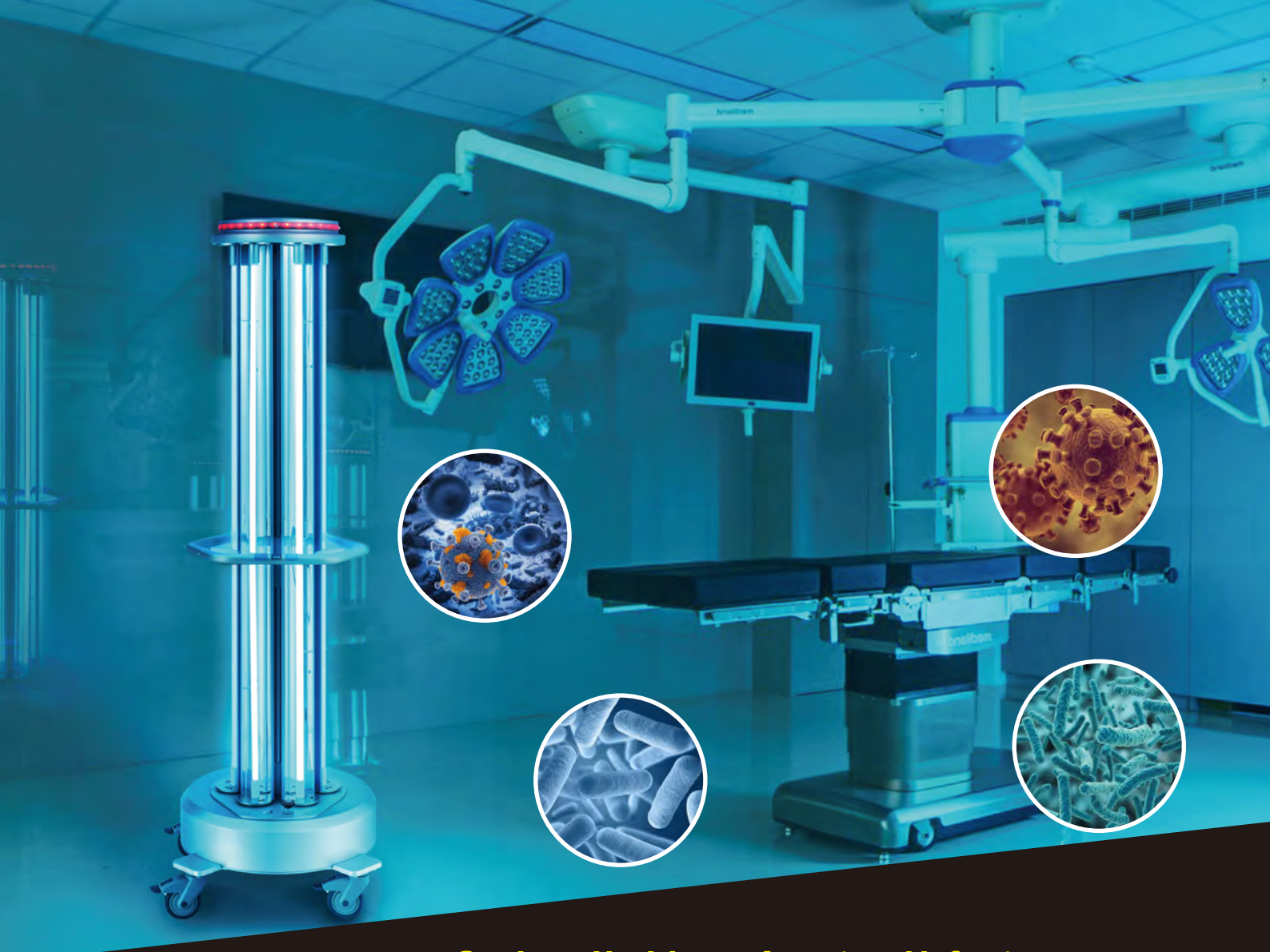


Hyper Light Disinfection Robot

Disinfection to Protection





Combats Healthcare-Associated Infections

The Hyper Light Disinfection Robot is a specially designed robot made to prevent Healthcare-Associated Infection (HAI) for any healthcare facilities by means of UVGI disinfection method. The germicidal UV (254nm UVC) is capable of killing and inactivating microorganisms by destroying nucleic acids and disrupting DNA or RNA, leaving them unable to replicate and repair.

Quick and Effective Disinfection

The system consists of 6 amalgam UV lamps and patented rotational reflector technology to effectively distribute UV-C output to the surroundings to inactivate and kill microorganisms. The technology provides an easy, fast, environmentally-safe and low maintenance operation for the operator throughout the lifetime of the product.

Kills Bacteria and Viruses

Hyper Light is clinically proven with capability of eradicating more than 99.99% of microorganisms including bacteria, viruses and pathogens within 3 meter radius in 15 minutes. (SGS laboratory testing conducted September 2015.)

Environmental Safety and Quality Care

The Hyper Light Disinfection Robot emits no ozone and leaves no residuals so it is completely eco-friendly. Hyper Light not only improves the environmental hygiene, but also protects patients and healthcare workers from cross infection. Ultimately, reducing healthcare-associated infection can result in better quality of care.



Multi-Motion Sensor

Hyper Light is equipped with all-around multi-motion sensor system to prevent potential injuries from accidental entry during the disinfection process. The system will automatically terminate the procedure seamlessly in association with the tablet to minimize injuries from UV-C exposure.

LED Status



- Blue Light : Stand by
- White Light : Warm Up
- Red Light : Disinfecting
- Green Light : Complete



Patented Protective Reflector

Rotational protective reflector technology is a patented design for multiple purposes. While the automatic rotational movement provides protection against dust contamination and accidental damage to the lamp, the high reflectance coating allows UV-C energy to be distributed uniformly in a constant high level and also increase the range in distance for disinfection.

Circular Handle



The ergonomically designed handle has a LCD screen display and buttons for easy use. The thin handle design does not obstruct the UV irradiation.



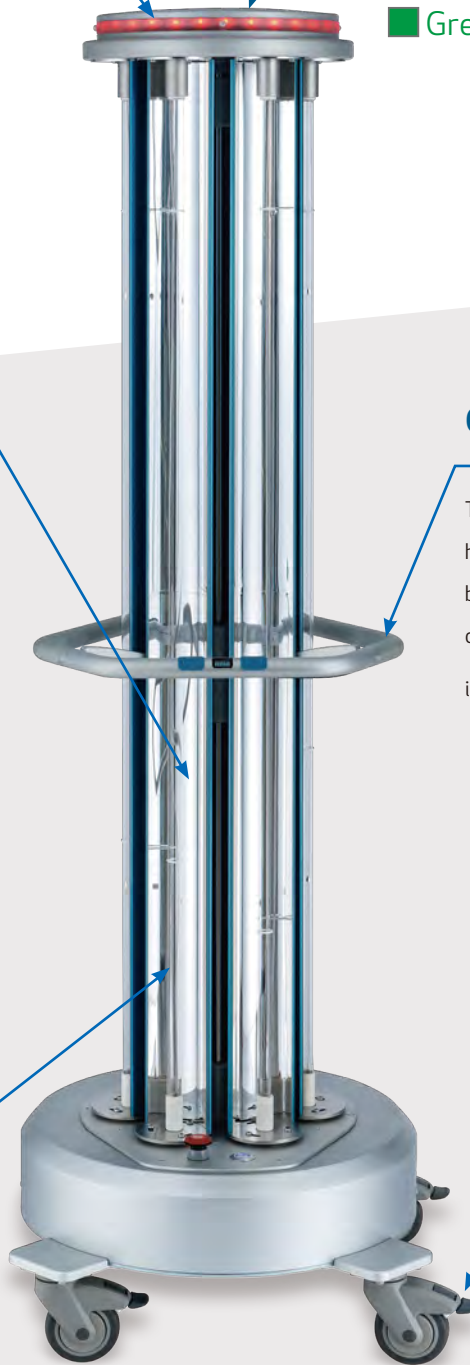
Amalgam Lamps

The amalgam lamps offer high power, low-pressure and ozone-free features; these special properties allow the lamps to operate at high temperature (up to 90°C), produce no ozone gas, leave no toxic residues, generate low thermo-sensitivity and possess long lifetime compared with conventional low-pressure mercury lamps.

High Maneuverability



Hyper Light has four 4 inch omnidirectional wheels, enabling it to be pushed to any location in a hospital setting. Only 3.2kg of force is needed to move Hyper Light, conforming to AORN standards.



Hyper Light P 1

Input : 100 - 240 Vac, 50/ 60 Hz, Max 1200 Watt
Dimension : 71 cm * 71 cm * 154 cm
Weight : 74 Kg
UVC Bulbs : 6 High Output Amalgam lamps
Bulb Lifetime : 12000 hrs
Temperature : 10° to 40°C
Relative Humidity : 10 to 80%
Atmospheric : 700 - 1060hPa



UVC Dosage of Hyper Light P1: Time	Distance	UVC Dosage
5 min.	1 m	621 mJ/cm ²
5 min.	2 m	234 mJ/cm ²
5 min.	3 m	117 mJ/cm ²
5 min.	4 m	63 mJ/cm ²
5 min.	5 m	42 mJ/cm ²



Hyper Light P3

Input: 100 - 240 Vac, 50/ 60 Hz, Max 1800 Watt

Dimension: 71 cm * 71 cm * 195 cm

Weight: 85 Kg

UVC Bulbs: 6 High Output Amalgam lamps

Bulb Lifetime: 12000 hrs

Temperature: 10° to 40°C

Relative Humidity: 10 to 80%

Atmospheric: 700 - 1060hPa

UVC Dosage of Hyper Light P3: Time	Distance	UVC Dosage
5 min.	1 m	834 mJ /cm ²
5 min.	2 m	366 mJ /cm ²
5 min.	3 m	144 mJ /cm ²
5 min.	4 m	114 mJ /cm ²
5 min.	5 m	69 mJ /cm ²



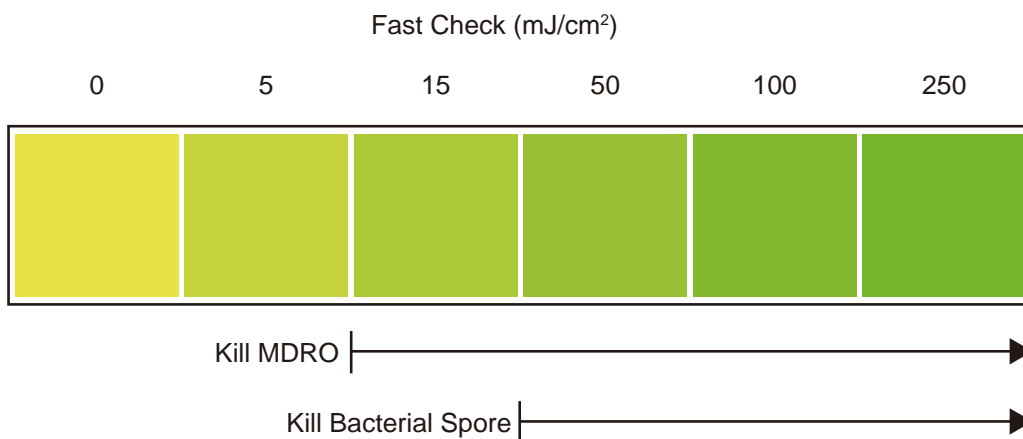
Wireless Control: Tablet Control System

Hyper Light records and documents your disinfection data automatically to the tablet system. The intuitive tablet control provides user-friendly interface and real time documentation for all your validation and verification processes.



Easy Validation : FastCheck

Our FastCheck allows for quick visualization on the disinfection performance. Simply place the FastCheck to the area of disinfection, the color will change from yellow to green (250 mJ/cm²) which verifies 99.99% performance of the disinfection process.





Clinical Disinfection Report

The disinfection capability of Hyper Light is verified by SGS, a third party international certification company, and clinically proven by National Taiwan University Hospital. Hyper Light can kill over 99.99% of bacteria and viruses, including multi-drug resistant organisms (MDRO) within 3 meter radius in 15 minutes. Hyper Light can completely destroy all toxic matters. In the clinical trial, the high touch surface of ward were nearly 100% disinfected by Hyper Light after 15 minutes of treatment, indicating that it can effectively kill microorganisms in hospital setting and reduce hospital infections due to transmission between patients and medical staff.

Germicidal Efficiency of Hyper Light (Distance : 3 meter)				
Germs	Before Treatment	Treatment in 5 mins	Treatment in 10 mins	Treatment in 15 mins
	Unit: CFU			
Virus * ¹				
Influenza A	1.0 x 10 ⁷	5.0 x 10	6	<1
Avian influenza	1.0 x 10 ⁷	4.0 x 10	2	<1
Enterovirus 71	1.0 x 10 ⁷	4.0 x 10 ²	5.0 x 10	2
Bacteria * ²				
<i>E. coli</i>	1.2 x 10 ⁷	1.6 x 10	2	<1
<i>E. faecalis</i>	8.4 x 10 ⁶	1.2 x 10 ⁵	2.8 x 10 ²	<1
<i>K. pneumoniae</i>	8.5 x 10 ⁶	2.2 x 10	<1	<1
<i>M. abscessus</i>	9.2 x 10 ⁸	2.0 x 10 ⁵	1.6 x 10 ⁴	4.0 x 10 ²
Fungus * ²				
<i>A. brasiliensis</i>	5.3 x 10 ⁶	5.3 x 10 ³	<1	<1
Spore * ²				
<i>C. difficile spore</i>	1.2 x 10 ⁷	3.3 x 10	2	<1
MDRO * ³				
VRE	1.2 x 10 ⁷	1.3 x 10	<1	<1
MRSA	1.2 x 10 ⁷	1.2 x 10	3	<1
MDRPA	8.2 x 10 ⁸	3.0 x 10 ³	6.0 x 10 ²	2.0 x 10 ²
MDRAB	1.1 x 10 ⁸	4.2 x 10 ³	4.0 x 10 ²	<1
Room Disinfection Efficiency of Hyper Light (Area : 21 sq meter) * ³				
Site of sampling	Before Treatment	After Treatment		Reduction %
	Unit: CFU			
Left Bedrail	20	0		100%
Right Bedrail	0	0		N/A
Top of Bedside Table	50	0		100%
Telephone	280	0		100%
Door Knob of Refrigerator	170	0		100%
Switch 1	120	0		100%
Switch 2	0	0		N/A

*1. Chang Gung University testing conducted January 2015.

*2. SGS laboratory testing conducted September 2015.

*3. National Taiwan University Hospital testing conducted May 2016.

Please contact Mediland sales representative or visit our website www.hyperlight.com.tw for more testing report information.



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