CDG-13B Ultraviolet(UV) radiation

For weather automation applications

Features

- Designed on silicon-cell principle
- No moving parts, no maintenance, can work in any altitude• Strong corrosion resistant ability
- High sensitivity
- Low power consumption
- Light weight, long service life
- Used as sunshine duration sensor
- It has strong resistance to the interference of visible light or other common light sources, and can work stably in complex environments

CDG-13B UV Radiation Sensor is a precision instrument used to measure the atmosphere of the sun's ultraviolet radiation (UVA & UVB),supporting the product related information acquisition instrument use can provide public concern: the UV index, UV erythema measurement, on the health effects of the UV and UV special biology and chemistry, highly meteorology, industry, construction, medical attention, are widely used in the exposure caused erythema dose, integrated environment ecological effect, the study of climate change and ultraviolet radiation monitoring and forecast.

Typical installation locations

- Top of building
- Solar energy
- Open areas
- Outdoor locations

Design structure

It responds to ultraviolet radiation in a specific wavelength range (usually below 300nm), such as UVC band 185nm ~ 270nm, UVB band 270nm ~ 315nm, UVA band 315nm ~ 400nm, etc. Among them, the solar blind UV sensor also shields UVA and UVB, and only responds to UVC band UV. Visible blind UV sensors block visible light and respond only to ultraviolet light..

Easy installation

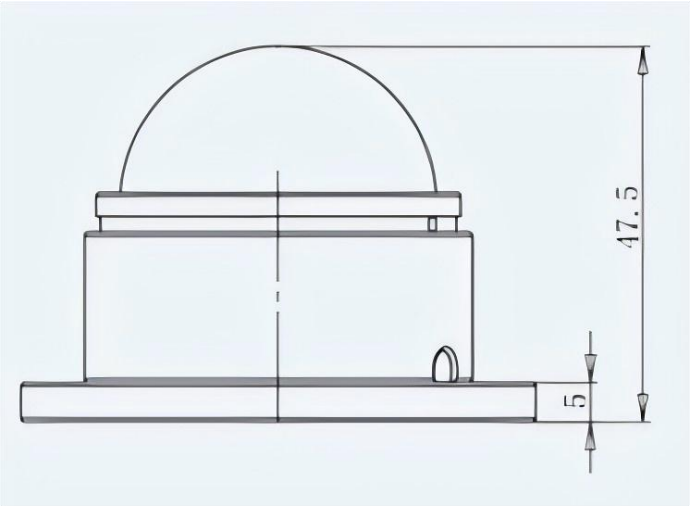
Open without shelter: It should be installed in an open area without shelter from tall buildings, trees, etc., to ensure that it can fully receive UV radiation. Sensors usually need to be mounted horizontally to ensure measurement accuracy. You can calibrate using a level to ensure that the sensor is mounted on a level surface。

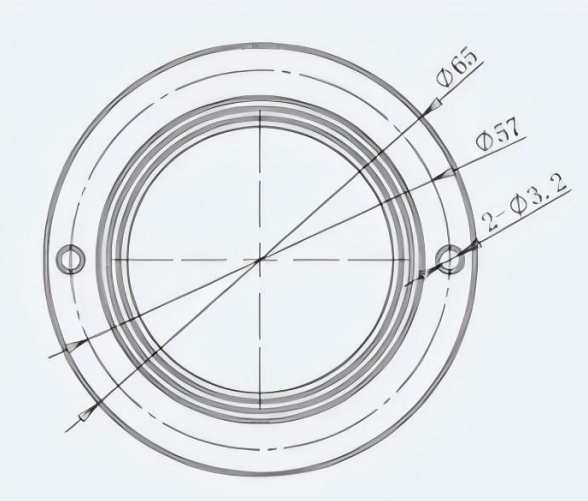
Reliable operation

Usually made of high-strength materials, such as aluminum alloy, can withstand a variety of harsh environmental conditions, such as wind and rain, sand, high temperature, low temperature and so on. The housing is well sealed to prevent moisture, dust and other impurities from entering the interior of the sensor, affecting its performance and life.It can accurately measure the intensity and spectral distribution of UV radiation. The sensor has high sensitivity, low noise and good linearity, which can maintain stable performance under different environmental conditions.

Dimensions & installing

CDG-13B connector dimension



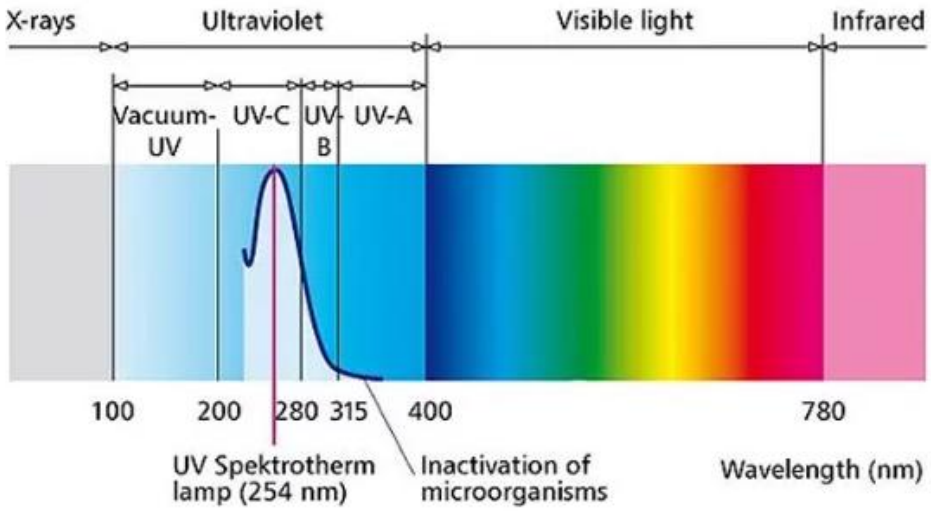


Movable pole bracket

2 -M4*20 outer hex screws

2 -M4 nuts,2-M4 flat mat,2-M4 Spring washers

Spectral response



Technical data

Measurement performance, models CDG-13B

Item	Specifcations
Spectral range	280～400nm
Supply	5V,12-24VDC
Range	0-100W/m²(UVAB-280～400nm),0-90W/m²(UVA-315～400nm),0-6W/m²(UVB-280～315nm)
Output	0-10V,0-5V,4-20mA,RS485
Accuracy	±5% rdg
Response time	≤1s
Cosine correction	≤±4%(Solar elevation angle=30°)
Non-linear	≤±3%
Temperature effect	±0.08%/℃
Stability	≤±2%/year
Operating temperature	-40℃-+85℃
Ingress protection	IP67
Weight(unpacked)	150g
Shell material	Aluminum alloy
Storage condition	10℃-60℃@20%-90%RH

Model number	Type	Output	Special features
CDF-10A	Wind speed	Pulses(PNP) RS485 4-20MA 0-5V	Three cup plastic wind speed
CDF-11A	Wind direction	RS485 4-20MA 0-5V	Plastic wind direction sensor
CDF-20B	Combined Wind Speed & Direction	RS485 4-20MA 0-5V 0-10V	Integrated wind speed and direction
CDF-21A	Ultrasonic Wind Speed & Direction	RS232/RS485(Modbus/NMEA-0183), Voltage(0-5V),Current(4-20mA) optional	Ultrasonic principle
CDW-33A	Atmospheric Temperature,Humidity & Pressure	RS485	Shelter installation
CDQ-T6A	Miniature Ultrasonic Automatic Weather	RS485	Wind speed & direction temp & humidity &pressure
CDY-12A	Economical Tipping Bucket Rainfall	Pulses(@10kΩ&0.01uF),RS485	Diameter :φ200mm, height: 271mm
CDG-10B	Solar Radiation	0-5V,4-20mA,RS485	Spectral range:300～1100nm
CDG-11B	Pyranometer	0-20mV,RS485	Spectral range:300～3000nm Class one
CDG-12B	PAR sensor	0-5V 4-20mA RS485	Spectral range:400～700nm
CDG-13B	Ultraviolet(UV) Radiation	0-5V 0-10V 4-20mA RS485	Spectral range:280～400nm
CDG-14A	Illuminance Sensor	0-5V 0-10V 4-20mA RS485	Spectral range:380～780nm
CDG-17B	Scattering Radiometer	RS485	Spectral range:280～3000nm

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