High Energy Dual – Band UV Photolysis Lamp

Type	Tube Diameter	Length	Power	Current	Voltage at High Freq	UV Output at 254NM		Standard Life	Long Life
	MM	MM	W	MA	V	uw/cm²	W	H	H
G39 T5/VH	15	865	39	425	98	130	15	10000	13000
G79 T5/VH	15	1630	79	425	189	225	32	10000	13000
G150 T5/VH	15	1630	150	800	195	400	45	10000	13000
UA75W/VH-B*	15	410	75	800	98	200	28	10000	13000
UA150W/VH-B*	15	810	150	800	195	400	56	10000	13000
UA150W/VH-T*	15	810	150	800	195	400	56	10000	13000
UA150W/VH-F*	15	810	150	800	195	400	56	10000	13000
UA150W/VH-FX*	15	810	150	800	195	400	56	10000	13000

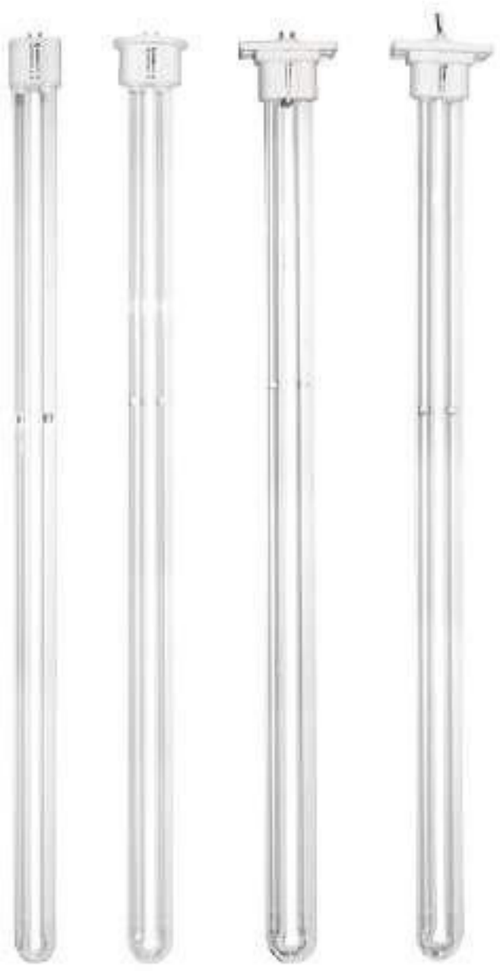
B represents the standard flat head, T represents the oval flange head, F represents the square flange head
FX represents the square flange head with wires

Kitchen Fumes Smell Treatment

185 & 254 nm UV lamp effect is very good on the kitchen fume treatment and malodorous corrupt gas treatment. After treatment of contaminants, the mineralization degree is higher, and it can be completely degraded. The photocatalytic oxidation of UV lamps can play a role in a wide range of Organics, such as hydrocarbons. Domestic and foreign scientific research departments of waste gas treatment have confirmed that organic pollutants can be effectively controlled by photocatalytic oxidation.

Industrial Emissions Degradation of VOCs Organic Pollutants Purifier

Advanced Oxidation Process (AOPs), which has been heavily used in the field of organic waste purification, the principle is through the inclusion of 185nm and 254nm dual-spectrum UV lamp. 185nm UV can make oxygen (O_2) in the air into ozone (O_3), while in the 254nm light catalysis, it makes ozone (O_3) into a strong oxidant hydroxyl (· OH) , and then the organic pollutants into H_2O And CO_2.



Principles of photodegradation of organic pollutants

185nm vacuum UV light has a higher energy, while stimulating organic pollutants molecules can also make the air oxygen and water decomposition to produce strong oxidation of · OH, so that to achieve the degradation effect.

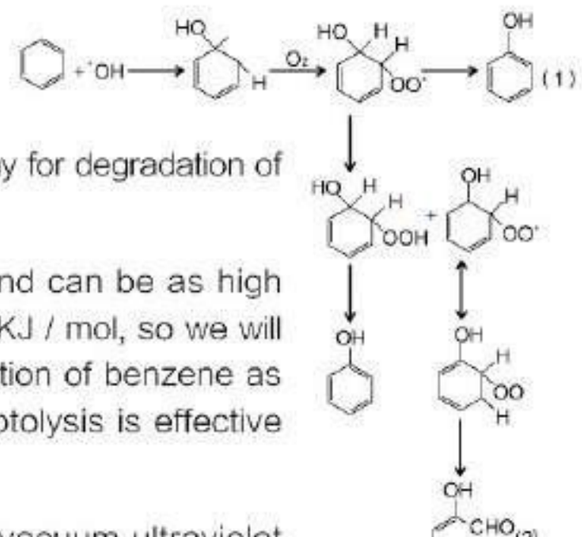
In the 185nm optical radiation, it will produce a variety of oxidizing substances, such as · OH, · O and O3, the production path is as follows:

$$3O_2 \xrightarrow{hc(185nm)} 2 \cdot O_3 \quad (1)$$

$$O_3 \xrightarrow{hc(254nm)} \cdot O + O_2 \quad (2)$$

$$\cdot O + H_2O \longrightarrow 2 \cdot OH \quad (3)$$

$$VOC + \cdot OH \longrightarrow H_2O + CO_2 \quad (4)$$



Possible pathway for degradation of benzene

π chemical bond can be as high as 2000-2800 KJ / mol, so we will be the degradation of benzene as a means of photolysis is effective markers.

In the case of vacuum ultraviolet radiation and O_3, benzene produces phenol and various intermediates, which are oxidized by free radical addition reaction and oxidation, and finally produce H_2O and CO_2.

The experimental results show that the degradation rate of benzene-containing pollutants can reach 90% under certain conditions. For example, the concentration is 348.2mg / m³.

Vacuum UV photolysis technology is simple to implement and easy to implement the operation, it is a powerful means of degrading organic pollutants.