

Sense.ACP

ambient light, RGB color, proximity

Built around the ams-OSRAM TMD3725, the Sense.ACP provides digital ambient light sensing (ALS), RGBC+IR color measurement with 16-bit data converters, and IR-based proximity detection with an integrated LED and factory-calibrated driver. Color photodiodes include UV and IR blocking filters while ALS gain is adjustable from 1× to 128× for operation across a wide range of lighting conditions. Proximity detection is interrupt-driven with configurable thresholds, offset compensation, and automatic ambient light subtraction. An on-board 3.3V buck converter supplies the IR LED driver from the V+ input.

Overview

Revision	b
Package	T44-10
Supply	1.8–1.8V (seems okay at higher voltages, but the component datasheet says this is the max)
Component	TMD3725
Interfaces	I2C

Pad Assignments



(top view)

PAD	TYPE	FUNCTION	NOTE
1	power	GND	
4	interface	I2C.CLK	
5	interface	I2C.DAT	
9	digital	INT	programmable interrupt output
10	power	V+	1.8V

Interfaces

I2C		
Mode	slave	
Max Clock	400kHz	
Address	0x39	
Format	7-bit addr	
FUNCTION		
I2C.CLK	Yes	4
I2C.DAT	Yes	5