



## APDS-9700 Signal Conditioning IC for Optical Proximity Sensors

### General Description:

APDS-9700 is a signal conditioning IC that enhances the performance and robustness of the optical sensors used for proximity or object detection. APDS-9700 is a single chip solution that consists of a LED driver circuit, sunlight cancellation and built-in LED stuck high protection circuit integrated into a single chip. APDS-9700 has artificial light immunity and is also operational under the sun. Design flexibility is optimized as APDS-9700 can be paired up with an integrated proximity sensor or discrete pair solution.



APDS-9700 can be disabled to maximize power savings and battery life in applications such as portable or battery-operated devices. The LED current of the optical proximity sensors can be configured to different levels using a limiting resistor at the LEDA pin. APDS-9700 also provides user flexibility to control the pulse width with suitable burst rate, duty cycle and frequency that can reduce power consumption. These low power consumption features makes it also ideal for low power mobile and handheld devices.

APDS-9700 is capable of operating at voltage supply ranging from 2.4 V to 3.6 V. APDS-9700 has two separate output pins for analog and digital outputs. This provides flexibility to use either the analog or digital output (or both) depending on the requirements of the application.

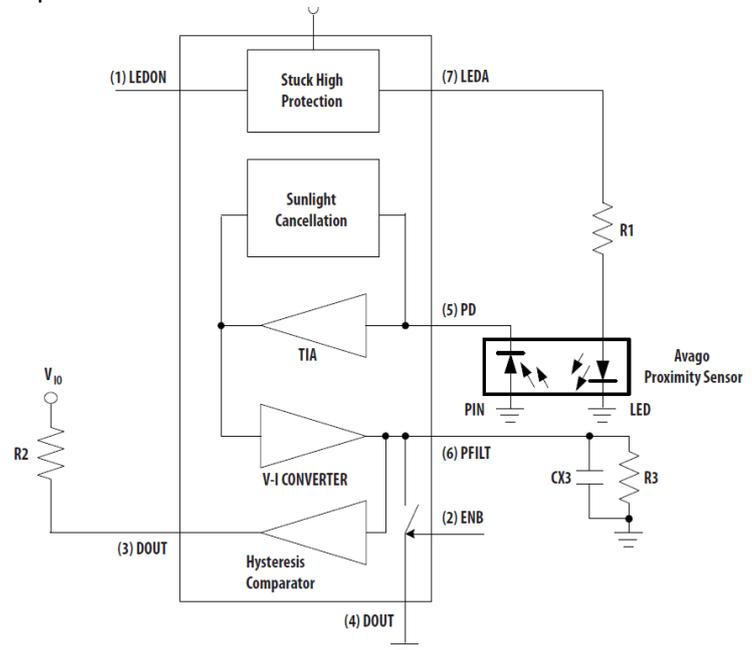
### Key Features:

- Low power consumption
  - LED pulse width control
  - Low shut down current
  - External LED drive-current control
- Complete shutdown mode
- Supply voltage : 2.4 V to 3.6 V
- Operational in sunlight conditions up to 100klux(withHSDL-9100)
- Artificial light immunity
- Analog & Digital output available
  - Built in hysteresis comparator for digital output

- LED stuck High protection
- Wide bandwidth Trans-impedance amplifier
- External capacitor and resistor for integration and gain controls
- Flexibility to enhance detection distance up to 200mm with HSDL-9100 or further with external discretes pair
- Small 2mm x 2mm QFN 8-pin package
- Design flexibility to pair with Avago Proximity Sensors
- or discretes pair solution
- Lead-free & ROHS Compliant

### Applications:

- PDA and mobile phones
- Portable and Handheld devices
- Personal Computers/Notebooks
- Amusement/Games/Vending Machines
- Industrial Automation
- Contactless Switches
- Sanitary Automation



### Related Products Information:

Mfr Part #	Farnell #	Newark #	Description
APDS-9700-020	1634725	77M9971	Signal Conditioning IC for Optical Proximity Sensors-QFN package