

## Data Sheet



### Description

The APDS-9006 is a low cost analog-output ambient light photo sensor in a Reverse Mount, 4 pin miniature chipLED lead free surface mount package, with temperature and voltage compensation features. It consists of a spectrally suited photo sensor, which provides excellent responsivity that is close to the response of the human eyes, as shown in figure 2.

The APDS-9006 is ideal for applications in which the measurement of ambient light is used to control display backlighting such as in Note-book, mobile phone, PDA applications that draw heavy current from display backlighting will benefit from incorporating these photo sensor products in their designs by reducing power consumption significantly. Other applications include ESS, Automatic Residential and Commercial Lighting Management.

### Features

- Excellent responsivity which peaks in the human luminosity curve, close responsivity to the human eye
- ChipLED surface-mount package – Reverse Mounting
  - Height – 1.10mm
  - Width – 3.20mm
  - Depth – 1.60mm
- Good output linearity across wide illumination range
- Low sensitivity variation across various light sources
- Stable performance over temperature and voltage
- Operating temperature, -40°C to 85°C
- Vcc supply 2.4 to 5.5V
- Lead-free package

### 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 Cameras
- Automatic Residential and Commercial Lighting Management
- Electronic Signs and Signals

## Application Support Information

The Application Engineering Group is available to assist you with the application design associated with APDS-9006 ambient light photo sensor module. You can contact them through your local sales representatives for additional details.

## Ordering Information

Part Number	Packaging Type	Package	Quantity
APDS-9006-020	Tape and Reel	4-pins Chiplid package	2500

## Typical Application Circuit

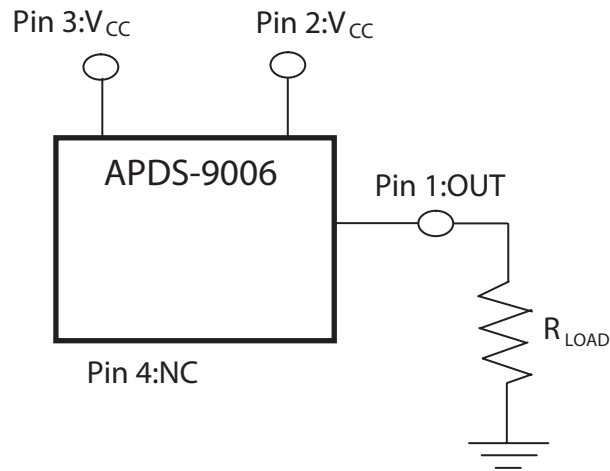


Figure 1. Typical application circuit for APDS-9006

Notes : PIN 2 and PIN 3 Vcc need to be externally shorted.

## Figure 1 Table

Component	Recommended Application Circuit Component
$R_{LOAD}$	5k ohm

Note 1 : Refer to fig. 11 Vout vs Lux graph

## I/O Pins Configuration Table

Pin	Symbol	Description
1	OUT	OUT
2	VCC	VCC
3	VCC	VCC
4	NC	No Connect

## Relative Spectral Response Vs. Wavelength

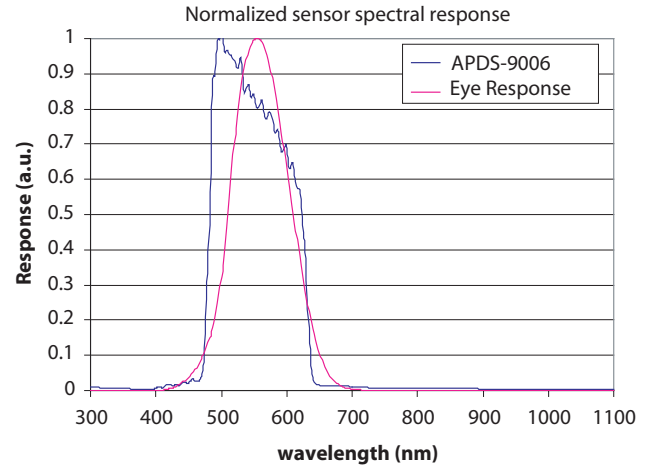


Figure 2. Relative Spectral Response Vs. Wavelength