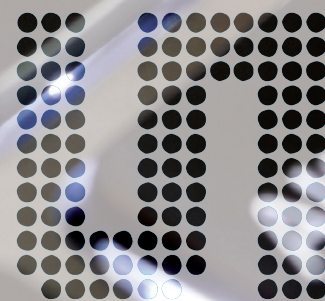# Product Document

Ambient Light Sensors

www.ams.com/ TSL2572

TSL2572 – Ambient Light Sensor Family

- Very high sensitivity behind spectrally distorting materials
- Saves energy in display management applications
- Capable of operating in 60k lux bright sunlight

We provide innovative analog solutions to the most challenging applications in sensor and sensor interfaces, power management, and wireless.

General Description

The TSL2572 family of devices provides Ambient Light Sensing (ALS) that approximates human eye response to light intensity under varying lighting conditions and through a variety of attenuation materials. While effective for general-purpose light sensing, the device is particularly useful for display management in order to extend battery life and provide optimum viewing in diverse lighting conditions.

Display panel and keyboard backlighting can account for up to 30 to 40 percent of total platform power. The reduced-gain mode extends the operating range to 60k lux in sunlight. The TSL2572 is an ideal solution for a variety of consumer electronics applications which include mobile phones, notebooks, tablets, LCD monitors, flat-panel televisions, and many more.

Applications

- Display backlight control
- Keyboard illumination control
- Solid-state and general lighting control
- Printer paper detection

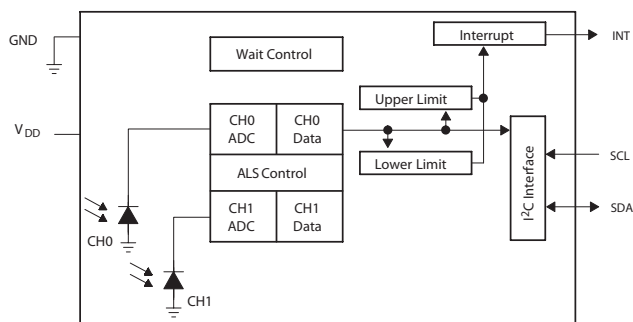| Device	Package	I²C Interface		Ordering Number
		Address[1]	Bus Voltage	
TSL25721	FN-6	0X39	V_{DD}	TSL25721FN
TSL25723	FN-6	0X39	1.8V	TSL25723FN

[1] Alternate address option available

Features

- Ambient Light Sensing
  - 8M:1 dynamic range
  - operation to 60k lux in sunlight
  - approximates human eye response
  - very high sensitivity
  - programmable analog gain and integration time
- Programmable interrupt with persistence filter
- Power Management
  - low power 2.2 µA sleep-state
  - 90 µA wait-state with programmable wait time
- I²C fast-mode compatible interface
  - 400 kbits/s data rate
  - V_{DD} or 1.8-V Bus interface
- Small 2 x 2 mm Dual Flat No-Lead (FN) Package

Functional Block Diagram

Spectral Responsivity

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