

## UV-C Air Disinfection ULE-Series

### Description

The ULE series convinces through design and performance. The space-saving models have been specially designed for effective UV-C disinfection of room air. They are highly efficient systems for UV-C air disinfection and are specifically designed to inactivate microorganisms in aerosols (e.g. SARS-CoV-2, influenza...).

The UV-C tubes are protected by a high-quality modern housing. This provides reliable UV shielding for people in the room at all times. The device works chemical-free and produces neither ozone nor other harmful emissions.

Recirculating air disinfection starts by simply pressing the pressure switch. With stand or for wall mounting. Supplied ready to plug in with 3 m cable length.



ULE-series  
UV-C disinfection unit with stand

### How the ULE-Series works

The microbe-contaminated air is actively directed into the interior of the unit by very quiet fans, where it passes UV tubes. Air volume, flow velocity and UV-C dose are coordinated to achieve excellent inactivation rates.

Due to the very quiet fan, the effective device can be used in many rooms and areas. Everywhere where several people are present and aerosols should remain as microbe-free as possible. For guaranteed operating performance of the UV-C lamps, an LED service indicator is integrated, which lights up red when the number of operating hours is reached (approx. 16,000 h).

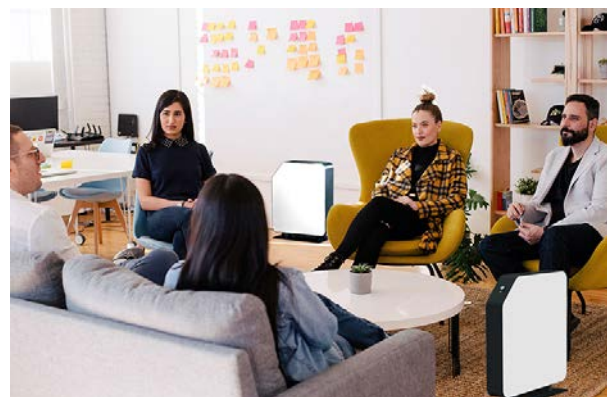
### Mode of Action

The very high-energy UVC light triggers a photochemical reaction. The wavelength of 254 nm is absorbed by the cell nucleic acids of the microorganisms (viruses, bacteria...) and leads to their inactivation.

Which and how many ULE units you need for effective UV-C disinfection of your rooms depends on various factors (see table on page 2).

### Application Areas

- Waiting rooms, medical practices and clinics
- Treatment and therapy rooms
- Care facilities
- Schools, kindergartens, educational institutions
- Offices, meeting rooms
- Hospitality
- ...



# UV-C Air Disinfection ULE-Series

## Technical Data

Model	ULE-05	ULE-M	ULE-L	ULE-XL
Air flow rate*	ca. 115 m <sup>2</sup> /h	ca. 330 m <sup>2</sup> /h	ca. 600 m <sup>2</sup> /h	ca. 900 m <sup>2</sup> /h
Power	60 W	200 W	300 W	450 W
Operating hours of the UV-C tubes	up to 16.000 h			
Dimension* (H x W x D)	600 x 600 x 100 mm	860 x 860 x 210 mm	860 x 860 x 315 mm	860 x 860 x 315 mm
Material housing	Steel powder coated			
Voltage	230 V / 50 Hz (±10%)			
Noise level at 1 m	36 dB(A)	40 dB(A)	40 dB(A)	47 dB(A)
Weight	15 kg	39 kg	49 kg	49 kg
Order No.	110.5519	110.5560	110.5561	110.5562

\* at room air approx. 20°C, humidity 50%.

\*\* Housing size without stand or wall mount; dimensions vary depending on device version

## Sample Calculations

Room example	Meetingroom		Office for 2		Waiting room Medical practice		Class room		Restaurant	
Room size	25 m <sup>2</sup>		25 m <sup>2</sup>		25 m <sup>2</sup>		70 m <sup>2</sup>		100 m <sup>2</sup>	
Room volume	63 m <sup>3</sup>		63 m <sup>3</sup>		63 m <sup>3</sup>		175 m <sup>3</sup>		250 m <sup>3</sup>	
Number of persons	6		2		3		25		35	
Duration of stay	2 h		7 h		1 h		2 h		2 h	
Device model	1 x ULE-05	1 x ULE-M	1 x ULE-05	1 x ULE-M	1 x ULE-05	1 x ULE-M	1 x ULE-L	2 x ULE-L	1 x ULE-XL	1 x ULE-XL 1 x ULE-L
Reduction of the risk of infection by [%] due to air purifiers	> 70 %	> 80 %	> 70 %	> 80 %	> 70 %	> 80 %	> 70 %	> 80 %	> 70 %	> 80 %
Reduction of infection risk by air purifier + 1x shock ventilation/h by [%].	> 80 %	> 90 %	> 80 %	> 90 %	> 80 %	> 90 %	> 80 %	> 90 %	> 80 %	> 90 %

Based on "COVID 19 Aerosol Transmission Risk Calculator" of the Max Planck Institute for Chemistry: <https://www.mpic.de/4747361/risk-calculator>  
Assumptions: Room height= 2.5m; sedentary activity of persons; persons do not wear masks; proportion of speech 20%; calculation example 4-person office: risk of infection that at least one other participant is infected if one person is highly infectious; without air purifier 50%, with air purifier Q600 6.6%, results in a reduction of the risk of infection by >80%.

## UV-C Air Disinfection ULE-Series

### Benefits at a Glance

- Simple operation
- Modern design
- Made in Europe
- Extremely quiet
- No disturbing air noise
- Low maintenance
- People are safely protected from UV-C radiation
- Produces neither ozone nor other pollutants
- Chemical-free



ULE-05  
UV-C air purifier with stand

### Effectiveness Studies

Various studies prove the high effectiveness of UVC disinfection.

#### Sources:

##### **Inactivation study on SURFACES.**

2020, Goethe University Frankfurt, Dr. Hönle AG, series of experiments on the inactivation of SARS-CoV-2 by UV radiation.

Result: Killing rate achieved in the laboratory: 99.99%.

##### **Inactivation study in AEROSOLS**

2012, Harvard School of Public Health Boston, Mcdevitt, James & Rudnick, Stephen & Radonovich, Lewis. Aerosol Susceptibility of Influenza Virus to UV-C Light.

Result: Killing rate achieved in the laboratory: 98.2%.

2020, Columbia University of New York, Buonanno, Manuela & Welch, David & Shuryak, Igor & Brenner, David. Far-UVC light (222 nm) efficiently and safely inactivates airborne human coronaviruses. Result: Killing rate achieved in the laboratory: 99.99%.

#### **Conclusion:**

The disinfecting power of UV radiation has been scientifically proven, including its effectiveness against coronaviruses.

According to current scientific studies, mutations of coronaviruses are also reliably inactivated by UVC radiation.

2020, Ulm University of Technology, Hessling, Martin & Hönes, Katharina & Vatter, Petra & Lingenfelder, Christian. Ultraviolet irradiation doses for coronavirus inactivation.