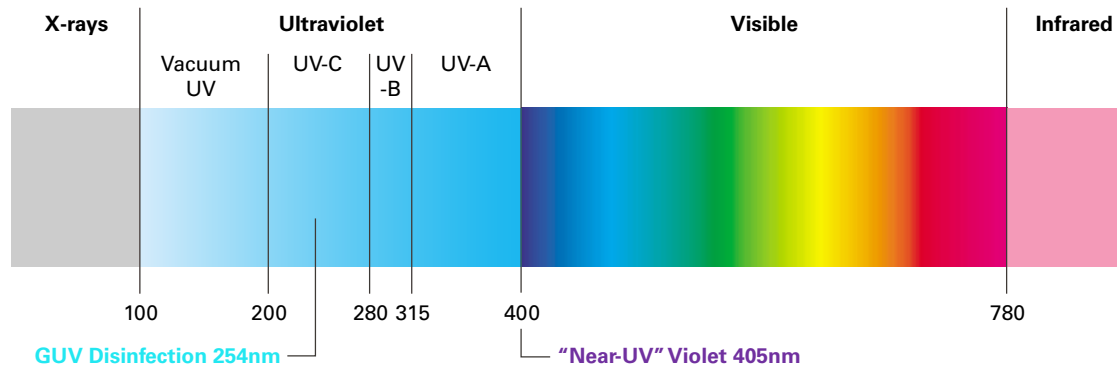


# What is Disinfection Lighting?



- 222nm, Non-visible
- Technology Infancy
- Unclear Pathogen Effects
  - Virus effect being tested
  - Effective on bacteria
  - Not effective on mold or fungi
- Exposure Time Testing
- Exposure Risks
- Ozone Risks

**FAR UV**

Unknown Pathogen Effects

Exposure Risks

Technology Infancy

- 254nm, Non-visible
- Proven Technology (no known micro organisms resistant to UVC) <sup>1</sup>
- Proven Pathogen Effects
  - Inactivates viruses
  - Kills bacteria
  - Kills mold and fungi
- Exposure Time is Short
- Exposure Risks

**GERMICIDAL UV (GUV)**

Superior Pathogen Effect

Controllable Exposure Risks

Proven Technology

- 315/365nm Non-visible
- Proven Technology
- Limited Pathogen Effect
  - Low virus inactivation
  - Reduces bacteria
  - Limited effect on mold, fungi
- Exposure Time is Moderate
- Exposure Risk

**UVA/B**

Limited Pathogen Effect

Controllable Exposure Risks

Proven Technology

- 405nm, Visible light
- Technology Infancy
- Limited Pathogen Effect
  - Extremely limited viruses effect
  - Reduces bacteria
  - Unknown effect on mold and fungi
- Exposure Time is Long
- Limited Exposure Risks

**NEAR-UV**

Limited Pathogen Effect

Limited Exposure Risks

Technology Infancy

<sup>1</sup> Fluence (UV Dose) Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa, Viruses and Algae Revised, updated and expanded by Adel Haji Malayeri, MadjidMohseni, Bill Cairns and James R. Bolton. With earlier contributions by Gabriel Chevrefils(2006) and Eric Caron (2006) With peer review by Benoit Barbeau, Harold Wright (1999) and Karl G. Linden.