



Light is protecting

AirZing™ – powered by OSRAM UV (HNS)

Jiaming.HE (DI MC IND) | Updated on March 10, 2020

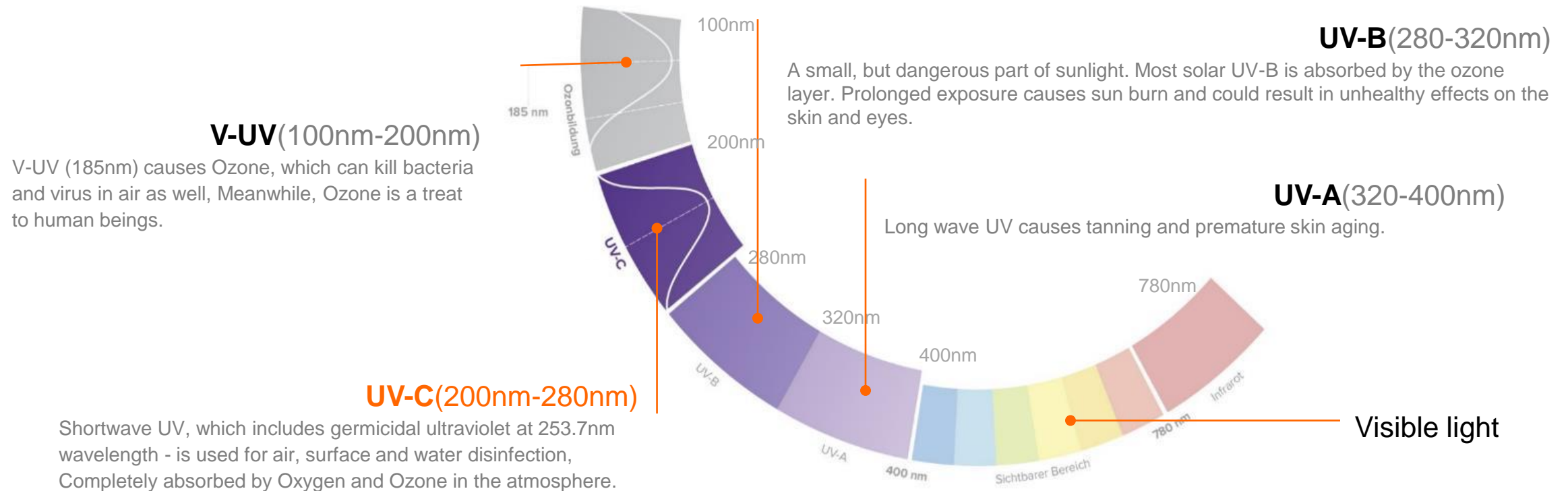
Light is OSRAM



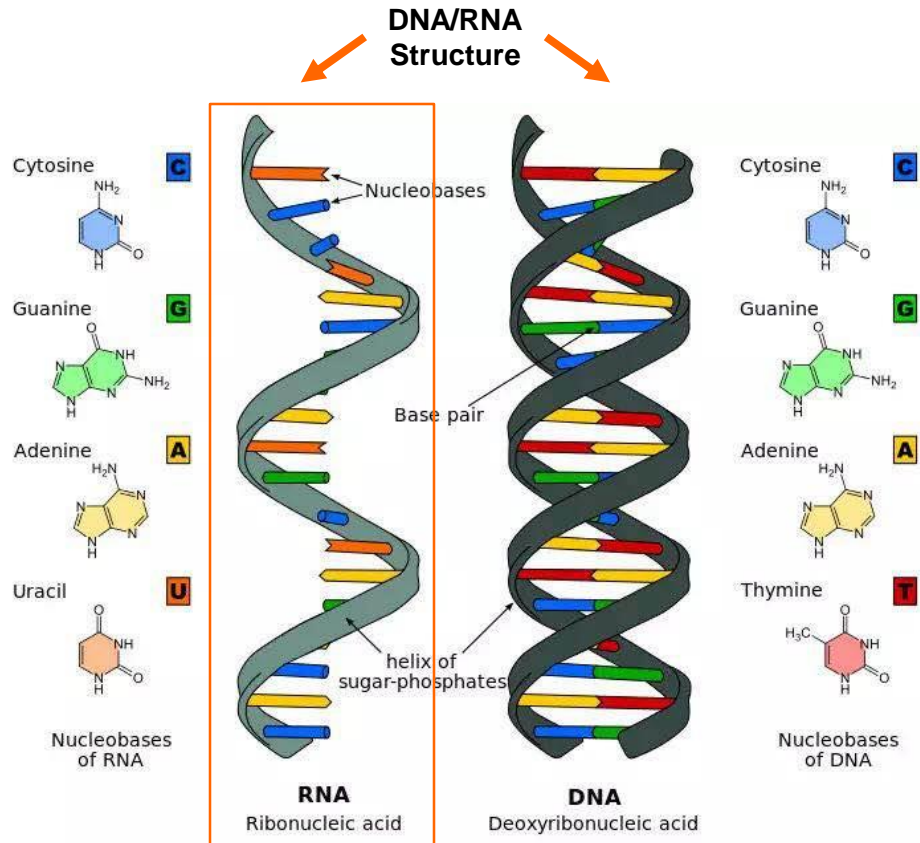
OSRAM

UV-C is proved a mature technology of killing micro-organisms efficiently

- As we all know, UV is part of sun light, which is an easy way of surface cleaning in our daily life.
- UV is a sort of invisible electromagnetic radiation, with wave length between 100-380nm.
- The very first artificial UV light source was introduced to the world in Germany 200 years ago.

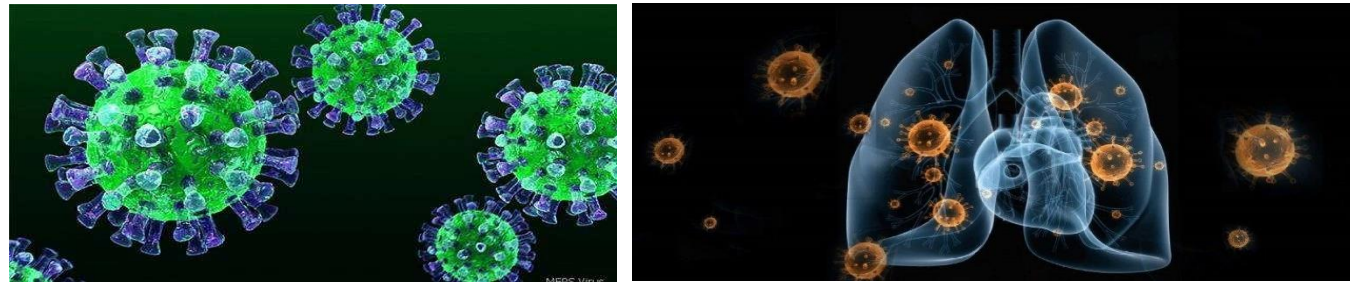


How does UV-C kill micro-organisms(bacteria and virus)



The cell nucleus of micro-organisms(bacteria and virus) contains thymine, a chemical element of the DNA / RNA. This element absorbs UV-C at a specific wavelength of 253.7 nm and changes to such an extent (formation of thymine dimers) that the cell is no longer capable of multiplying and surviving.

- UV-C (253.7nm) penetrates the cell wall of the micro-organism
- The high energy photons of the UV-C are absorbed by the cell proteins and DNA / RNA
- UV-C damages the protein structure causing metabolic disruption
- DNA/RNA is chemically altered so organisms can no longer replicate
- Organisms are unable to metabolize and replicate, **CAN'T** cause disease or spoilage



Coronavirus (SARS-CoV-2) has typical RNA structure

Comparison

V-UV(185nm) also kill micro-organisms as well, but causes Ozone accordingly which is harmful for human beings. It is used for more industrial applications. UV-C is safer.

UV-C can kill Coronavirus (SARS-CoV-2)

Coronavirus are sensitive to UV-C.

According to **Multilingual epidemic control manuals for COVID-19** (7th Edition), published by National Health Commission of China, updated on March, 04, 2020

Fact

OSRAM AirZing™ PRO (More than **1,000** pcs of UV-C product) are equipped in **38** hospitals in City of Wuhan, among **45** in Hubei province in total as of March, 2020

新型冠状病毒感染肺炎
9个事实

1. 病毒对紫外线和热敏感

病原学

- 属于β属的新型冠状病毒，有包膜，颗粒呈圆形或椭圆形，常为多形性
- 其基因特征与SARSr-CoV和MERSr-CoV有明显区别
- 与蝙蝠SARS样冠状病毒 (bat-SL-CoVZC45) 同源性达85%以上
- 病毒对紫外线和热敏感**
- 消毒剂敏感性
 - 56°C 30 分钟、乙醚、75%乙醇、含氯消毒剂、过氧乙酸和氯仿等脂溶剂均可有效灭活病毒
 - 氯己定不能有效灭活病毒

Some reports from Chinese Media showing UV-C is effective on coronavirus

流行病学特点

- 传染源**: 新型冠状病毒感染的患者; 无症状感染者也可能成为传染源
- 传播途径**: 飞沫传播; 密切接触传播; 在相对封闭的环境中长时间停留于高浓度气溶胶情况下存在经气溶胶传播的可能; 应注意粪便及尿对环境造成污染及气溶胶或接触传播
- 易感人群**: 人群普遍易感

临床表现

- 主要表现**: 发热; 干咳; 乏力; 少数患者伴有鼻塞、流涕、咽痛、肌痛和腹泻等症状; 部分儿童及新生儿病例症状不典型，表现为呕吐、腹泻等消化道症状，或仅表现为精神弱、呼吸急促
- 轻型患者**: 低热; 轻微乏力; 无肺炎表现
- 重症患者**: 多在发病一周后出现呼吸困难和/或低氧血症; 严重者快速进展为急性呼吸窘迫综合征、脓毒症休克、多器官功能衰竭等; 重症、危重症患者病程中可为中低热，甚至无明显发热
- 潜伏期**: 1-14天，多为3-7天

诊断标准

- 疑似病例**: 有流行病学史中的任何一条，且符合临床诊断标准中两条
- 临床诊断**: 有流行病学史中的任何一条，且符合临床诊断标准中三条
- 确诊病例**: 实时荧光RT-PCR检测新型冠状病毒核酸阳性; 病毒基因测序，与已知的新型冠状病毒高度同源; 血清新型冠状病毒特异性IgM抗体和/或IgG抗体检测为阳性，或恢复期双份血清抗体滴度4倍以上升高

AirZing™ – powered by OSRAM UV (HNS)

Designed in
GERMANY

Efficient

99.9%
Sterilization
efficiency

Precise

253.7nm
UV wave length

Premium

0
Ozone Emmission

Powerful

360°
Coverage Area

Smart

IR Sensor

Safe

30s
Delay Starting

*Available for PRO only

Integrated Ballast

- Match OSRAM HNS UV lamps

IR Sensor – Safety Kit

- 30s delay starting
- Switch off lighting system once detecting people coming inside UV-working space immediately
- Coverage Area between 80-150 sqm2 depends on installation height

*IR Sensor is available for AirZing™ PRO only.

OSRAM HNS UV lamp

- Made in Europe
- Premium quality
- 253.7 nm UV output
- No Ozone emmission



Metal Screw

- Anti-UV coating

Lamp Holder

- Boost and anti-UV

Special plastic housing

- Anti-UV coating

AirZing™ ECO

Designed in
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AirZing™ **ECO**

| | |
|----------------------------|----------------------------|
| Product name | AirZing™ ECO |
| Input Voltage | 220V±10% |
| Input Current | 0.14A |
| Output Current | 360 mA |
| System Wattage | 33 W |
| lamp Wattage | 30 W |
| Power Factor | > 0.9 |
| THD | < 20% |
| UV-C Output (253.7nm) | 11-12W |
| Initial UV-C irradiance | >1.2 W/m ² @1M |
| UV-C irradiance @ 9000 hrs | >0.96 W/m ² @1M |
| Lamp life time | 9,000 Hrs |
| Warranty | 1 Year |
| Dimension | L929mm/W54mm/H78mm |
| Weight | 1.1kg (net)/1.7kg(package) |
| Operation Temperature | -10 °C~ 35 °C |
| Storage Temperature | -20 °C~ 60 °C |

| | | | |
|--------------------------------------|---------------------------|--------------------|-----------------------|
| Efficient | Precise | Premium | Powerful |
| 99.9% Sterilization efficiency | 253.7nm UV wave length | 0 Ozone Emmiton | 360° Coverage Area |

*IR Sensor and Delay Starting is not available

AirZing™ PRO

Designed in
GERMANY



AirZing™ **PRO**

| | |
|----------------------------|----------------------------|
| Product name | AirZing™ PRO |
| Input Voltage | 220V±10% |
| Input Current | 0.19A |
| Output Current | 430 mA |
| System Wattage | 40 W |
| lamp Wattage | 36 W |
| Power Factor | > 0.9 |
| THD | < 20% |
| UV-C Output (253.7nm) | 14-15W |
| Initial UV-C irradiance | 1.4 W/m ² @1M |
| UV-C irradiance @ 9000 hrs | >1.24 W/m ² @1M |
| Lamp life time | 9,000 Hrs |
| Warranty | 3 Years |
| Dimension | L1363mm/W54mm/H78mm |
| Weight | 1.5kg (net)/2.2kg(package) |
| Operation Temperature | -10 °C~ 35 °C |
| Storage Temperature | -20 °C~ 60 °C |

| | | | | | |
|--------------------------------------|---------------------------|---------------------|-----------------------|--------------|-----------------------|
| Efficient | Precise | Premium | Powerful | Smart | Safe |
| 99.9% Sterilization efficiency | 253.7nm UV wave length | 0 Ozone Emmitter | 360° Coverage Area | IR Sensor | 30s Delay Starting |

AirZing™ can be used in ...





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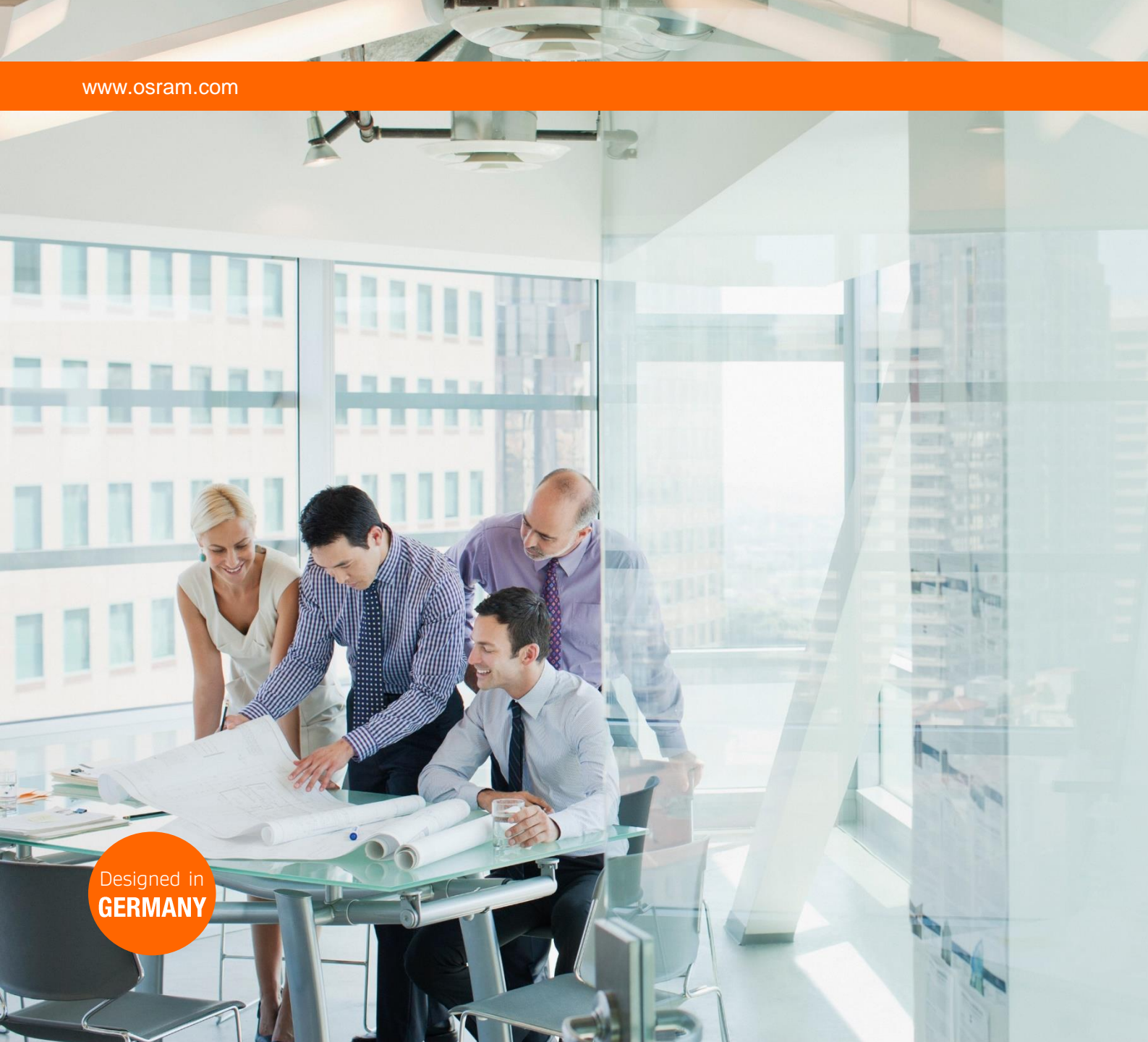
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AirZing™ - PRO

Power **40 W** (36 W HNS)
Dimension 1363 mm x 54 mm x 78 mm
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Parts of a microscope

- eyepiece lens
- objective lens
- course focus
- fine focus
- stage
- illuminator

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More Information

callosram@osram.com