

## Descriptions

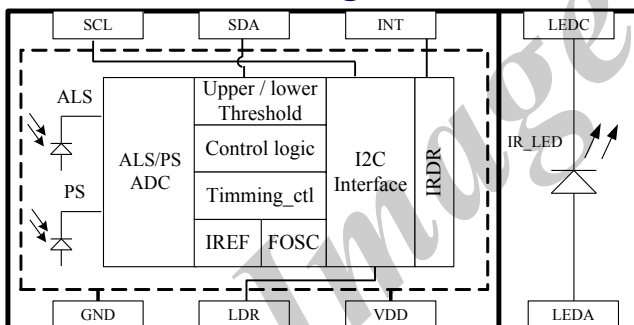
AP3425 is a module integrated with a digital ambient light sensor [ALS], a proximity sensor [PS], and an IR LED in a single package.

This device provides a multiple gain ALS function with linear response over various dynamic ranges 536 / 2144 / 8576 / 34304 Lux and is well suited for applications under clear or darkened glass.

The proximity function is specifically targeted 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 AP3425 is designed to minimize device-to-device variations for ease of manufacturability.

## Function Block Diagram



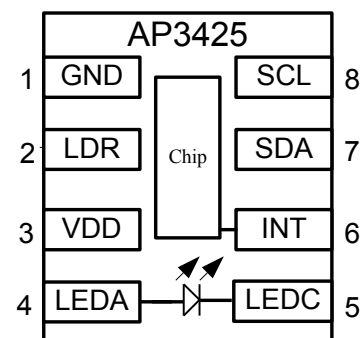
## Features

- I<sup>2</sup>C interface (Fast Speed mode at 400k Hz)
- Mode Select: Ambient Light Sensor (ALS), ALS+Proximity Sensor (PS)+IR, Power Down (PD), ALS once, Soft Reset.
- 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 at 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
  - Paired with 940nm IR LED to avoid red light blinding
- Heartbeat Sensor (Optional)
- Form factor 4.0mm x 2.0 mm x 1.1 mm
- RoHS compliant

## Applications

- Smart phone, Tablet PC, Wearable
- Personal Navigation Device
- Notebook/Ultrabook
- LCD/PDP TV backlight systems
- Digital Photo Frame
- Applications with Capacitive Touch Panel
- Heartbeat Sensor (Optional)

## Pin Description



## Ordering Information

Part No.	Packing Type	Package	Q'ty
AP3425	Tape and Reel (MSL3)	8Ld Chipped 4.0 x 2.0 x 1.1mm	2,500
AP3425M		8Ld Chipped 4.35 x 2.35 x 3.25mm	1,500
AP3425H		8Ld Chipped 4.35 x 2.35 x 3.65mm	

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