

265 nm variation for UV sterilization

Achieved the highest efficiency UV sterilizing light source



ZEUBE265

◆ Applications

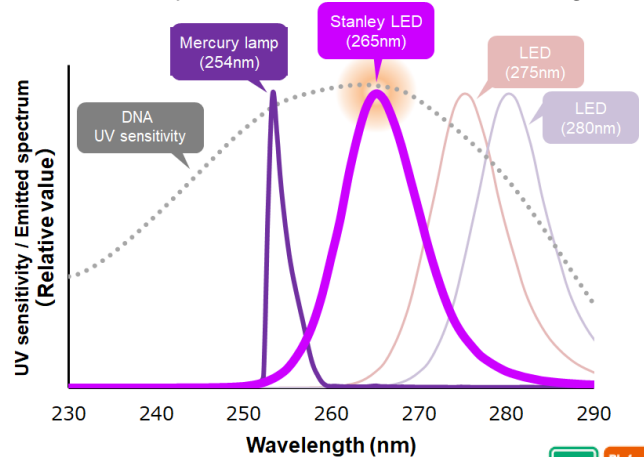
Water/liquids disinfection	Surface disinfection / Air sterilization		Others
<p>Water purification devices</p> <ul style="list-style-type: none"> - Water purification - Wastewater treatment - Industrial water - Cleaning water - Amenities - Fisheries / Agricultural water 	<p>Drinking water</p> <ul style="list-style-type: none"> - House water purifier - Water server 	<p>Humidifier</p> <ul style="list-style-type: none"> - Water tank 	<p>Refrigerator</p> <ul style="list-style-type: none"> - Inside - Icemaker water
		<p>Automatic self-cleaning toilet seats</p> <ul style="list-style-type: none"> - Nozzle - Rinse water 	<p>Air conditioning equipment</p>
			<p>Water quality sensor</p>
			<p>Curing equipment</p>

- Ultraviolet sterilization that directly affects the DNA of bacterium
- No residual risk due to no use of chemicals

◆ Features

- 265 nm : the highest sterilizing capability
- Light output variation: 25 mW / 35 mW / 50 mW
- Offers clear advantages over UV lamps:
 - Compact
 - Mercury-free
 - Low power consumption
 - Low heat generation
 - Instant ON/OFF switching

UV sensitivity of DNA and emitted wavelength



◆ Specifications



Part name			ZEUBE265 -1BA	ZEUBE265 -2BA	ZEUBE265 -1BB	ZEUBE265 -2CA	Units
Basic characteristics	Wavelength	λ_p	265				nm
	Light output	Po	25	30	35	50	mW
	Forward voltage	V_F	6.9	6.9	6.9	6.9	V
	Half intensity angle	$2\theta_{1/2}$	120	120	120	120	deg.
Absolute maximum ratings	Forward current	I_F	100 to 500				mA
	Junction temp.	T_j	100				°C
	Thermal resistance	$R_{th(j-s)}$ ※	6.0				°C/W
	Operating temp.	T_{opr}	-30 to +85				°C
	Storage temp.	T_{stg}	-40 to +100				°C
Size		LxWxH	3.5 × 3.5 × 2.24				mm

Conditions : $T_a=25^\circ\text{C}$ $I_F=440\text{mA}$ ※Junction-Soldering point

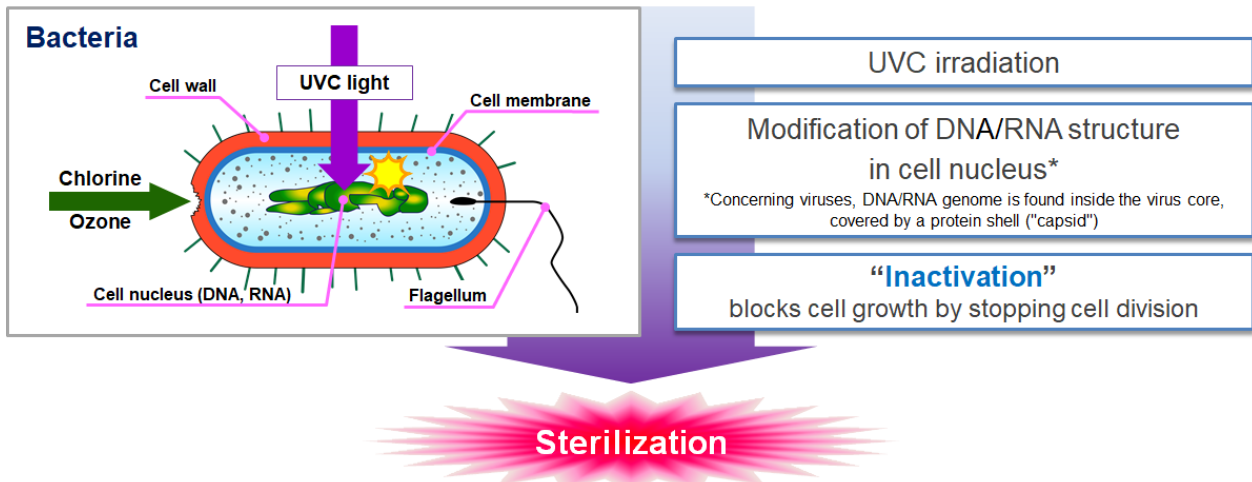


Principle of UV sterilization

Bacteria and viruses multiply by replicating the genetic material found in the nucleus of living cells, thus leading to infections and onset. DNA and RNA possess the genetic material necessary for proliferation.

The UVC range of light can change and rearrange the "strands" constituting the helical structure of DNA/RNA.

Sterilization process



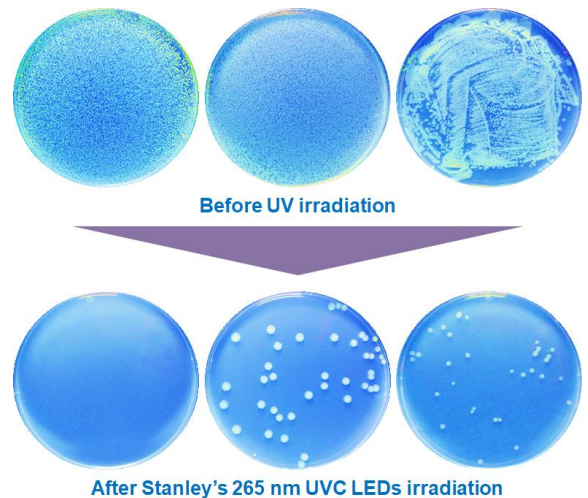
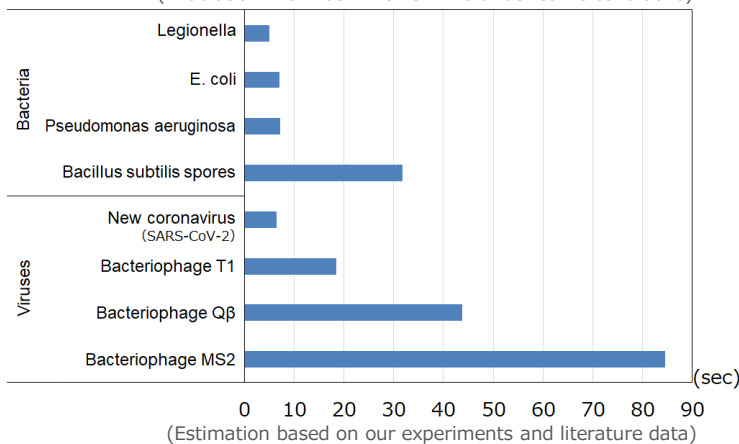
UV sterilization becomes possible by "inactivating" DNA/RNA

Effectiveness of UV sterilization

Achieving a reliable bactericidal effect just by irradiating UV light. UV light's bactericidal effect works against various DNA/RNA bacteria and viruses and is being analyzed daily by various universities, research institutes and companies.

99.9% sterilization time

(Irradiation with 265nm UVC LEDs under same conditions)

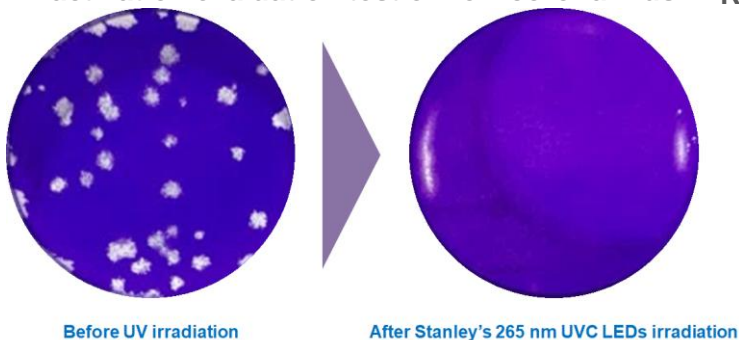


Confirmation of effectiveness against new coronavirus

As a test result in collaboration with Yamaguchi University (Dr. Daisuke Hayasaka and Dr. Hiroshi Shimoda, Laboratory of Veterinary Microbiology, Joint Faculty of Veterinary Medicine), we confirmed the high effectiveness of virus inactivation of SARS-CoV-2 with UV sterilization.

We also confirmed the wavelength superiority of our UVC products.

Inactivation evaluation test of new coronavirus



Relative comparison of sterilizing ability by wavelength

