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MAX44000*

Integrated Ambient Light and Proximity Sensor

Industry's Lowest Power Integrated Ambient Light and Proximity Sensor Provides Reliable Measurements

*Future Product

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Status

Part Number Status

MAX44000 Active: In Production. See [Ordering Information](#) for details.

Description

The MAX44000 combines a wide-dynamic range ambient light sensor with an integrated infrared proximity sensor. This sensor IC is an ideal solution for touch-screen portable devices.

Its ambient sensor has the ability to make wide dynamic range (0.03 lux to 65,535 lux) measurements. The on-chip IR proximity detector is matched with an integrated IR LED transmitter to improve noise immunity. All readings are available through an I²C communication bus. A programmable interrupt pin minimizes the need to poll the device for data, freeing up microcontroller resources, reducing system software overhead and, ultimately, reducing power consumption.

The IC is designed to drive an external IR LED and can operate from a V_{DD} of 1.7V to 3.6V. It consumes just 5µA operating current when only the ambient light sensor is enabled, and 7µA when the proximity receiver and driver are enabled. In ambient plus proximity mode, it consumes as low as 11µA, including external IR LED current.

Data Sheet

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Key Features

- V_{DD} = 1.7V to 3.6V
- Low-Power Operation
 - 5µA in Ambient Mode
 - 7µA in Proximity Mode
 - 11µA in Ambient Plus Proximity Mode, Including IR LED Current
- Excellent Light-Source Matching
- Programmable Green- and IR-Channel Gains
- Integrated Single-Pulse IR LED Driver
 - 10mA to 110mA Programmable Range
 - Internal Ambient Cancellation
- -40°C to +105°C Temperature Range
- Tiny, 2mm x 2mm x 0.6mm UTDFN-Opto Package

Application Notes

Application Note 5033 [The Importance of Being Earnest \(About Reading from an ADC on the I²C Interface\)](#)

Design Guides

[Amplifiers and Comparators \(PDF\)](#)

Reliability Reports

Show FIT data for:

Request Reliability Report for:

Software/Models

none

Ordering Information

Notes:

1. Other options and links for purchasing parts are listed at: <http://www.maxim-ic.com/sales>.
2. **Didn't Find What You Need?** Ask our applications engineers. Expert assistance in finding parts, usually within one business day.
3. Part number suffixes: T or T&R = tape and reel; + = RoHS/lead-free; # = RoHS/lead-exempt; -D = drypack; -U/+U on DS parts = cut tape. More: See [Full Data Sheet](#) or [Maxim Product Naming Conventions](#).
4. * Some packages have variations, listed on the drawing. "PkgCode/Variation" tells which variation the product uses. Note that "+", "#", "-" in the part number suffix describes RoHS status. Package drawings may show a different suffix character.

Filters

Part Number: Package: Any Temperature: Any ☐ Tape and Reel

MAX44000	Free Sample	Buy	Status	Recommended Replacement	Package: TYPE PINS FOOTPRINT DRAWING CODE/VAR *	Temp	RoHS/Lead-Free? Materials Analysis
MAX44000EVKIT+	Buy	Active			KIT; Land Pattern: Not Available		See data sheet
MAX44000EVKIT#	Buy	Active			KIT; Land Pattern: Not Available		See data sheet
MAX44000EDT+T	N/A	No Longer Available	MAX44000		OTDFN 2x2;6 pin;TDFN; Outline Drawing: 21-0490 (PDF) Land Pattern: 90-0344 (PDF) Use pkgcode/variation: D622N+2*	-40°C to +85°C	See data sheet
MAX44000GDT+T	Buy	Active			OTDFN 2x2;6 pin;TDFN; Outline Drawing: 21-0490 (PDF) Land Pattern: 90-0344 (PDF) Use pkgcode/variation: D622N+2*	-40°C to +105°C	See data sheet

Similar Products by Function

MAX44007	Low-Power Digital Ambient Light Sensor with Enhanced Sensitivity
MAX44009	Industry's Lowest-Power Ambient Light Sensor with ADC

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