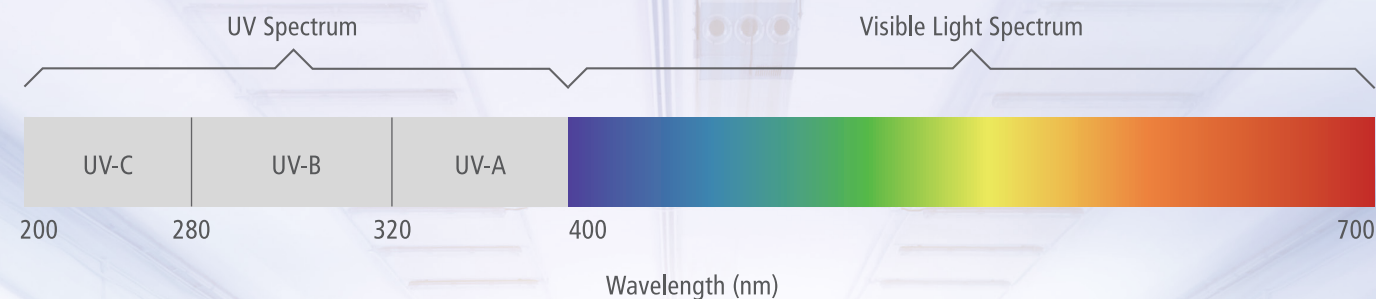


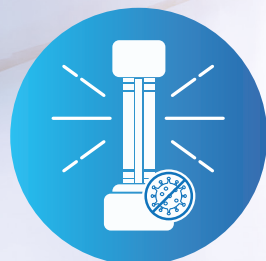
ULTRAVIOLET GERMICIDAL IRRADIATION (UVGI)



UV-C is a type of ultraviolet at wavelength of 280 – 200 nanometre, which is the most effective wavelengths for germicidal control.

UVGI is a disinfection method that uses UV-C light to eliminate or inactivate microorganisms, such as bacteria, viruses, moulds, and other pathogens. It can be used to prevent the spread of certain infectious diseases.

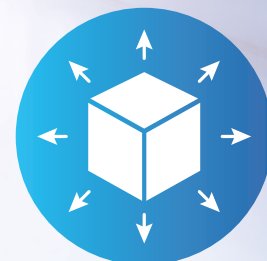
BENEFITS



Use ultraviolet C-band energy to kill or inactivate the microorganisms



Improve Indoor Air Quality (IAQ)

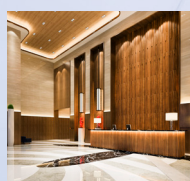


Versatile designs to suit your air-conditioning equipment such as installing in Ducted Fan Coil Unit (FCU) & Air Handling Unit (AHU)

APPLICATIONS



Hospitals & Healthcare Industry



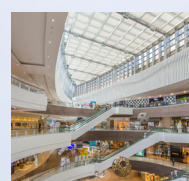
Hotels & Hospitality Industry



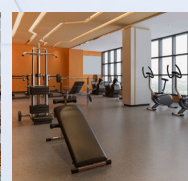
Food & Pharmaceutical Industry



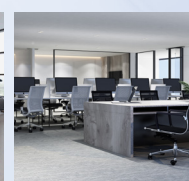
Educational Institutions



Malls & Cinemas



Fitness Centre



Commercial Office



DAIKIN AIRCONDITIONING (SINGAPORE) PTE LTD
10 Ang Mo Kio Industrial Park 2, Singapore 569501
www.daikin.com.sg

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Perfecting the Air

INDOOR AIR QUALITY SOLUTION



UV-C DISINFECTION TREATMENT
(Duct Type Fan Coil & Air Handling Unit)

UV-C LED UVGI SYSTEM



DUCT TYPE FAN COIL

- Room air is circulated and disinfected through the air sterilisation system using built in UV-C LED in the ducted fan coil.
- UV-C LEDs are installed in a specific angle to ensure optimal air treatment.
- UV-C LEDs are specially designed with enhancing reflector for more concentrated UV-C light achieving better disinfection effect.
- Suitable for small and medium space applications.



BENEFITS OF UV-C LED

- Eliminate viruses and bacteria through air sterilisation, without affecting airflow rate and noise
- Achieve concentrated UV-C light within 15 degree
- Achieve advanced germicidal efficiency at all temperature range with high intensity point source output
- Fast set up time with rapid responsiveness



- Easy maintenance and reduce additional space requirement
- Compact size which enables design flexibility for small and medium space installation
- Comply with European Union's Directive 2002/95/EC - the Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- Interlock with fan coil unit

LED SPECIFICATIONS

Model	Unit	DUV30L1
Power Supply	-	24VDC
Power Input	w	1.44
Current	mA	67
Radiant Power	w	0.028
UVC Intensity (average)	$\mu\text{w}/\text{cm}^2$	5,000
UV wavelength	nm	275
Effective distance	mm	650
Protection level	-	IP65
Lifespan (L50)	h	$\geq 14,000$
Operation Temperature	$^{\circ}\text{C}$	-30 ~ +60

TEST RESULT

- A third party has assessed the effectiveness of bacteria reduction of the UV-C LED system by conducting microbiological analysis before and during operation of the UV-C LED system, which is equipped in the Fan Coil Unit (FCU) for treating circulated indoor air.
- The results showed a decrease in TVBC (Total Viable Bacterial Count) and TVMC (Total Viable Mould Count) concentration after 1 hour of operation where it achieved 86.18% and 74.98% reduction respectively. All results are within the acceptable limits of Singapore Standard SS 554:2016 and SS 554:2009, "Code of practice for indoor air quality for air-conditioned buildings".

UV-C LAMP UVGI SYSTEM

AHU

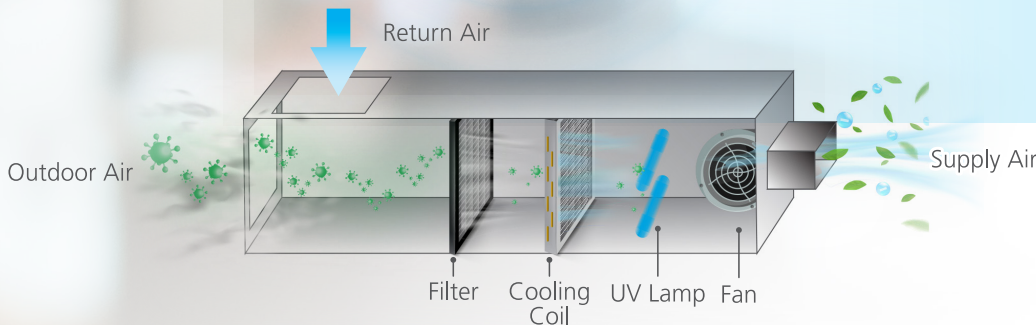
- In AHU air chamber space, UV-C lamps can provide greater intensity output and higher disinfection effect.
- UV-C lamps are installed in AHU for coil sterilisation and surface disinfection.
- UV-C lamps target and irradiate the cooling coil and condensate drain pan.
- Suitable for large space applications



BENEFITS OF UV-C LAMP

- Effectively reduce mould, bacteria and viruses in air chamber, cooling coil surface and provide drain-pan sterilisation
- 360 degree irradiation sterilisation
- High power with great UV light sterilisation

- Maintain cooling coil cleanliness and heat transfer efficiency, improve AHU performance and energy savings
- Reduce cooling coil maintenance frequency
- Interlock with AHU



LAMP SPECIFICATIONS

Model	Unit	Standard Output					High Output				
		SOL-303	SOL-436	SOL-843	SOL-1148	SOL-1554	HOL-303	HOL-436	HOL-843	HOL-1148	HOL-1554
Power Supply	-	220-240V/1 ϕ , 50/60 Hz					220-240V/1 ϕ , 50/60 Hz				
Power Input	w	15	21	41	55	75	33	48	87	120	155
Current	mA	425	425	425	425	425	800	800	800	800	800
Radiant Power	w	4.3	7.3	16	22	33	9	13	28	39	54
UVC Intensity @ 1m	$\mu\text{w}/\text{cm}^2$	43	72	150	180	240	83	120	260	300	395
UV wavelength	nm	254					254				
Length	mm	303	436	843	1148	1554	303	436	843	1148	1554
Protection level	-	IP65					IP65				
Lifespan	h	$\geq 10,000$					$\geq 10,000$				
Operation Temperature	$^{\circ}\text{C}$	5 ~ 45					5 ~ 45				