

UV-C Sensor Module

GUVX-T20GH



Description

GUVX-T20GH is made in TO-5 housing with built-in amplifier and quartz glass.

This package is specialized in amplifying the small photocurrent from the chip to voltage signal in order to fit input signal of analog-to-digital converter(ADC). This package is also available to adjust the output voltage range by gain control.

GUVX-T20GH can be equipped with an integrated amplifier and is perfectly suited for each UV radiation region (UVA/UVB/UVC). The strong points of this products are high responsivity, hermetic sealing, small dimension and low-cost structure for both of industrial and consumer applications.

Features

- Adaptive single supply voltage range to voltage of ADC
- High Sensitivity and Good Solar Blindness
- Small and Compact Size

Applications

- Low-Intensity measurement
- Sterilization (UV-C) lamp monitoring
- Water purification



Fig. 1 Overview

Absolute Maximum Ratings

Exceeding these limits may decrease lifetime or destroy the board or parts of it immediately.

Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Storage Temperature	T _{st}	-40		90		
Operating Temperature	T _{op}	-30		85		
Supply Voltage	V _{cc}			5.5	V	
Soldering Temperature	T _{sol}			260		
Soldering Time	T _{sol,t}			10	sec.	

Electrical Characteristic (at 25)

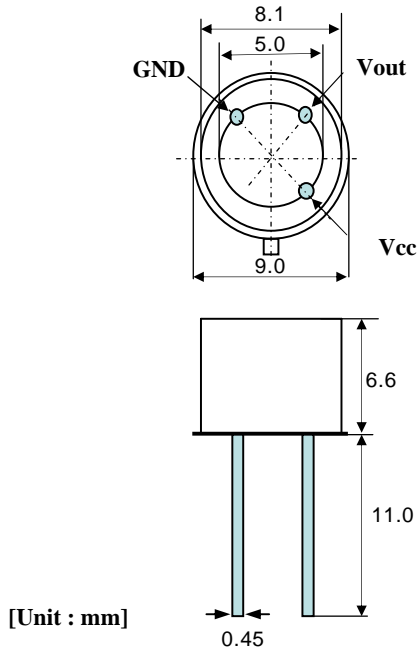
Parameter	Symbol	Value			Unit	Remark
		Min.	Typ.	Max.		
Spectral Response		210		280	nm	
Supply Voltage	V _{cc}	1.8	-	5.5		DC
Supply Current	I _Q	30	50	70	μA	
Transimpedance Gain	G		10 ⁷		A/V	
Input Current	I _{in}	1			pA	
Output Voltage	V _{out}			V _{cc} -0.3	V	
Output Offset Voltage	V _{off}			5	mV	
Response Time	T		3		ms	

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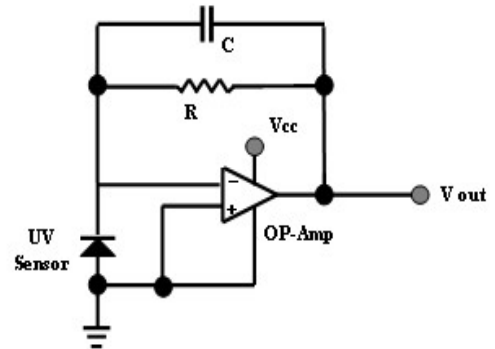
GUVC-T20GH



Physical Dimentions

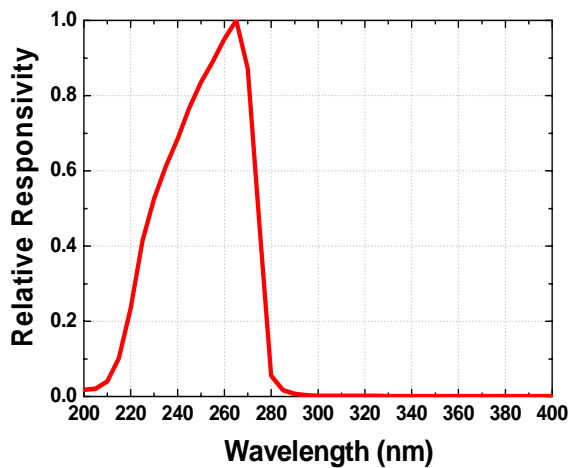


Application Circuit

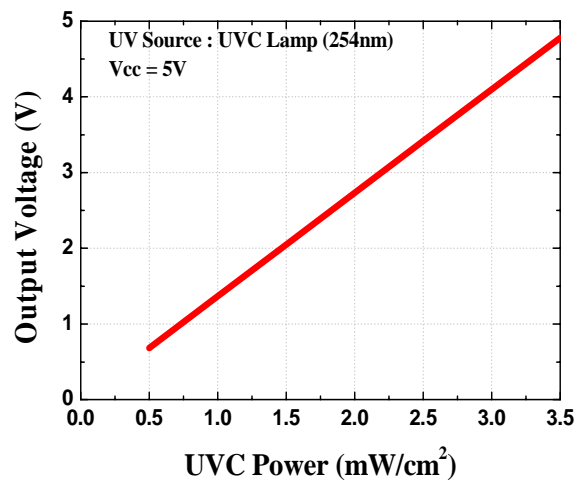


Optical Characteristics of GUVC-T20GH

Typical Spectral Response



UV Power vs. Output Voltage



Notice

- Please protect the sensitive devices on the board against electrostatic discharge(ESD) by using anti-electric wrist band, ground connection and so on. Without any ESD protective action, the warranty is voided.