



### Ground-breaking development to combat the spread of harmful airborne pathogens.

Ultraviolet irradiation for purification and circulation of fresh sanitised air.

### The human friendly and safe Thornlite Bio Vac luminaire is now locally manufactured to destroy harmful viruses, germs and bacteria

“Germicidal UVC radiation (GUV) is an important environmental intervention which reduces both Contact spread and Airborne transmission of infectious agents like bacteria and viruses” \*Even droplets dry out and become airborne for several hours\* (CIE statement May 12, 2020)

It was recently discovered that **SARS-COV-2 virus** can be rendered non-infectious with the application of UVC radiation as it breaks down the DNA/RNA sequence and stops its ability to replicate. Colloquially it may be said that the UVC radiation “kills” the virus that causes **Covid-19**. (IES LEUKOS 202 Vol 16 no 3. Illuminating Engineering Society)

UV sterilization is unmatched in its efficacy, simplicity, and dependability as a disinfectant, including health care where even infections resistant to multi drug treatment that result in increased mortality, are successfully disinfected.

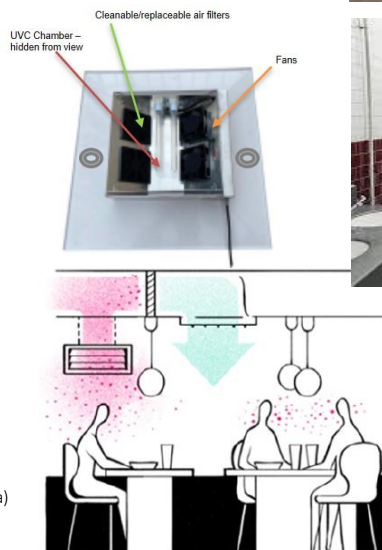
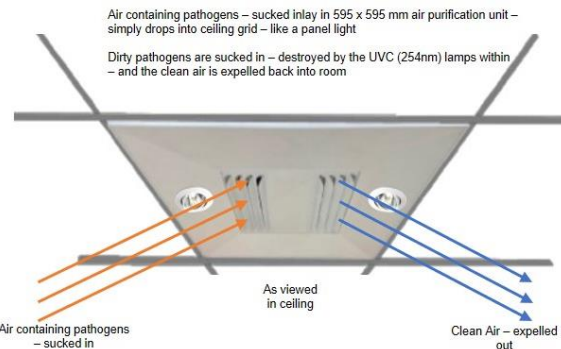
The principal of biotechnological air cleansing and circulation is applied whereby contaminated air is sucked into the Bio Vac chamber where it gets UVC cleansed (radiated) and filtered through air filters. Purified clean air is then expelled back into the room. Unlike foggers or spray disinfectants, there is no respiratory risks for instance asthmatics.

Full circulation of cleansed air takes place **every 15 minutes** in a room 5x5m and 2.7m high with a kill rate of 99.98% within 60 minutes.

The **Thornlite Bio Vac** was successfully evaluated by the **NIOH** (National Institute for Occupational Health SA) (Report No 005/20-21, July 1, 2020 (for MTB H37Ra)

Furthermore, Qatar Airways now announced that they managed to condense seating arrangements on their flights, thanks to UV Air purification.

Successful GUV disinfection demands strict adherence to established engineering guidelines and testing criteria and for this reason, the **Thornlite Bio Vac** is locally produced in a factory that has been manufacturing luminaires and related products for the past 29 years.



Schools



Hospitals



Restaurants



Offices



Toilets

**References:**

- 1)UVC Upper Room, Clive B. Briggs & Eldad J Avital
- 2)Clin. Infect, Morawska, L. & Milton D
- 3)ACS Nano, Barcelona Institute of Science and Technology
- 4)GMS,Hygiene and Infection Control
- 5)NIOH,Immunology & Microbiology Report No 005/20-21 July 1, 2020 (MTB H37Ra)
- 6)CIE, May 12, 2020
- 7)IES,Leukos 2020 Vol 16 No 3 – Kevin W. Houser – Oregon State University USA

PROUDLY SOUTH AFRICAN



0128191684/0826005484/0828011747  
info@thornlite.co.za  
www.thornlite.co.za