

## ACTIVE LIGHTING LTD

Optimizing energy conservation and efficiency

6th April 2021

## RE: BBT UV-air INTRODUCTION

We are marketing a new product range from BBT uv-air for which Active Lighting Ltd has the sole rights.

The two products are

UV Flow. This is a portable unit which can be wall mounted or be free standing on a stand.

UV Halo. This is a more commercial unit which can be hard wired and controlled remotely

with a timer. It can be mounted in jib ceiling or ceiling tile.

The units disinfect and sterilise the air by using a UV lamp, HEPA filter and photo catalyst (PCO) filters.

Ultraviolet (UV) light has been used for many years in industry and in health and hygiene regimes. According to the International Ultraviolet Association; "The portion of the UV spectrum. {The germicidal region} that is important for the disinfection of water and air is the range that is absorbed by DNA {RNA in some viruses}. This germicidal range is approximately 200-300 nm."

The DNA, RNA and proteins of microorganisms absorb the UV light in the wavelength of 253.7 nm which is most effective for sterilization by inactivating the cells of bacteria and germs.

## **PCO Process**

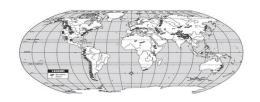
The Photocatalytic Oxidation process combines UVC irradiation with a substance (catalyst) titanium dioxide (TiO2) which results in a reaction that changes harmful contaminants into water/carbon dioxide. As the air circulates through the chambers the microbes are "attacked" by free hydroxyl radicals and super-oxide ions (created by UV light and titanium dioxide), breaking their cellular structure apart and destroying both the intracellular mass and DNA/HNA chromosomes. The result is harmless water and carbon dioxide.

PCO is a very powerful air purification technology and has the ability to destroy particles as small as 0.001microns.

With the current Covid situation these products will be very useful in reducing substantially the airborne spread. We do have detailed technical information, microbiology report, operational guides, CE and RoHS certification. I would also suggest doing your own tests to verify. We can give you samples for this.

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