



INTENSE PULSED UV SYSTEM

XeMaticA-1L-Basic

1 UV flash lamp **COMPACT R&D system**



for evaluation tests in food, bio-medical and pharmaceutical applications:

- Single pulse operation, manually operated,
- pulse energies from ca. 100J to max. 500J,
- 180° exposure by top and side reflectors.

UV chamber:

- 20 cm wide x 14 cm high x 10 cm deep,
- all lined with 98% reflectors,
- +/-20% UV uniformity under the sample shelf.

Conveniences:

- fits anywhere in any lab,
- has optimal UV doses /pulse used in most published works on PUV.

El connection: #1: EU-standard:

220-240 VAC, one phase, 50-60 Hz, 200 w ave.;

#2: for USA: 208 VAC, 1 phase, 50-60 Hz.

Size, weight:

36 cm wide x 34 cm high x 38 cm deep, food-grade stainless-steel, weight ca. 9 kg.

Flash lamp type and its efficiency:

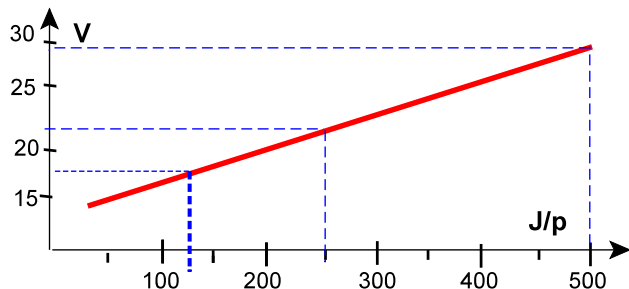
- Xe gas (no Mercury!) air-cooled flash-lamp,
- 15 or 19 cm active length,
- up to **10-25 J/cm** pulse power load on flashlamp,
- UVC, UVB and UVA outputs increase with increase of a pulse energy, from 12% to 35%,
- **Max UVC flux** to a product: **0.5 J/cm²/pulse.**

Max Sterilization Efficiency under the reflector:

- common bacteria: **2-5 logs pulse,**
- common spores: **1-3 logs/pulse.**

Safety:

- fully interlocked, operation is possible only at a fully closed door of the UV chamber,
- no UV light, EM field or Ozone leaks out to a user.
- operating with an open enclosure is not possible.



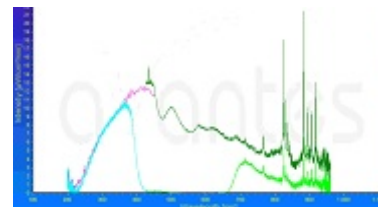
Paid Options:

#1: pulse controls

through 2 x BNC connectors to PC scope with two channels at ca. 1 μs resolution. BNC can be connected to UVC, Voltage or current sensors; **Note #1:** UVC sensor allows to measure a UVC transparency of packaging foils by comparing signals with and without a foil.

#2: Ozone -free flash lamp,

#3: Filter to block visible + IR light and to pass up to 80% only UVB light, or UVC+UVB light.



#4: Pyrex filter to block UVC light:

< The scale to dial Volts vs. pulse energies. Dialling energy is by pushing the green button, firing a pulse- by the red button, the total cycle with the lamp cooling: 1-2 min.

Note#2: our UV pulse parameters overlap those in most-of up-to-date publications & vendors.

Our PUV systems are in use worldwide and

were successfully tested in leading EU labs.