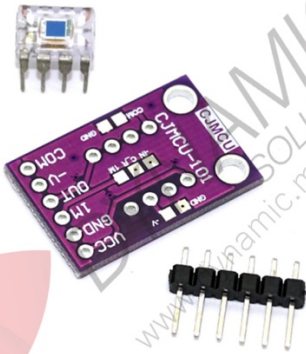


# Analog Light Intensity Sensor OPT101



## Features:

The OPT101 is a precision analog light intensity sensor with a built-in photodiode and transimpedance amplifier. This integration eliminates leakage current errors and noise issues found in discrete designs. The sensor operates on a single 2.7–36V supply with only 120  $\mu$ A quiescent current, providing a linear analog output proportional to light intensity. With a wide spectral response (300–1000 nm), 0.45 A/W responsivity, and 14 kHz bandwidth, it is well-suited for medical instruments, laboratory equipment, smoke detectors, barcode scanners, and proximity sensors.

Specifications	
Model	OPT101
Supply Voltage	2.7V ~ 36V DC
Quiescent Current	120 $\mu$ A
Photodiode Area	5.2 mm <sup>2</sup>
Responsivity	0.45 A/W (650 nm)
Output Voltage Ratio	0.45 V/ $\mu$ W
Analog Output Range	V <sub>s</sub> – 1.15V
Bandwidth	14 kHz
Operating Temperature	0°C ~ 70°C
Package	8-pin PDIP / SOP
Usage	Light detection in medical, lab, proximity sensors, barcode scanners, automation systems

## Pinouts:

Pin Name	Type	Description
VCC	Power	Positive supply input (2.7V ~ 36V)
GND	Power	Ground connection
1M	Analog	Internal 1M $\Omega$ feedback resistor input
OUT	Analog	Amplifier output (light intensity signal)
-V	Power	Negative Supply
COM	Analog	Photodiode positive, typically connected to GND

