



BOEKEL SCIENTIFIC UV CROSSLINKER AH

1. Can the UV Crosslinker be used for sterilization?

Yes – we recommend utilizing the UV Crosslinker in Energy Mode and setting the fluence to the Minimum Acceptable Value as determined by your facility. A common starting point is 300 mJ/cm², as this corresponds to a 3-log reduction (99.9%) of microorganisms.

Fluence (UV Dose) Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa, Viruses and Algae. (2015). International Ultraviolet Association. Retrieved October 26, 2023, from <https://iuva.org/Guidance-Documents>

If sterilizing something nontransparent, such as a scalpel or other instrument, best practice would be to run a cycle per side.

For consumables and clean room purposes, a much higher dose (>7250 mJ/cm²) is necessary to achieve an effective dose for elimination of nanogram quantities of contaminating DNA.

UV irradiation and autoclave treatment for elimination of contaminating DNA from laboratory consumables. (2009, July 23).

ScienceDirect®. Retrieved October 26, 2023, from <https://www.sciencedirect.com/science/article/abs/pii/S1872497309000982>

2. What is the Min & Max height of the Adjustable Height feature?

The maximum height is 4.1" and the minimum height is 2.6".

Adjustable travel is about 1.5".

3. What is the power rating of each UV lamp?

8W

4. What is the overall power rating of the UV Crosslinker?

175W

5. What is the (total) irradiance of the lamp output (mW/cm²)?

A set of new lamps give off about 9-13mW/cm²
(which fluctuates over time, even in small sample intervals).

6. What is the lifespan of the lamps?

UV-C (254nm) lamps have 8000-hour life

UV-A (368nm) & UV-B (306nm) have 3000-hour life.



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7. How long does it take to sterilize instruments in the UV Crosslinker?

It takes roughly 43 seconds to achieve 300 mJ/cm^2 with a set of new lamps with the height set to maximum distance. With the lamps closer to the object being sterilized, it will take less time. Also, using new lamps will have the shortest time achieved, as the time will increase as the overall output decreases with the life of the lamps.

A good estimate would be about 0.5 J/cm^2 per minute being delivered. If sterilizing something nontransparent, such as a scalpel or other instrument, best practice would be to run a cycle per side (roughly 1.5 mins at 300 mJ/cm^2).

8. Can you switch between multiple wavelength lamps? Does it require calibration?

The UV Crosslinker can be used at any time with any of the different wavelength lamps. All five lamps (of the same wavelength) must be utilized to work. When changing to different wavelength lamps, the correct wavelength must be selected in the set-up menu. You can access the set-up menu as described in 8.2.4 in the Operator's Manual. There is no manual calibration needed.

NOTE: The instrument comes standard with 254nm wavelength as the setting in the set-up menu. Always pick the correct wavelength setting upon initial validation and when changing lamps.

9. Are the lamps sold individually or as a pack of 5?

The lamps are individually salable on our website. Please note that you must order 5x the number of lamps to replace them all. We do not guarantee the use of any 3rd party lamps.



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