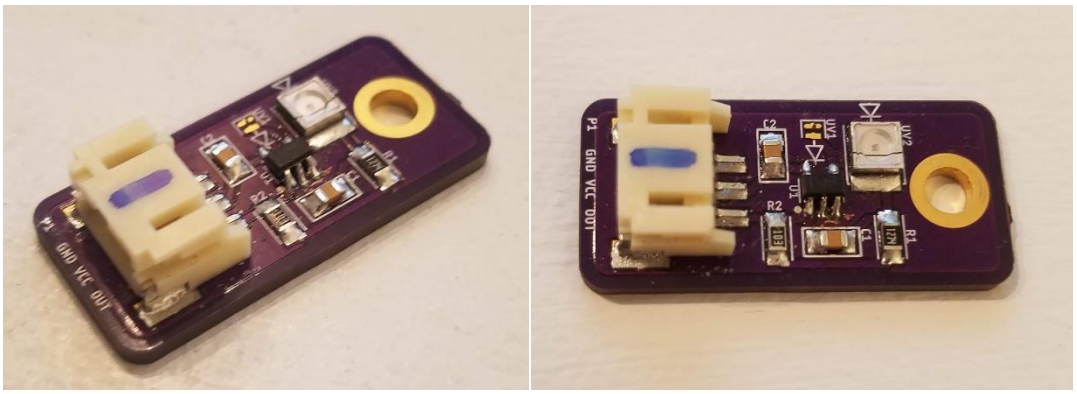
GUVC-S10GD-5V
UVC Light Sensing Module, 220-280 nm Germicidal Range



1. Features

- Pure UV-C (germicidal) detection on 220-280 nm bandwidth, with rejection of UVB, UVA, and visible wavelengths
- Aluminum Gallium Nitride based sensing element
- Precision CMOS transimpedance amplifier offers rail-to-rail performance
- Built in noise filtering
- Standard 3-pin PH connector interface
- Analog voltage output proportional to UVC intensity

2. Applications

- Sterilization lamp monitoring
- Pure UV-C monitoring
- Counterfeit UV product detection

3. Description

This analog light sensing module uses a photodiode to detect 220-280 nm light (exclusive UVC). The peak detection wavelength is 254 nm. A CMOS transimpedance amplifier is used to convert the low-level photocurrent to a stable voltage. With the input of 2.2 to 5.5 VDC the module outputs a voltage that is proportional to the UVC light on the sensing element. 2 VDC is equivalent to 40 mW/cm^2. The maximum output is 5 VDC at 100 mW/cm^2 UVC intensity. The output voltage is limited to the level of the input voltage.

4. Pin Configuration

The module interfaces using a 3 position PH connector. The recommended connector is JST P/N PHR-3.

- Pin 1: Ground (GND)
- Pin 2: Voltage input (VCC)
- Pin 3: Analog output (OUT)

5. Specifications

Absolute Maximum Ratings

Parameter	Symbol	MIN	MAX	UNIT
Supply Voltage	VCC	2.2	5.5	V
Operating Temperature	T_A	-30	85	C
Storage Temperature	T_{stg}	-40	90	C
Optical Source Power Range	P_{opt}	0.01	100	mW/cm^2
Output Short Circuit			Continuous	mA

6. Application and Implementation

The module is designed to interface directly to an ADC. The robust analog filtering means that software filtering is not required. After converting the ADC reading to voltage (specific to ADC resolution), the UVC optical power in mW/cm^2 is found by multiplying the voltage by 20.

7. Dimensions

- Length: 30 mm (1.181 in)
- Width: 14 mm (0.551 in)
- Height: 8 mm (0.315 in) MAX