

Ultraviolet light

Ultraviolet light is a general term for radiation from 0.01 to 0.40 micrometers in the electromagnetic spectrum. Can not cause people's vision. In the electromagnetic spectrum, the wavelength is 0.01~0.04 microns, Radiation between the visible purple end and the X-ray.

Ultraviolet rays are classified according to wavelength: Near ultraviolet UVA, far ultraviolet UVB and ultra short UVUV.

The degree of penetration of ultraviolet light on human skin is different. The shorter the wavelength of ultraviolet light, the greater the damage to human skin. Short-wave UV rays can pass through the dermis, while medium waves can enter the dermis.

Ultraviolet light with a wavelength of 200 to 290 nm can penetrate the cell membrane of bacteria and viruses, damage nucleic acids (DNA), and make cells lose their ability to reproduce and achieve rapid sterilization. Short-wavelength ultraviolet rays having a wavelength of 200 nm or less can decompose O₂ molecules, and the generated O* combines with O₂ to generate ozone O₃.

Ultraviolet light and ozone have strong oxidative ability to decompose organic molecules including malodor, The multiplication effect of UV/O₃ combined exerts a powerful power in air purification treatment.

When ultraviolet rays are strongly applied to the skin, it may cause photodermatitis, erythema, itching, blisters, edema, etc. on the skin; severe skin cancer may also occur.

Ultraviolet rays act on the central nervous system, Headache, dizziness, and elevated body temperature can occur.

Act on the eye, can cause conjunctivitis, keratitis, It is called photo ophthalmitis, and it may induce cataracts. Ultraviolet rays generated during the welding process can cause the welder to suffer from electro-optic ophthalmia (which can be cured).

紫外线

紫外线是电磁波谱中波长从 0.01~0.40 微米辐射的总称，不能引起人们的视觉。电磁谱中波长 0.01~0.04 微米辐射，既可见光紫端到 X 射线间的辐射。

紫外线根据波长分为：近紫外线 UVA，远紫外线 UVB 和超短紫外线 UVC。紫外线对人体皮肤的渗透程度是不同的。紫外线的波长愈短，对人类皮肤危害越大。短波紫外线可穿过真皮，中波则可进入真皮。

波长 200~290nm 的紫外线能穿透细菌、病毒的细胞膜，给核酸（DNA）以损伤，使细胞失去繁殖能力，达到快速杀菌的效果。波长 200nm 以下的短波长紫外线能分解 O₂ 分子，生成的 O*与 O₂ 结合产生臭氧 O₃。紫外线和臭氧具有强的氧化分解包括恶臭在内的有机分子的能力，UV/O₃ 并用的相乘作用在空气净化处理中发挥强大威力。

紫外线强烈作用于皮肤时，可发生光照性皮炎，皮肤上出现红斑、痒、水疱、水肿等；严重的还可引起皮肤癌。

紫外线作用于中枢神经系统，可出现头痛、头晕、体温升高等。作用于眼部，可引起结膜炎、角膜炎，称为光照性眼炎，还有可能诱发白内障，在焊接过程中产生的紫外线会使焊工患上电光性眼炎（可以治愈）。