

## Precautions for installation, construction, operation, and safety

- The permissible limit value (TLV) of 222 nm ultraviolet rays that a person may be exposed to in a day is 22 mJ/ Cm<sup>2</sup> or less (in 8 hours) per day according to ACGIH (American Conference of Governmental Industrial Health) and JIS Z 8812 (measurement method of harmful ultraviolet radiation). When using eVio, install and operate so that it is exposure within this allowable value.
- Always install the unit to be at least 1 meter away from people
- The temperature of this product rises while the lamp is on or immediately after it is turned off. Never touch the lamp or lamp housing. (It may cause burns, etc.)
- Do not use or store flammable gas or flammable substances near the product. Also, do not cover it with flammable materials such as paper or cloth, or place it near such items. (It may cause a fire)
- Do not use in humid environment such as near a humidifier, or in a dusty place. Also, do not allow the power plug or outlet to get wet, and do not insert or remove the power plug with wet hands. (It may cause electric shock, fire, or malfunction.)
- Do not use in an environment with a lot of oily gas (exhaust gas, steam, etc.).
- Do not hit or drop the product. Also, do not push or pull during installation. It may cause an accident or an unexpected accident. Also, do not push or pull the product when it is mounted on a wall (facing sideways or downwards).
- Do not use the product outdoors. Also, do not install it indoors where it will be exposed to liquids such as water.
- This product emits UV light. Please note that UV light may cause fading or deterioration depending on the material of the object exposed. Quark technology is not responsible for any fading or deterioration due to UV light exposure.
- Specifications and design of this product are subject to change without notice for improvement. The lamp is a glass product. Return the old lamp to your dealer or Quark Technology, or dispose of it according to the method specified by your local government.
- It is generally said that pregnant people tend to have sensitive skin to UV rays. If you are concerned about UV rays or have photosensitivity, use long sleeves, a hat, sunscreen cream, etc. and take the same measures as your daily sun UV protection. If you lack experience or knowledge, please do not use the product without proper guidance. Please be careful not to let children play with the product.
- Ozone odor may be generated during UV light emission. Due to the small amount this is not harmful to the human body. If you feel uncomfortable or feel unwell, stop using eVio immediately and consult a doctor.



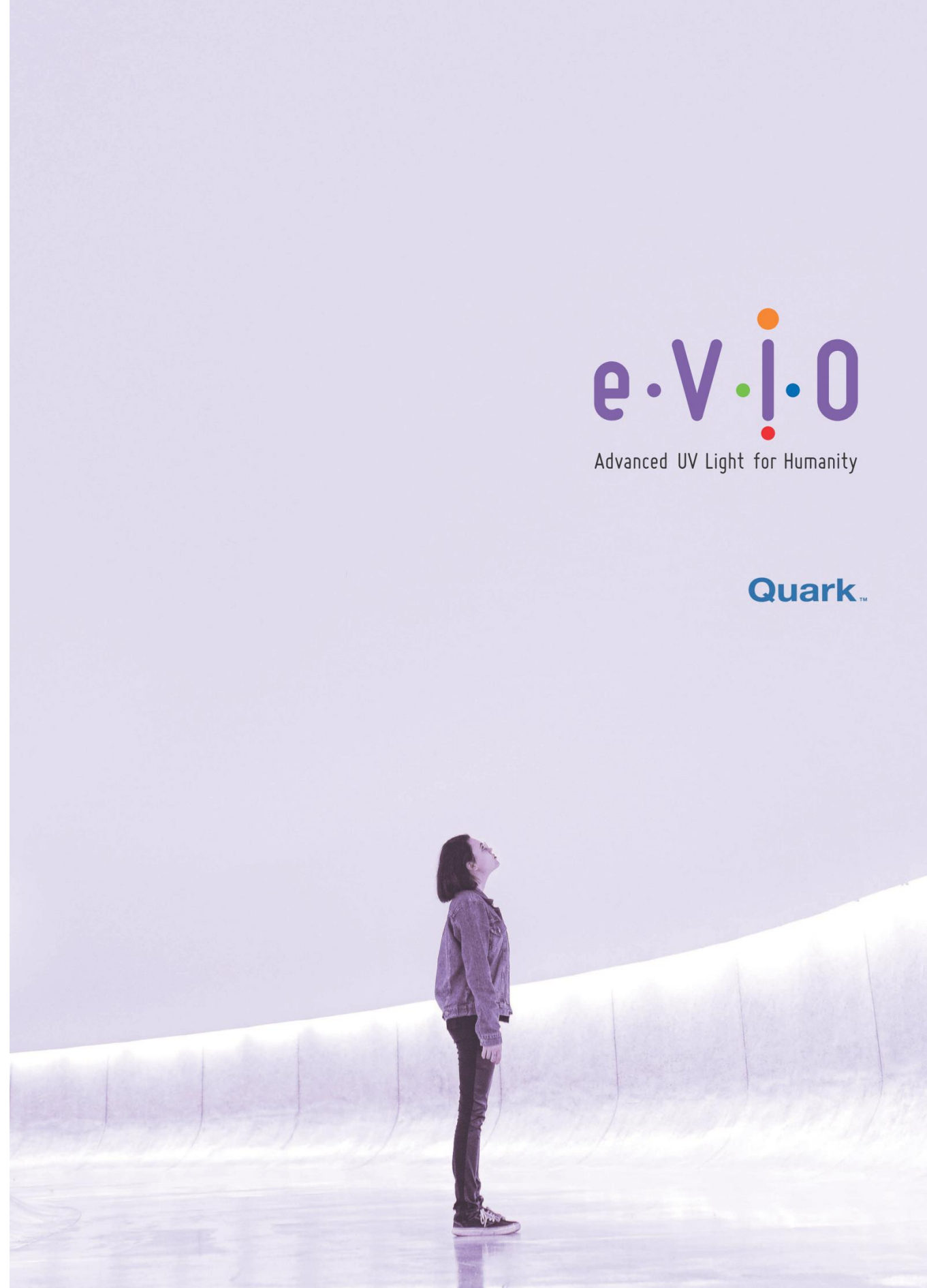
Quark™

Please check with the seller for warranty and after-sales service. Please read carefully the contents specified in the installation, construction, operation, and safety precautions to use the product safely and correctly.

- Please note that the appearance and specifications are subject to change.
- The color of the product may differ slightly from the actual product due to the printing condition.

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**Quark™** eVIO Advanced Technology is a patent of Quark Technology Co., Ltd.





eVIO is a completely new type of ultraviolet light that can be used in occupied environments, which has not been possible with conventional ultraviolet wavelengths. eVIO uses advanced technology to suppress the effects of ultraviolet rays on the bodies of humans and animals, while maintaining the virus suppression and sterilization capabilities inherent in ultraviolet rays.

## What eVIO can do

It can sanitize space and object surfaces with ultraviolet light even in an occupied environment..

### Space sterilization

eVIO is highly effective for space sterilization. In particular, when operated in a manned environment, eVIO can sterilize an entire space without affecting the human body by emitting ultraviolet rays that have been stripped of their harmful wavelengths, thereby maintaining a safe and clean environment.

### Surface sterilization

eVIO is also effective in sterilizing object surfaces. Continuous irradiation is possible, especially in an unattended environment, which maximizes the sterilization effect.



Medical environment

elevator

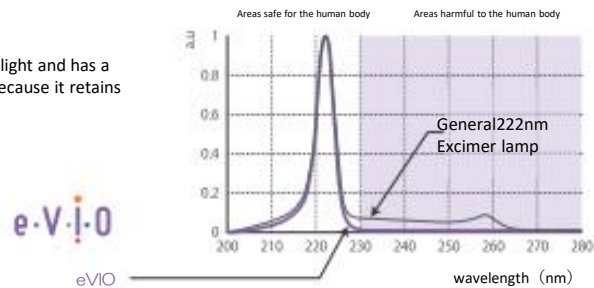
meeting room

## eVIO safety

It has been confirmed that it is safe to use in a manned environment.  
(Please use the product in compliance with the usage instructions in the instruction manual.)

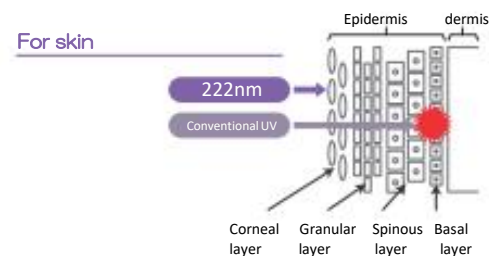
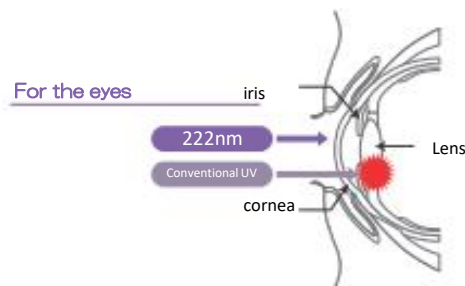
### 222nm UV

Ultraviolet light has a wavelength of 10-400 nm and is shorter than visible light and has a strong bactericidal effect. The wavelength of 222 nm is extremely useful because it retains the bactericidal effect without affecting the human body.



### Low impact on the human body

The absorption coefficient of proteins and keratin differs between the 222 nm UV and the conventional UV wavelength. Since 222nm ultraviolet light does not penetrate into the skin and eyes, it has been found to have lower impact on the human body.



## eVIO Advanced Technology

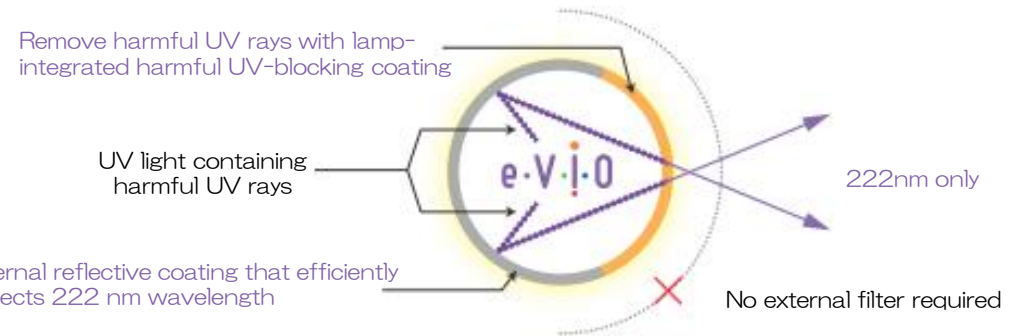
Removing harmful wavelengths from UV light requires superior coating technology. eVIO does not use external filters, which are common in conventional products. eVIO is the world's first technology that can emit exclusively the 222nm UV wavelength.

### Integrated harmful UV light-blocking coating

eVIO has a harmful ultraviolet blocking coat inside the lamp, and emits exclusively the wavelength of 222 nm with the harmful ultraviolet rays removed by the UV lamp. The lamp-integrated coat dramatically improves durability and maintainability compared to conventional products.

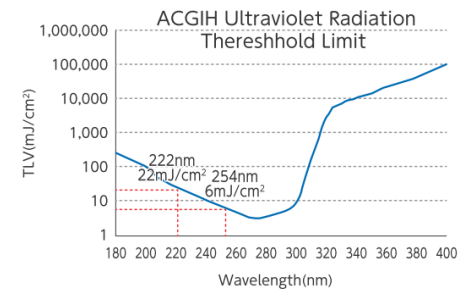
### High efficiency internal reflective coating

eVIO has a special reflective coating on the inside of the lamp that allows light rays to be reflected inside the lamp and efficiently extract the 222 nm wavelength.



### Sensor technology

Although the safety of 222nm UV light is scientifically supported, the United States ACGIH (American Conference of Governmental Industrial Hygienists) has established a Threshold Limit Value (TLV). Therefore, the eVIO uses motion sensors to control the operation so that the this limit is not exceeded in a manned environment.



wavelength	TLV	Relative wavelength dependent Adverse effects
222nm	22mJ/cm <sup>2</sup>	27%
254nm	6mJ/cm <sup>2</sup>	100%