



## 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 1µA 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 0.65µA 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 = 0.65µA 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

