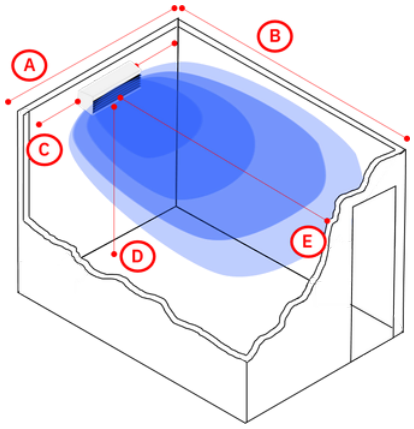

WELLNESS CENTRES


TRANSPORT

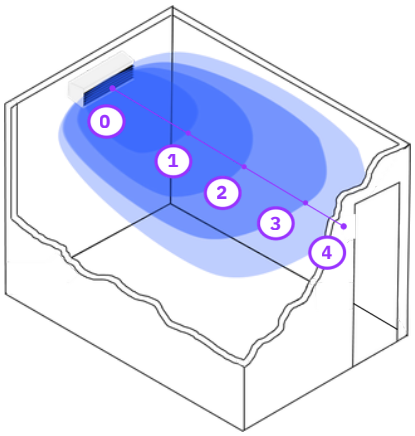
TECHNICAL TABLE	UV-FLOW-90H-C-WH
REPLACEMENT LAMP	n°1 CHS-90WHF
POWER CONSUMPTION	90W
DIMENSION (WxHxD)	mm 986 x 109 x 151 (in 38.81 x 4.29 x 5.94)
WEIGHT	kg 5 (lb 11.02)
AREA COVERGE (> 10µW/cm²)	m² 16 (ft² 172.22)
	FOR ALL MODELS
LAMP LIFE (hours)*	≤ 18.000
PROTECTION RATING	IP20
OP. TEMPERATURE**	MIN. -15°C ÷ MAX. +40°C | (MIN. 5.0°F ÷ MAX. +104.0°F)
OP. RELATIVE HUMIDITY**	From 20 to max. 90%
VAC | FREQUENCY	230V or 110-277V | 50/60 Hz
POWER SUPPLY	On-board power supply always included.
ELECTRICAL CONNECTION	Cable 3x1 mm², lenght 2.5 m (ft 8.2)/plug on request

*** Useful life can be substantially reduced by several environmental or technical factors**
**** Outside of these ranges, performance may not be optimal**

PLANNING THE INSTALLATION		UV-FLOW-90H-C-WH
1.MINIMUM ROOM SIZE	**MINIMUM HEIGHT FROM THE FLOOR TO THE CEILING**	m 3,00 (ft 9.8)
	MINIMUM LENGHT OF LONG SIDE (B) (distance from the wall opposite the device)	m 3,50 (ft 11.48)
	MINIMUM LENGHT OF SHORT SIDE (A) (the wall were the device is installed)	m 3 (ft 9.84)
2.POSITIONING THE DEVICE	**MINIMUM DISTANCE FROM CEILING TO DEVICE (top side)**	cm 30 (ft 0.98)
	MINIMUM DISTANCE FROM FLOOR TO DEVICE (bottom side) (D)	m 2,4 (ft 7.9)
	MINIMUM DISTANCE FROM SIDE WALLS TO DEVICE (center) (C)	TO BE PLACED AT THE CENTER OF THE WALL
UV-C power µW/cm² from the face of the fixture, on the horizontal center-line of the UV beam	**at 60 cm (23 in) (0)**	63
	at 1 m (3.2 ft) (1)	33
	at 2 m (6.5 ft) (2)	18
	at 3 m (9.8 ft) (3)	11,6
	at 4 m (13 ft) (4)	6,56

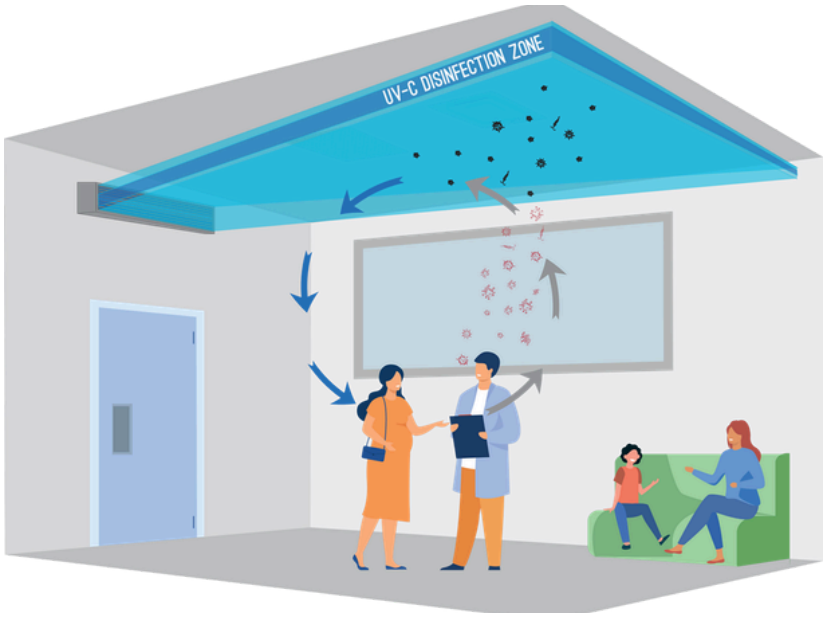


ROOM REFERENCE SIZES FOR A CORRECT APPLICATION



UV-C POWER MEASURED ON THE HORIZONTAL CENTER LINE

UPPER ROOM GUV APPLICATION



UPPER-AIR devices utilize **natural or mechanical air currents** that circulate airborne infectious agents to the upper layers of rooms. Once in the upper layers, they are exposed to UV-C radiation, **which eliminates them**.

Upper room GUV air disinfection with good air mixing **has been shown under real-life conditions to produce the equivalent of adding as much as 24 room air changes per hour**—quietly, safely and sustainably.

These units are mounted on the wall at a height above 2,30 mt or 7.5 ft.
They use **non-reflective louvres** to **direct UV-C energy upward and outward**, ensuring that UV emissions do not enter the part of the room that is occupied.

Upper-room UVGI has been used for over 70 years, under high-risk conditions, and especially where few buildings have efficient mechanical ventilation systems, the only practical approach to the environmental control of airborne infection is upper room GUV.

ASHRAE's Mission and Vision To serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration and their allied fields creating standards for healthy and sustainable built environment for all.

*ASHRAE defines the application of UPPER AIR systems to fight airborne infectious diseases as the **highest priority***

DOE is measuring the cost savings provided by GUV technology as an energy-efficient approach to improve indoor air quality, reduce transmission of diseases in buildings, and prepare for future epidemics or pandemics.

*"Germicidal ultraviolet is a method of air and surface disinfection that may provide effective reduction of virus transmission in buildings **without the need for energy-intensive high-ventilation solutions**. (...)*

TAILORED TO EVERY ENVIRONMENT:

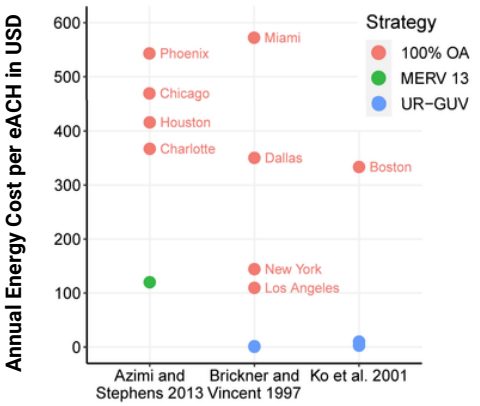
Measure | Design

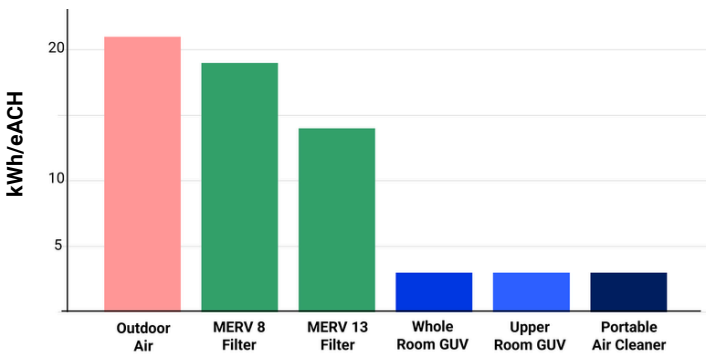
After measuring the exact dimensions and assessing obstacles or reflective surfaces in a target installation, we **calculate a solution for the optimal number**, **form factor**, and **output energy** of UV-FLOW devices.

Energy cost per eACH of various strategies

GUV has much lower energy cost than 100% outside air for **equivalent disinfection.** Energy cost savings and decarbonization benefits vary by location, as shown on the tabe below*:

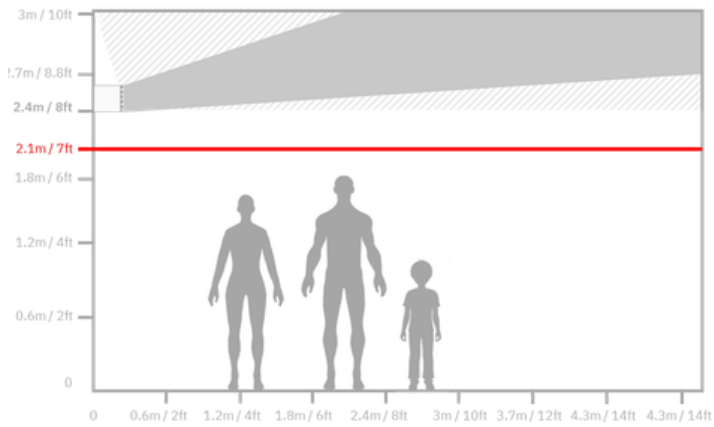
Upper room UVGI is far less expensive per year per equivalent air changes per hour (ACH) **compared to mechanical ventilation or other commercial air cleaners***.





Source: Pacific Northwest National Laboratory

SAFE GUV DESIGN



If designed and installed according to the usr manual, **UV-FLOW series allow you to comply with the most widely accepted safety guidelines**:

- **Threshold Limit Value (TLV) of 6 mJ/cm2 over an eight-hour period** (according to ACGIH committee on Physical Agents for UV-C 254nm exposure);
- **Limit of irradiance [0.2 µW/cm2] at 7 ft (2,10m) from the floor** in any part of the room.

All guidances on the design, installation, testing, and safe operation of upper-room UVGI systems **is based on science and practice-based evidence**.

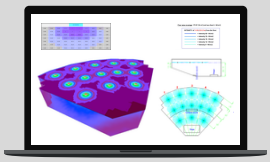
TROUBLE-FREE INTEGRATION AND INSTALLATION

- We provide the optimal point of integration for every product
- Mounting and powering the device can be done without complex requirements.
- Ongoing maintanance only takes a few minutes to replace lamps when necessary.

SOFTWARE ENGINEERED DISINFECTION

From our in-depth know-how on the subject and with our proprietary dosage calculation software we can simulate device performance and validate effectiveness in every application.

Calculation Software



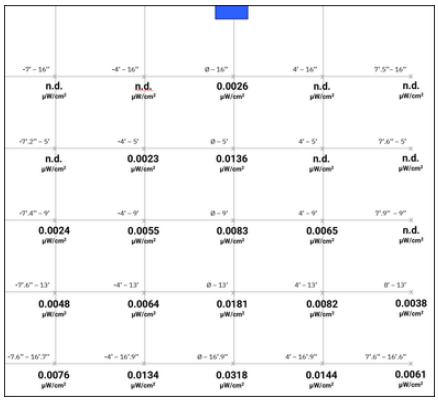
TECHNICAL DRAWINGS

Every Light Progress Product is available in detailed DWG and STEP files for your design-in and specification clarity.

VIEW or DOWNLOAD now

CLICK HERE

POST-INSTALLATION



Our customers rely on our knowledge and support for the post-installation phase:

Validation is completed by measuring the GUV throughout the installation with photobiological testing standard;

This verifies every **Installation** has been applied to manufacturer instructions and is performing as advertised to safely and effectively improve indoor air quality;

Finally, installation is ready to be **Operated** by a trained and supported customer.

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POWER SUPPLY OPTIONS FOR PROFESSIONAL SYSTEMS

Lamp monitoring, connectivity and flexibility for customized applications.

OPTIONAL CONTROL BOARD “MASTER 16A” MULTI-LAMP MONITORING UNIT

The **Control Board MASTER 16-A** is a simple and accessible **control unit for managing multiple UV-C devices** in a single system.

- **Multiple device solution**: dedicated monitoring for up to 16 A
- **Faulty lamp alarm**: LED indicator
- **Exhaust lamp alarm**: LED indicator, with hour counter and digital display.
- **IP20 protected**: protected against solid objects larger than 12 mm
- **Automatic Switch**: turn on devices manually or with the embedded timer.

OPTIONAL CONTROL BOARD «MASTER-ST-AC» COMPLETE MULTI-LAMP MANAGEMENT SYSTEM

The **Control Board “Master”** is an advanced control and monitoring unit designed for **multi-lamp UV-C systems**, providing a **digital display, operating hour counter** with **exhaust lamp alarm** and synoptic layout.

- **Multiple device solution:** dedicated monitoring for up to 35 UV devices.
- **Faulty lamp alarm**: LED indicator and dry contact output to connect to existing control panels and BMS.
- **Safety switch:** low voltage input from existing control panels and BMS, switches off UV lamps when needed.
- **IP66/67 protected**: complete dust protection and powerful water jets.
- **Exhaust lamp alarm**: with hour counter, digital display, and dry contact output to connect to existing control panels and BMS.
- **Synoptic layout**: to monitor the status of each connected UV-C lamp.

OPTIONAL CONTROL BOARDS					
	CONTROL BOARD «MASTER-16»		**CONTROL BOARD «MASTER-ST-AC»**		
MAIN FEATURES					
MODEL	**16-A**	**16-A**	**ST-AC/5-P-A**	**ST-AC/20-P-A**	**ST-AC/35-P-A**
COMPATIBLE UVC DEVICE (W)	**40**	**90**	**40-90**	**40-90**	**40-90**
CONTROL OF MULTIPLE DEVICES	up to 16 A	up to 16 A	up to 5 devices	up to 20 devices	up to 35 devices
FAULTY LAMP ALARM	✔ LED indicator		✔ LED indicator ✔ Dry contact output * (up to 230V, 1A)		
EXHAUST LAMP ALARM	✔ LED indicator		✔ LED indicator ✔ Dry contact output * (up to 230V, 1A)		
LAMP LIFE HOUR COUNTER	✔ Digital Display		✔ Digital Display		
SAFETY INPUT contact from BMS or Safety System	✔ Low voltage input		✔ Low voltage input		
SYNOPTIC SCHEME	-		✔ LED indicator		
POWER CABLE connection to the mains	Three-core cable 2P+E (not included)		Three-core cable 2P+E (not included)		
CONNECTION PLUG on lamp side	-		-		
INSTALLATION Mounting options	Screws (not included)		Screws (not included)		
TECHNICAL FEATURES					
MODEL	**16-A**	**16-A**	**ST-AC/5-P-A**	**ST-AC/20-P-A**	**ST-AC/35-P-A**
ELECTRONIC CONTROL GEARS ON BOARD	-		-		
DIMENSIONS (mm) **(W x H x D)**	410x300x180		410x300x180	610x400x230	740x530x255
DIMENSIONS (in) **(W x H x D)**	16 1/8' x 11 3/4'' x 7 1/8''		16 1/8' x 11 3/4'' x 7 1/8''	24' x 15 3/4'' x 9''	29 1/8'' x 20 7/8'' x 10''
HOUSING MATERIAL	ABS		ABS with transparent cover		
OPERATING TEMPERATURE**	min. -15°C ÷ max. +40°C (min. 5.0°F ÷ max. +104.0°F)		min. -15°C ÷ max. +40°C (min. 5.0°F ÷ max. +104.0°F)		
PROTECTION	IP20		IP66/67		
V AC | FREQUENCY	230V or 110V 50/60 Hz		230V or 110V 50/60 Hz		

* Dry contact output to be externally powered - to activate an external diagnostic system (BMS, MMS, SCADA, DCS, PLC)
** Outside of these ranges, performance may not be optimal