



Industry's Lowest-Power Ambient Light Sensor with ADC

MAX9635

General Description

The MAX9635 ambient light sensor features an I2C digital output that is ideal for a number of portable applications such as smartphones, notebooks, and industrial sensors. At less than 1 μ A operating current, it is the lowest power ambient light sensor in the industry and features an ultra-wide 22-bit dynamic range from 0.045 lux to 188,000 lux.

Low-light operation allows easy operation in dark glass applications.

The on-chip photodiode's spectral response is optimized to mimic the human eye's perception of ambient light and incorporates IR and UV blocking capability. The adaptive gain block automatically selects the correct lux range to optimize the counts/lux.

The IC is designed to operate from a 1.7V to 3.6V supply voltage range and consumes only 0.65 μ A in full operation. It is available in a small, 2mm x 2mm x 0.6mm UTDFN-Opto package.

Applications

- Tablet PCs/Notebook Computers
- TVs/Projectors/Displays
- Digital Lighting Management
- Portable Devices
- Cellular Phones/Smartphones
- Security Systems

Features

- ◆ Wide 0.045 Lux to 188,000 Lux Range
- ◆ Small, 2mm x 2mm x 0.6mm UTDFN-Opto
- ◆ VCC = 1.7V to 3.6V
- ◆ ICC = 0.65 μ A Operating Current
- ◆ -40°C to +85°C Temperature Range

Ordering Information

PART	PIN-PACKAGE	TEMP RANGE
MAX9635EDT+	6 UTDFN-Opto-EP*	-40°C to +85°C

+ Denotes a lead(Pb)-free/RoHS-compliant package.

*EP = Exposed pad.

Block Diagram

