INTEGRATION TECHNOLOGY

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SubZero RS-170 UVC RAPID SANITISER

UVC LIGHT AGAINST THE CORONAVIRUS SARS-Cov2

INACTIVATE 99.9% of SARS-Cov2 VIRUS on SURFACES in UNDER 10 SEC*

In response to the global Coronavirus pandemic, Integration Technology has developed a high power, portable, hand-held UVC rapid sanitiser based on the highly successful SubZero lamphead product range. The unit is highly effective at inactivating biomolecules and micro-organisms on all surfaces for applications that pose a high risk of public cross contamination:

- Ambulances and blue light services
- Buses, aircarft and cruise ship cabins, train carriages, and other public transport
- Hospitals, schools, offices, and hotel rooms

KEY FEATURES:

- Ultra compact and light weight
- High power – 1700W
- High intensity reflector system
- Mechanical automatic safety shutter
- Quick change cassette
- Rapid warm up and cool down
- Integrated air cooling
- 1-year Integration Technology warranty

TECHNICAL SPECIFICATION:

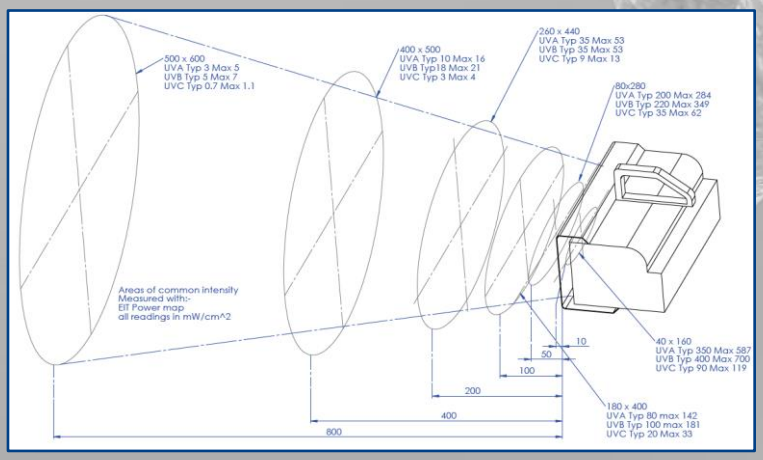
Disinfection by UV light is a non-contact process that allows widespread illumination achieving a greater overall decontamination rate. The SubZero RS-170 product is a high output 1700W input power, typically providing 4 times the power of other portable devices on the market, significantly reducing the exposure time required to achieve the same result.

The table below details the dosage rates required to inactivate between 90% and 99.9% of a selection of bacteria and viruses. Alongside are the number of seconds required to kill between 90% and 99.9% using the SubZero RS-170 when positioned at 200mm from the infected surface.

			Inactivation Rate			SubZero RS-170 @ 200mm		
			D_{90}	D_{99}	$D_{99.9}$	D_{90}	D_{99}	$D_{99.9}$
			Dose - mJ/cm^2			Time - secs		
Bacteria	Legionella	*(dumoffi)*	2.4	4.8	7.2	0.3	0.5	0.8
Bacteria	Salmonella	*(typhi)*	2.1	4.2	6.3	0.2	0.5	0.7
Bacteria	Streptococcus	*(pneumoniae)*	46.8	93.6	140.4	5.2	10.4	15.6
Virus	**Coronavirus**	***(SARS-Cov1)***	**22.6**	**45.2**	**67.8**	**2.5**	**5.0**	**7.5**
Virus	Measles	*(vrus)*	2.2	4.4	6.6	0.2	0.5	0.7
Virus	Poliovirus	*(type 1)*	4.1	8.2	12.3	0.5	0.9	1.4

Source:- Ultraviolet Germicidal Irradiation Handbook, Kowalski, 2009

*** There is little published data that accurately reports the D_{90} inactivation rate and extrapolations to $D_{99.9}$ for Coronavirus SARS-Cov2. Most experts consider Coronavirus SARS-Cov1 to be the closest relative to SARS-Cov2 and as such offers the best comparison for predicted inactivation dose rates .**



Distance	UVC Typ.	UVC Max.	Irradiated Area
mm	mW/cm^2		mm
10	90	119	40 x 160
50	35	62	80 x 280
100	20	33	180 x 400
200	**9**	**13**	**260 x 440**
400	3	4	400 x 500
800	1	1	500 x 600

Measured using a UV irradiance EIT PowerMAP®
All readings in mW/cm² and all dimensions are in mm

OPERATION:

Integration Technology recommend that infected surfaces are treated with 3 passes of the SubZero RS-170 at a distance of 200mm, with a traverse speed of 1 metre per 6 secs, in a direction perpendicular to the lamphead. This ensures that all the infected surface is irradiated and remains at a safe working temperature.

SAFETY WARNING: Always read the operating manual in full. The SubZero RS-170 emits a high intensity of ultra-violet light that is very dangerous to unprotected skin and eyes.

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