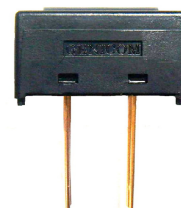


Reflective UV Sensor

GUVF-P12MD

Features

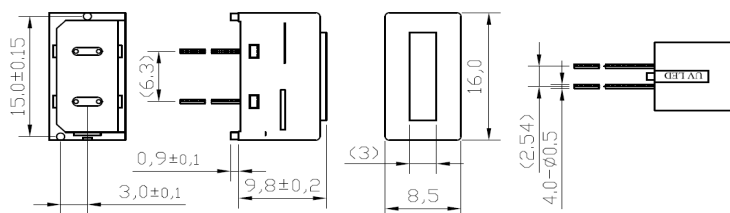
- Light Emission Wavelength - 365nm
- Emitting part- Visible range absorbing filter
- Receiving part - UV absorbing filter
- Responding to fluorescence ink



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	°C	
Storage Temperature	T_{stg}	-40	100	°C	
Soldering Temperature*	T_{sol}		330	°C	within 2 sec.

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

* At PWB Flow Soldering unsupported.

Characteristics (at 25 °C)

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 $\pm 3nm$

2. Receiving Part

Absolute Maximum Ratings

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

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

* At PWB Flow Soldering unsupported.

Characteristics (at 25 °C)

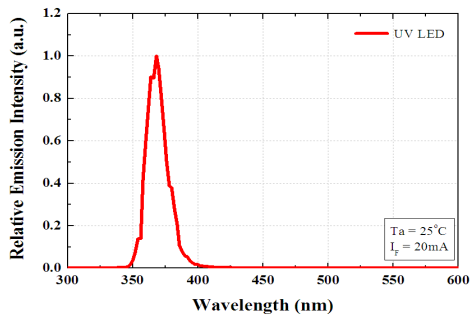
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Short circuit current **	I _{sc}	40	160	180	nA	I _F =10mA
Current leak current ***	I _{LEAK}			20	nA	I _F =10mA
Dark current	I _d			10.0	nA	V _R =10V
Capacitance	C _t		50		pF	V _R =0V, f=1MHz
Temperature coefficient of V _{OC}	α _t		-2.2		mV/°C	
Temperature coefficient of I _{SC}	β _t		0.18		%/°C	
Spectral sensitivity	λ	450		1,050	nm	
Peak wavelength	λ _P		880		nm	
Half angle	Δθ		±60		deg.	

** d=2.0mm, 90% Reflective paper

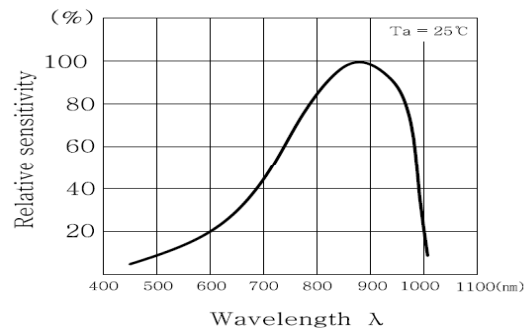
*** I_{LEAK}@ No object, in dark

※ Anode is connected to case.

3. Characteristic spectrums



UV LED emission intensity



Responsivity of receiving 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 August 20, 2012