Air Stream

UV-C: Less than 3,800 microwatts, No Chance!

UV-C lights work great. For surface disinfection of coils and drain pans.

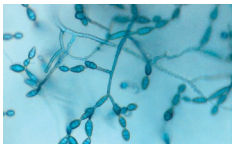
But can they kill what is in the air? Based on 99% log reductions of the microbials on the chart. They can't. Unless they can provide more than 3,800 microwatts of UV-C energy in 1 second.

A typical residential air conditioning system has a flow rate of 400cfm. This equates to 6.6cf/sec, or a 3 foot section of 2' x 2' duct passing every second. So this means, if a UVC light is below 3,800 microwatts it is incapable of acheiving airborne disinfection.

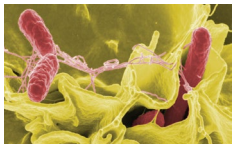
Imagine 6 of the boxes above passing through the duct every second.

Organism	Energy Dosage of Ultraviolet radiation (UV dose) in µWs/ cm2needed for kill factor
BACTERIA	**99% (2 log reduction)**
Bacillus anthracis - Anthrax	8,700
Bacillus anthracis spores - Anthrax spores	46,200
Bacillus paratyphusus	6,100
Bacillus subtilis spores	22,000
Bacillus subtilis	11,000
Clostridium tetani	22,000
Corynebacterium diphtheriae	6,510
Mycobacterium tuberculosis	10,000
Neisseria catarrhalis	8,500
Pseudomonas aeruginosa	10,500
Pseudomonas fluorescens	6,600
Salmonella enteritidis	7,600
Salmonela paratyphi - Enteric fever	6,100
Salmonella typhosa - Typhoid fever	4,100
Salmonella typhimurium	15,200
Sarcina lutea	26,400
Staphylococcus aureus	6,600
Staphylococcus hemolyticus	5,500
Staphylococcus lactis	8,800
Streptococcus viridans	3,800
Vibrio comma - Cholera	6,500
MOLD	**99%**
Aspergillius glaucus	88,000
Aspergillius niger	330,000
VIRUS	**99%**
Bacteriopfage - E. Coli	6,600
Infectious Hepatitis	8,000
Influenza	6,600
Poliovirus - Poliomyelitis	6,600

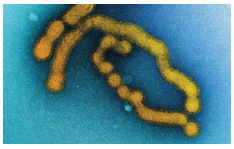
Mold



Bacteria



Viruses



FRESH-AIRE UV®

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