Reflective UV Sensor

GUVF-P12MD

Features

Light Emission Wavelength - 365nm

Emitting part- Visible range absorbing filter

Receiving part - UV absorbing filter

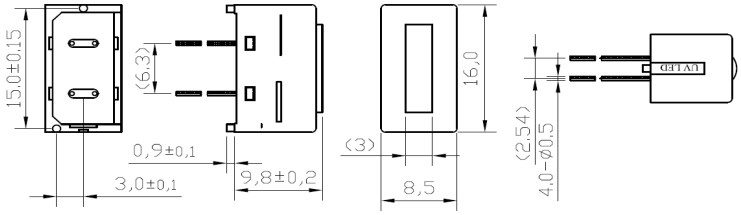
Responsing to fluorescence ink

Applications

Money detecting

Counterfeits bill detecting

Outline Diagrams



1. Emitting Part

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Remark
Forward Current	I_F		25	mA	
Pulse Forward Current	I_{FP}		80	mA	
Allowed Reverse Voltage	I_R		85	mA	
Power Dissipation	P_D		100	mW	
Operation Temperature	T_{opr}	-30	85	℃	
Storage Temperature	T_{stg}	-40	100	℃	
Soldering Temperature *	T_{sol}		330	℃	within 2 sec.

* For Max.2 seconds at the position of 3㎜ from the package.

* At PWB Flow Soldering unsupported.

Characteristics (at 25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Forward Voltage	V_F	-	(3.4)	4.0	V	I_F=10[mA]
Peak Wavelength * *	λ_P	360	365	370	nm	I_F=10[mA]

* * Peak Wavelength Measurement allowance is ±3㎚

2. Receiving Part

Absolute Maximum Ratings

Parameter	Symbol	Min.	Max.	Unit	Remark
Reverse Voltage	I_R		30	V	
Operation Temperature	T_{opr}	-25	90	℃	
Storage Temperature	T_{stg}	-30	100	℃	
Soldering Temperature *	T_{sol}		330	℃	within 2 sec.

* For Max. 2 seconds at the position of 3㎜ from the package.

* At PWB Flow Soldering unsupported.

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Characteristics (at 25℃)

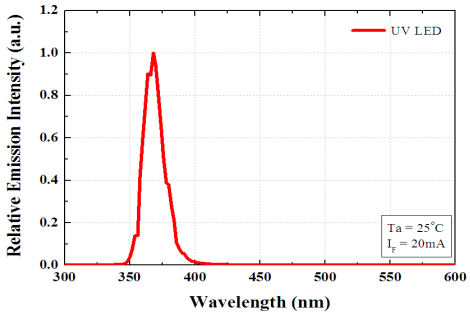
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Short circuit current * *	Isc	40	160	180	nA	I_F=10mA
Current leak current * * *	I_{LEAK}			20	nA	I_F=10mA
Dark current	Id			10.0	nA	V_R=10V
Capacitance	Ct		50		pF	V_R=0V, f=1MHz
Temperature coefficient of V_{OC}	αt		-2.2		mV/℃	
Temperature coefficient of I_{SC}	βt		0.18		%/℃	
Spectral sensitivity	λ	450		1,050	nm	
Peak wavelength	λ_P		880		nm	
Half angle	Δθ		±60		deg.	

* * d=2.0mm, 90% Reflective paper

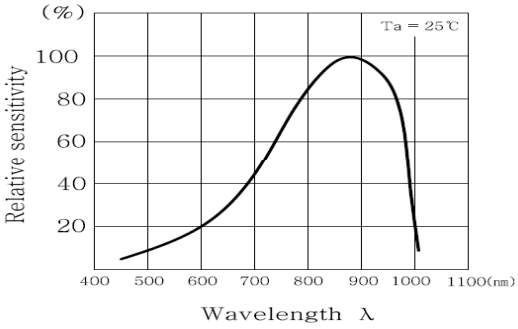
* * * I_{LEAK} @ No object, in dark

※ Anode is connected to case.

3. Characteristic spectrums



UV LED emission intensity



Responsivity of recieving sensor

4. Measurement conditions

- 1 cycle of test should be completed within 5 minutes.
- Left machine power-off at least 30 minute then for testing.
- To use the wordings side of Dummy.

* This spec. sheet applied to GUVF-P12MD since Aegust 20, 2012

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