



UV Aircraft Germ Kill

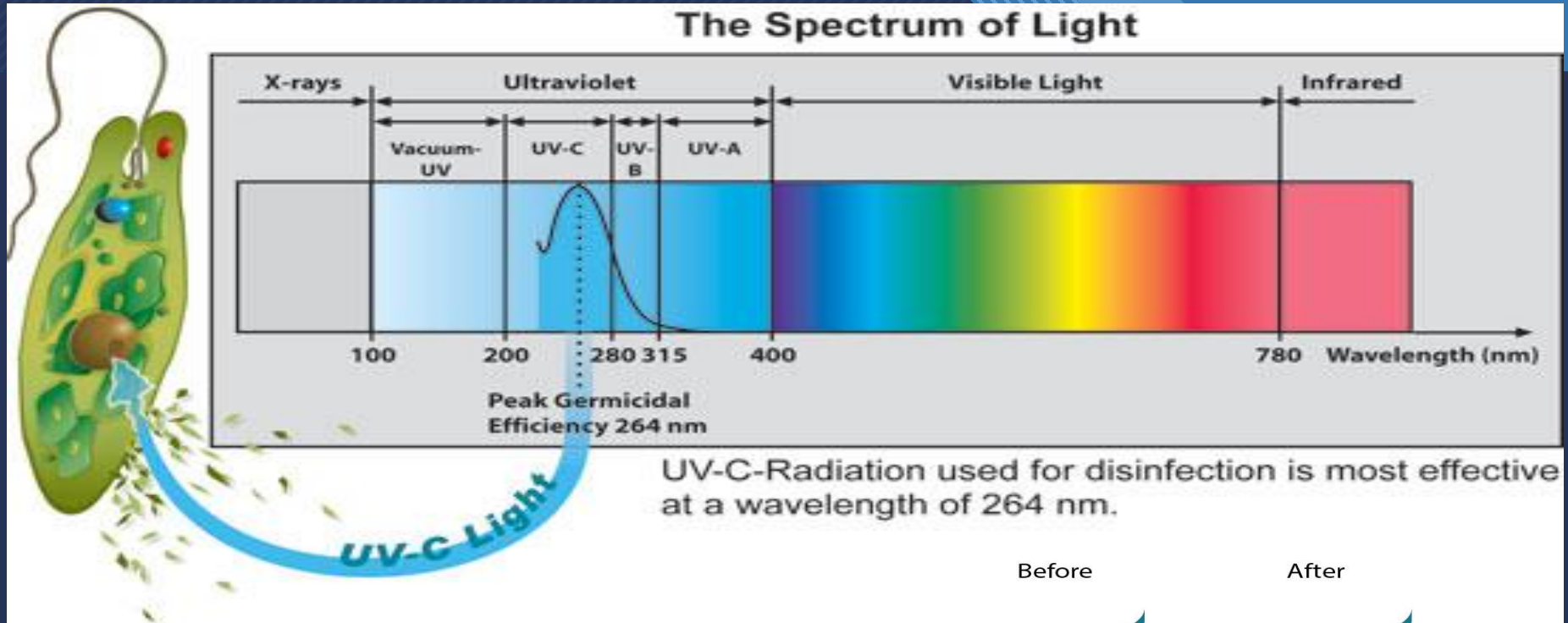
Prepared for

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Clinical Professor, Orthopedic Surgery
CTO & Co-Founder



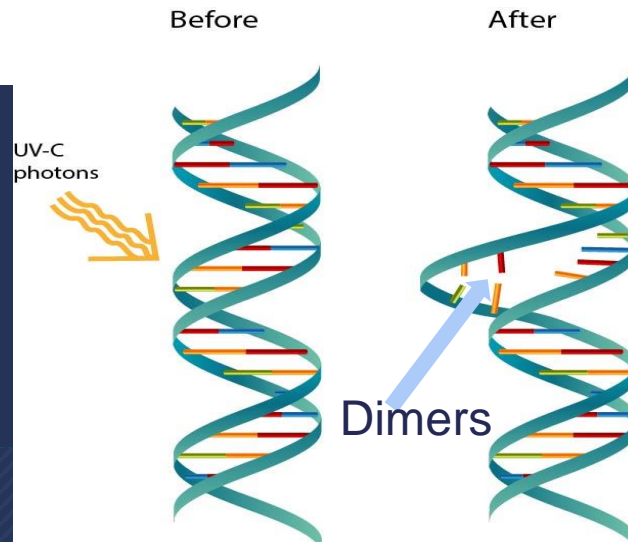
31 August 2020

WHAT IS ULTRAVIOLETT “C” (UVC)?



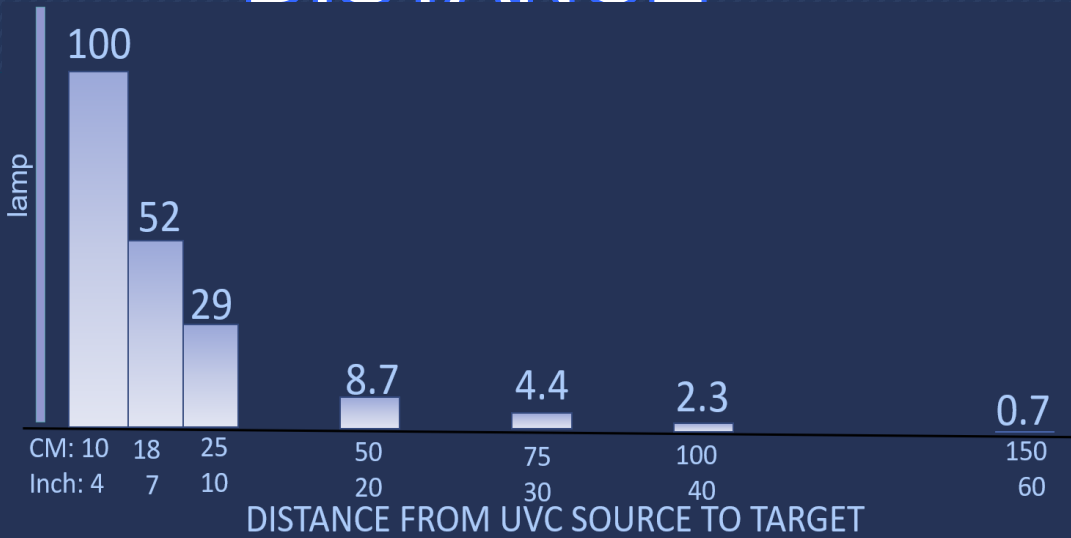
Hospital Proven >99% kill at $\leq 8\text{mJ}/\text{cm}^2$:

Coronavirus
Influenza
MRSA

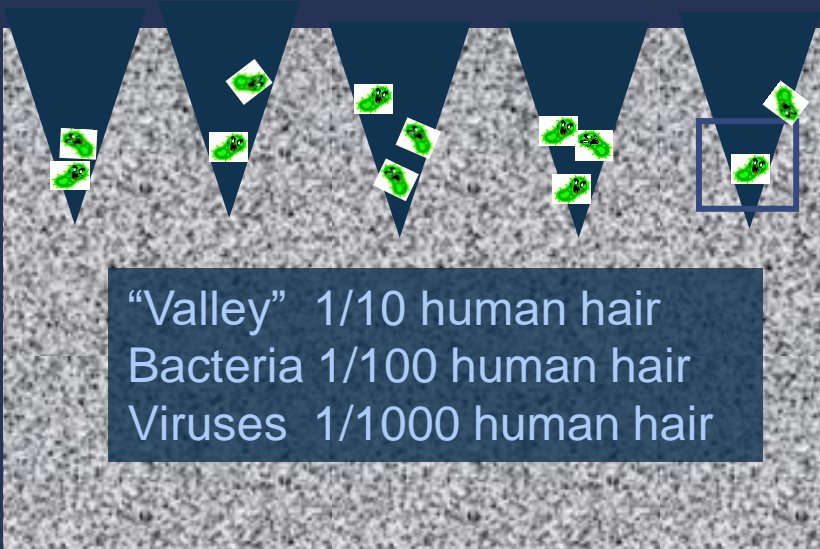
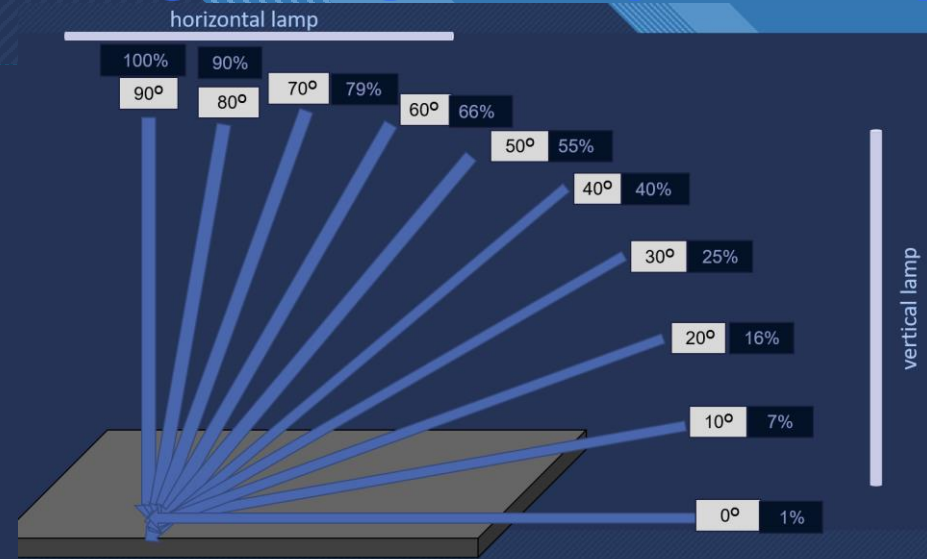


KEY UVC PROPERTIES

DISTANCE



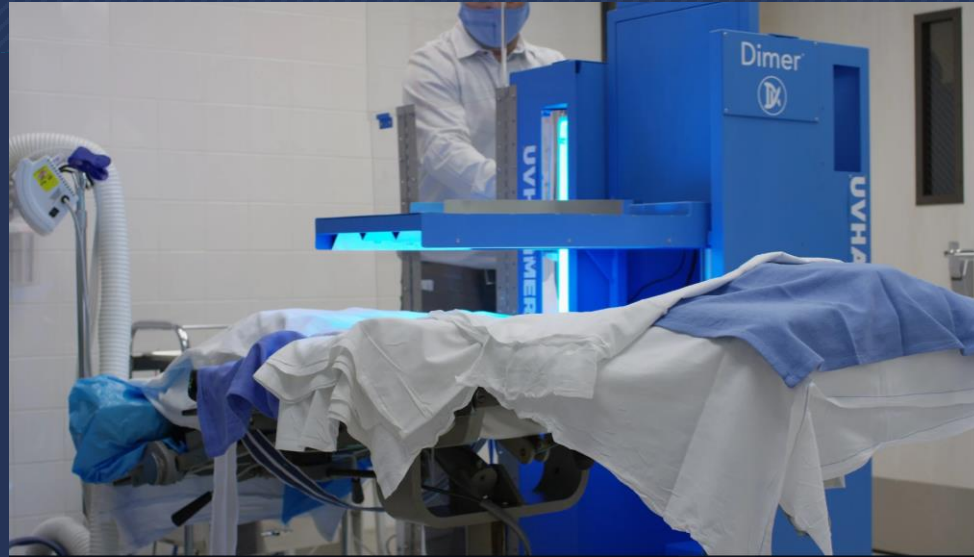
ANGLE OF INCIDENCE



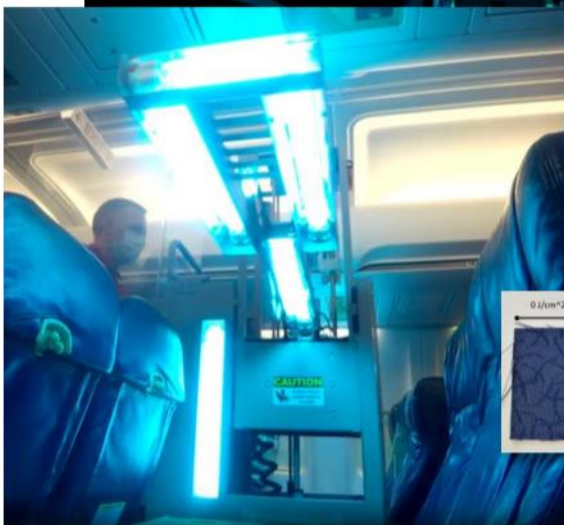
CANYON WALL EFFECT



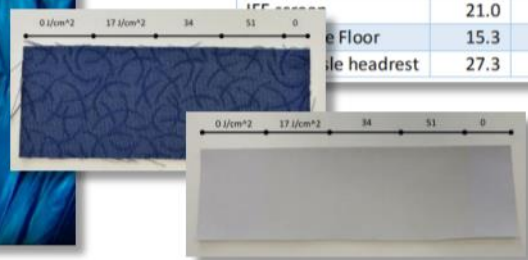
Dimer: "HOW UV WORKS"



HONEYWELL UV CABIN SYSTEM



Description	Treatment dose (mJ/cm ²)	
	10 rows/min	30 rows/min
Top of Aisle headrest	39.0	13.0
Top of Armrest	28.2	9.4
Seat Cushion Aisle	21.3	7.1
Top of Tray table (1 pass)	15.9	5.3
Aircraft Window	10.2	3.4
Overhead luggage handle	10.5	3.5
Passenger service unit	9.6	3.2
Floor in front of aisle seat	18.3	6.1
IFF	21.0	7.0
Floor	15.3	5.1
Aisle headrest	27.3	9.1



- **FAST:** Treats 30-row single-aisle aircraft in 10 minutes
- **CONSISTENT:** Reduces cleaning crew variability and errors – design enables consistent coverage
- **EFFECTIVE:** Uses 254nm UVC lamps also used in hospitals
 - Clinical studies demonstrate UVC light can reduce pathogens with rates as high as 90.0% - 99.9999% on tested bacteria and viruses when irradiated at specified dosages.¹
 - Preliminary clinical studies indicate UVC light may inactivate SARS-CoV-2, the virus which causes the COVID-19 disease at certain dosages using UVGI.¹
- **MATERIAL SAFE:** Materials testing showed no impact to flame retardancy and strength. Some color changes possible on some materials when used 4+ times daily for 4-5 years.²
- **FLEXIBLE:** Designed for use in cabin, galleys and lavatories

(1) Honeywell UV Cabin White Paper (June 2020 Update)

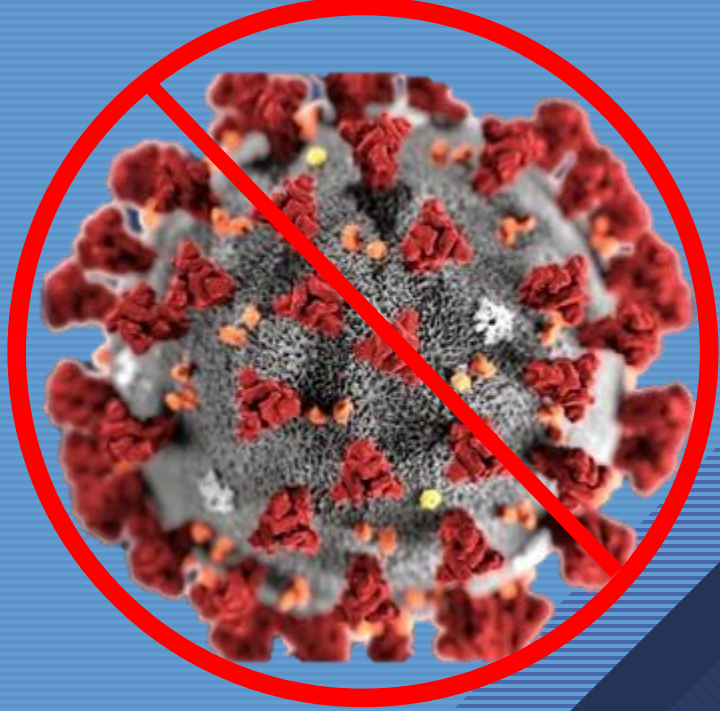
(2) Honeywell UV-C Materials Compatibility White Paper (August 2020)

RAPID REDUCTION OF VARIOUS PATHOGENS WHEN PROPERLY APPLIED TO TARGETED HIGH-TOUCH SURFACES

FAST — CONSISTENT — EFFECTIVE

These product concepts are currently under development. No testing has been done specifically as to protection against COVID-19. As with all of our products and services, Honeywell will adhere to its commitment to integrity and compliance within its global supply chain; meet relevant legal, scientific and industry standards; substantiate claims; and obtain necessary regulatory approvals as products progress through the development process.

Dr. Kreitenberg, Dimer, EPIC Online Technology Meeting on Surface Disinfection and Antibacterial Surfaces (in cooperation with IUVA)



Thank You



Dimer
UVC INNOVATIONS

Member, International Ultraviolet Association