

NUCTECH™ IS Series

IS0301 E-Beam Irradiation System



Technical Features

- **Self-shielding:** The irradiator is shielded as a sealed space to prevent radiation leakage.
- **Miniaturization:** It is 2.9m in length, 1.9m in width and 2.0m in height, suitable for use in common laboratory.
- **High energy:** Adopting linear electron accelerator as its radiation source, with the energy of 2.5MeV, which is high energy equipment in the self-shielding & miniaturized irradiator products.
- **Safety.:** Executing multiple safety measures to ensure the safety .
- **Easy to manage:** Utilizing advanced automation process to make the operators working easily.

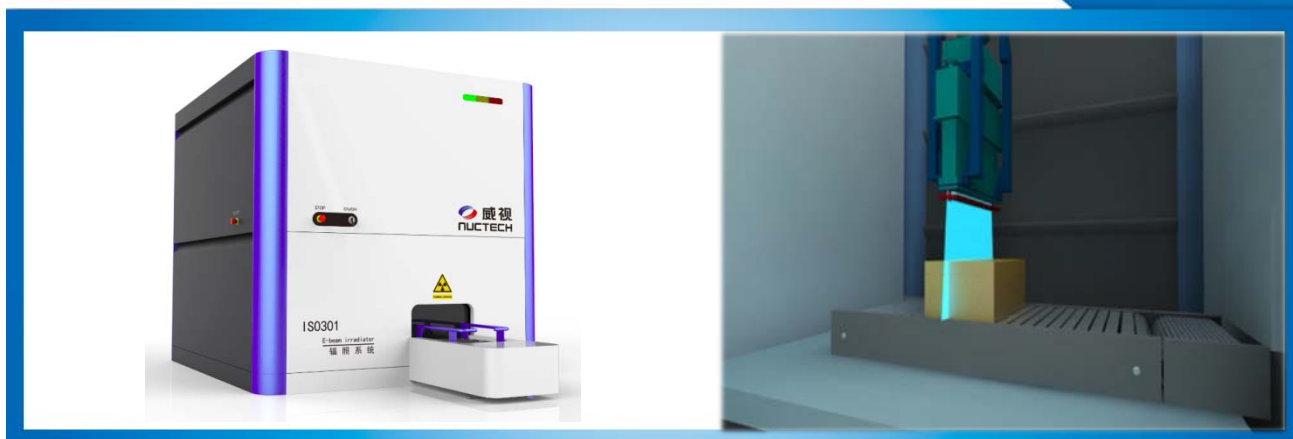
General

NUCTECH™ IS0301 self-shielded E-beam system is a miniaturized self-shielding system with the energy of 2.5MeV, power of 1kW, which use electron beams generated by linear electron accelerators to sterilize goods in a rapid and thorough way. It is suitable for sterilization of some small-scale medical equipment, sanitary products and mails etc. In particular, it can be applied to hospitals and epidemic prevention areas as a special irradiation sterilization equipment.

Linear electron accelerator technology is the core of the system, integrated with self-shielding, electronic technique, precision machinery and control technique to make it updated high-tech equipment. Professional radiation safety design ensures operators and environmental safety.



IS0301 self-shielded E-beam system



Technical Data

Item	Specification
Radiation source	Linear electron accelerator
Type of ray	E-beam
Energy/Power	2.5MeV/1kW
Surface uniformity of dose	$\leq \pm 5\%$
Irradiation speed	5mm/s ~120mm/s
Dose range(once, e-beam)	1kGy~25kGy
Dimensions	2.9m(L)×1.9m(W)×2.0m(H)
Weight	22,000kg
Temperature and humidity	
Operation temperature	5°C ~ 40°C (inside the vehicle)
Relative humidity	0% ~95%, non-condensing
Radiation safety	
Maximum environment radiation level ^①	$\leq 2.5\mu\text{Sv/h}$
Dose rate for operator ^②	$\leq 1.0\text{mSv}$
Dose rate for public ^③	$\leq 0.1\text{mSv}$

①Maximum environment radiation level: measured outside the machine, which is 0.3m far away from the irradiator.

②Assumed that the working time is 4000 hours per year, 1/4 of which (1000 hours) is the accelerator beam on.

③Occupancy factor: 1/16.



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