

APDS-9007

Ambient Light Photo Sensor with Logarithmic Current Output



Data Sheet

Description

The APDS-9007 is an analog current output Ambient Light Photo Sensor, packaged in a miniature chipLED lead-free surface mount package.

This device provides a Logarithmic response over a wide dynamic range of 3 lux to 70K lux and has a low sensitivity variation across various light sources. It is well suited for applications that operates under high ambient brightness.

Application Support Information

The Application Engineering Group is available to assist you with the application design associated with APDS-9007 ambient light photo sensor module. You can contact them through your local sales representatives for additional details.

Features

- Excellent responsivity -
Close responsivity to the human eye
- Miniature ChipLED Leadfree surface-mount package
 - Height – 0.8 mm
 - Length – 2.4 mm
 - Width – 2.0 mm
- Low sensitivity variation across various light sources
- Operating temperature : -40°C to 85°C
- Vcc supply 2 to 3.6V
- Lead-free package with RoHS compliance
- Photo current response to wide dynamic range of 3 lux to 70K lux

Applications

- Detection of ambient light to control display backlighting
 - Mobile devices – Mobile phones, PDAs
 - Computing devices – Notebooks, Webpads
 - Consumer devices – TVs, Video Cameras, Digital Still Camera
- Automatic Residential and Commercial Lighting Management
- Electronic Signs and Signals

Ordering Information

Part Number	Packaging Type	Package	Quantity
APDS-9007-020	Tape and Reel	6-pins Chiplid package	2500

Typical Application Circuit

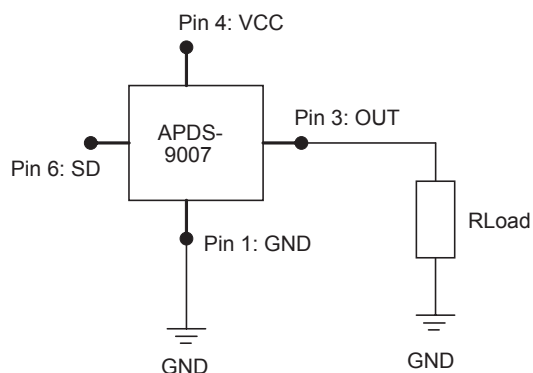


Figure 1. Typical application circuit for APDS-9007 (R_{Load} = 27 K Ohm)

I/O Pins Configuration Table

Pin	Symbol	Description
1	Gnd	Ground
2	NC *	No Connect
3	Out	Output
4	Vcc	Supply Voltage
5	NC *	No Connect
6	SD	Shutdown (Active High)

Absolute Maximum Ratings

For implementations where case to ambient thermal resistance is ± 50 °C /W

Parameter	Symbol	Min.	Max.	Units
Storage Temperature	T _S	-40	85	°C
Supply Voltage	V _{CC}	0	3.6	V

Recommended Operating Conditions

Parameter	Symbol	Min.	Max.	Units	Conditions
Operating Temperature	T _A	-40	85	°C	
Supply Voltage	V _{CC}	2	3.6	V	

CAUTION: It is advised that normal static precautions be taken in handling and assembly of this component to prevent damage and/or degradation which may be induced by ESD