



CAN UVC KILL THE NOVEL CORONAVIRUS?

UVC irradiation is able to kill any kind of bacteria or virus. We don't know the UV dose necessary to kill this new virus at the present time. Testing will have to be done to determine this. That information will become available in the future. The amount of UVC necessary to kill virus varies from virus to virus.

Here are a few examples measured in Microwatt Seconds per Square Centimeter.

Adeno Virus Type III 3	4,500
Bacteriophage 1,3,4,5,6,9	6,600
Coxsackie	6,300
Influenza 1,2,3,4,5,7,9	6,600
Infectious Hepatitis 1,5,7,9	8,000

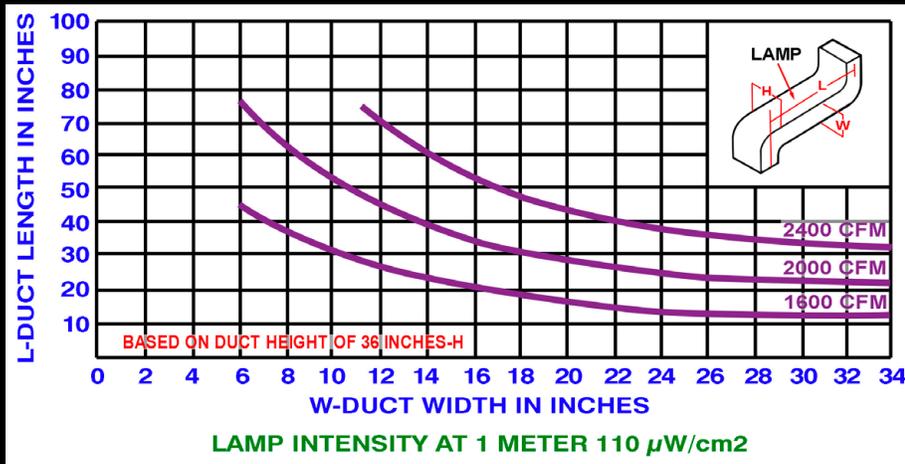
As you can see some are easier to kill than others, but all are killed by UVC.

What we do know is it takes a considerable UV dose to kill germs and virus. The principle of UVC sterilization is related to intensity of the lamps used. The more powerful the lamp the better the kill. The larger/longer the duct the better the kill. The slower the air is moving the better the kill.

Our products are designed to meet or exceed the design parameters set forth by Westinghouse. We need a 110 Microwatt lamp in an airflow up to 2400 CFM to get a 70 to 85% kill in a duct system. The lamp intensity is measured at one meter from the lamp. As germs get closer to the lamp the intensity increases. Two inches from the lamp we have 5,814 microwatts. We can't block the UVC with any type of cell or screen causing a shadowing effect. The light must irradiate up and down the duct to give us time and distance to allow the germs to absorb the UVC light as they flow through the duct.

If a customer is trying to protect their family from spreading germs around their home through their HVAC system we would recommend installing one of our dual lamp units. Putting two high microwatt lamps in the duct will produce 360 microwatts of UVC. That will be more than three times the Westinghouse recommended intensity necessary to get an 80% single pass kill. It's not even important to kill viruses but simply deactivate or sterilize them so they can't reproduce.

The chart below is a guide to achieving an 80% kill rate using a 110 microwatt lamp. Our 16" lamps are 180 microwatts each.



* Information provided by Westinghouse®

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