

UVC SANITIZER model SANUV-1



SANUV-1 sanitizer is a robust machine made of stainless steel, with wheels for easy placement.



Powerful Ultra Violet UVC lamps kill viruses in seconds. This is a picture made on purpose, to show how it works. In real operation it is not possible to see the light if the cover is open.



Trolleys and backpacks, especially when traveling by public transportation, like bus, train or airplane, touch many areas that could be contaminated. Same applies for boxes received by courier with on-line orders.



It is well known that UVC light at 254 nano-meters is highly effective against bacteria and viruses, including the Covid-19 (see below for reference to peer-reviewed scientific evidence).

Using such well-established results, SANUV-1 effectively sanitizes boxes, bags, trolleys, backpacks, and any other medium-sized objects providing the ideal solution for organizations such as private companies, public offices, retirement homes, etc.

SANUV-1 sanitizes objects in only a few seconds, by reducing any viral charge that they may have by 99% or more.

SANUV-1 uses professional Ultra Violet lamps that emit at 254 nm, that is, C type Ultra-Violet radiation. Such light has germicides properties, already widely used, for example, in water treatment plants. Objects that are exposed to this light do not suffer any damage, because of the short time of exposure.

Using SANUV-1 is straightforward:

- insert the object,
- close the top cover
- push the "start" button
- wait for the countdown to reach zero.

Normally 5 seconds are enough.

Because UVC can damage eyes and skin, we have taken safety extremely seriously. The unit has a double safety system that prevents accidental exposure to UVC, and an automatic shut-off in case the lid is opened during operations.

- Power: 230V - 200VA
- Dimensions: 65x45x94
- Internal size (max object size): 53x32x66 (depth)

Some literature about UV-C efficiency as a sanitizer

Since at least 1930, it is well known that UV-C is an highly effective germicide light. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2789813/>).

Light at this frequency destroys DNA of viruses and bacteria.

(https://www.researchgate.net/publication/278717381_Ultraviolet_Germicidal_Irradiation_Handbook).

A. Bianco, M. Biasin, G. Pareschi, et al, confirmed recently that UV-C irradiation is highly effective in inactivating and inhibiting SARS-CoV-2 replication.

(<https://www.medrxiv.org/content/10.1101/2020.06.05.20123463v2>).

They found that: "at a virus density comparable to that observed in SARS-CoV-2 infection, an UV-C dose of just 3.7 mJ/cm² was sufficient to achieve a 3-log inactivation, and complete inhibition of all viral concentrations was observed with 16.9 mJ/cm²"

Straightforward calculations indicate that 5 seconds inside the SANUV-1 are enough to provide 4.47 mJ/cm² of integrated flux.

As seen in SANUV-1 lamps datasheet (Philips TUV 25), each of its 7 x 25W lamps emits 4.5W of UV-C. Isotropic irradiation formula ($I = P / 4 \cdot \pi \cdot d^2$ -> $0.89 \cdot 10^{-3} = 4.5 / 4 \cdot 3.1415 \cdot 400$) gives us a value of 0.89 mw/cm² at a distance of 20 cm, that is an average distance for a small object (this is a cautelative approach). If we keep the light on for 5 seconds, we apply 4.47mJ/sqcm, that is more than what is needed for 99.9% inactivation. If we apply light for 20 seconds, we obtain total inactivation, with 17.90 mJ/cm².