DYNA IMAGE CORPORATION 敦宏科技

AP3216D
3-in-1 Digital ALS+PS+IRLED Module

Descriptions

The AP3216D is an integrated ALS & PS module that includes a digital ambient light sensor [ALS], a proximity sensor [PS], and an IR LED in a single package.

This device provides a multiple gain function with linear response over a dynamic range 400/1573/6357/25559 and is well suited to applications under clear glass or darkened glass.
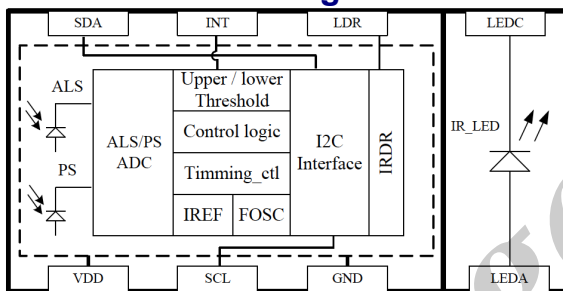
The proximity function is targeted specifically towards near field application and detects external object with simple configurable zone controlled by registers. With multiple proximity gain control, multiple IR LED current control and 10-bit ADC output, this device is designed specially to fix low reflection objects, such as black hair.

The device supports an interrupt feature to improve system efficiency and several features that help to minimize the occurrence of false triggering. Through internal calibration and CMOS design, the AP3216D is designed to minimize device-to-device variations for ease of manufacturability.

Function Block Diagram

Ordering Information

Part No.	Packing Type	Package	Quantity
AP3216D	Tape and Reel (MSL3)	8Ld Chipled 3.94x2.36x1.35mm	2,500

Features

- I^2C interface (FS mode at 400k Hz)
- Mode Select: ALS, PS+IR, ALS+PS+IR, PD, ALS once, SW Reset, PS+IR once and ALS+PS+IR once.
- Built-in temperature compensation circuit
- Wide operating temperature range (-30°C to +80°C)
- Ambient Light Photo Sensor
  - 16-bit effective linear output (0~65535)
  - 4 user selectable dynamic range
  - Anti-flicker rejection (reject 50/60Hz)
  - High sensitivity @ darkened glass
  - Window loss compensation
- Proximity Detector
  - 10 bit effective linear output (0~1023)
  - 4 programmable IR LED current output
  - High ambient light suppression
  - Cross talk compensation
- Form factor 3.94mm x 2.36mm x 1.35mm
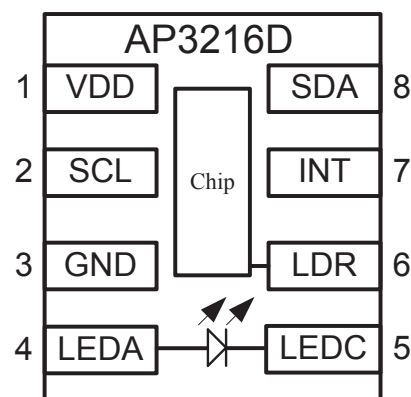- RoHS compliant

Applications

- Mobile phone, Pad
- Personal Navigation Device
- Notebook/Ultrabook
- LCD/PDP TV backlight systems
- Digital Photo Frame
- Applications with Capacitive Touch Panel

Pin Description

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