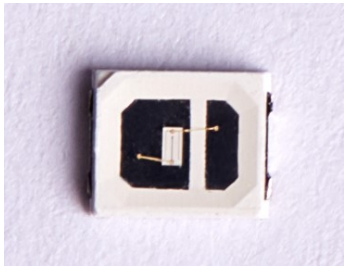
GaN-based UV photodiode Model：GS-ABC-2835M

General Features:



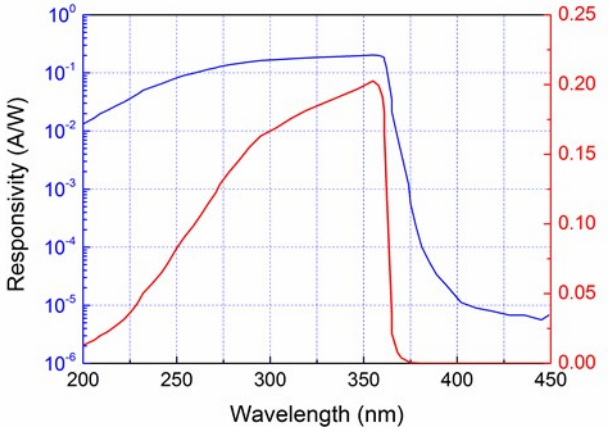
- UVA+UVB+UVC photodiode
- Photovoltaic mode operation
- SMD 2835 package
- Good visible blindness
- High responsivity and low dark current

Applications: UV index monitoring, UV radiation dose measurement, flame detection

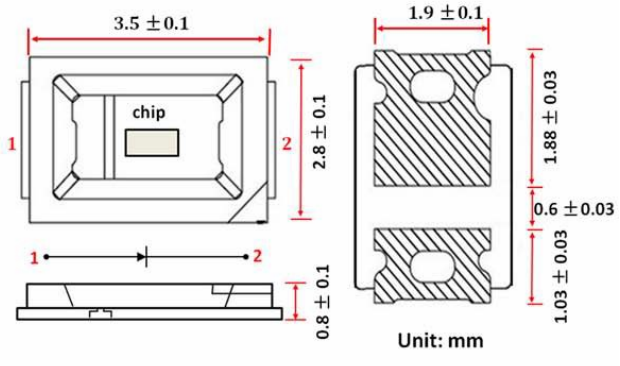
Specifications:

Parameters	Symbol	Value	Unit
Maximum ratings			
Operation temperature range	T_{opt}	-25-85	°C
Storage temperature range	T_{sto}	-40-85	°C
Soldering temperature (3 s)	T_{sol}	260	°C
Reverse voltage	$V_{r\text{-}max}$	-10	V
General characteristics (25 °C)			
Chip size	A	0.22	mm^2
Dark current (V_r = -1 V)	I_d	<1	nA
Temperature coefficient	T_c	-0.02	%/ °C
Capacitance (at 0 V and 1 MHz)	C_p	3.4	pF
Spectral response characteristics (25 °C)			
Wavelength of peak responsivity	λ_p	355	nm
Peak responsivity (at 355 nm)	R_{max}	0.20	A/W
Spectral response range ($R=0.1\times R_{max}$)	-	210-370	nm
UV-visible rejection ratio ($R_{max}/R_{400\ nm}$)	-	$>10^4$	-

Spectral response

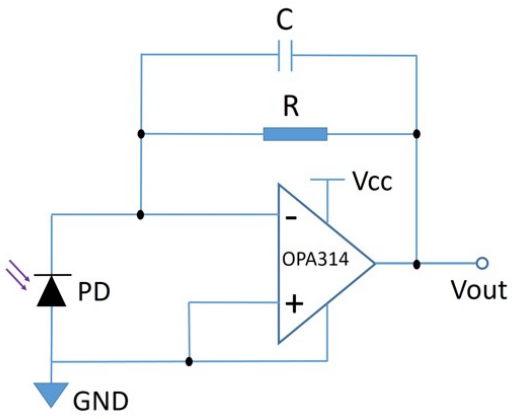


Package dimensions



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Application circuit:



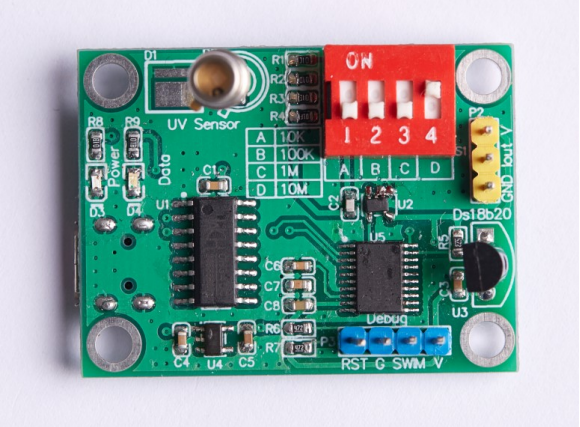
V_{out} (V) = I_{ph} (A) × R (Ω)

I_{ph} (A) = R_λ(A/W) × A (cm^2) × P (W/cm^2)

where A is chip area, P is incident UV power density and R_λ is responsivity at specific wavelength.

Evaluation circuit board:

A small multifunctional amplifier board for developers to simplify and support application development can be separately provided. The evaluation board with one amplifier channel supports both SMD- and TO-type packaged UV photodiodes supplied by GaNo Opto. Users could select one of the two mounting ports for UV photodiode evaluation, while both ports should not be used at the same time.



The evaluation board supports measurement range adjustment function via a dip switch. Different setting of the dip switch corresponds to different load resistance value, which determines the amplification magnitude of the signal processing circuit. A temperature sensor on board is used for embedded temperature compensation.

The UV photodiode evaluation board has both analog and digital output interface. Analog interface provides voltage signal as a function of UV illumination intensity, while digital interface provides serial communication to PC with direct digital output. A backside micro-USB port provides digital interface to PC with USB cable connection. Users could use serial communication host software in PC to receive direct measurement data from the evaluation board.

For ordering this evaluation board, please visit http://www.gano-opto.com, where the application note of this board, its host software as well as information about GaNo Opto's UV photodiodes can be found.

Note: The board is shipped without any photodiodes.