

Product Overview

NOA3315W: Digital Proximity Sensor with Dual Ambient Light

For complete documentation, see the data sheet.

The NOA3315 combines an advanced digital proximity sensor and LED driver with dual ambient light sensors (ALS) and tri-mode I2C interface with interrupt capability in an integrated monolithic device. Multiple power management features and very low active sensing power consumption directly address the power requirements of battery operated mobile phones and mobile internet devices.

The proximity sensor measures reflected light intensity with a high degree of precision and excellent ambient light rejection. The NOA3315 enables a proximity sensor system with a 16:1 programmable LED drive current range and a 30 dB overall proximity detection range. The dual ambient light sensors include one with a photopic light filter and one with no filter. Both have dark current compensation and high sensitivity eliminating inaccurate light level detection and insuring proper backlight control even in the presence of dark cover glass.

The NOA3315 is ideal for improving the user experience by enhancing the screen interface with the ability to measure distance for near/far detection in real time and the ability to respond to ambient lighting conditions to control display backlight intensity.

Features

- Proximity Sensor, LED Driver and Dual ALS in One Device
- Very Low Power Consumption
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant
- Proximity detection distance threshold I2C programmable with 12-bit resolution and eight integration time ranges (16-bit effective resolution)
- Effective for Measuring Distances up to 200 mm and Beyond
- Excellent IR and Ambient Light Rejection including Sunlight (up to 50K lux) and CFL Interference
- Programmable LED Drive Current from 10 mA to 160 mA in 5 mA Steps, no External Resistor Required
- User Programmable LED Pulse Frequency
- Dual ALS senses ambient light and provides 16-bit output counts on the I2C bus directly proportional to the ambient light intensity
- Photopic Spectral Response of ALS1 Nearly Matches Human Eye

For more features, see the data sheet

Applications

- Senses human presence in terms of distance and senses ambient light conditions, saving display power in applications such as:
 - ◆ Smart phones, mobile internet devices, MP3 players, GPS
 - ◆ Mobile device displays and backlit keypads

End Products

- Smart phones, mobile internet devices, MP3 players, GPS
- Mobile device displays and backlit keypads

For more information please contact your local sales support at www.onsemi.com.

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