



Sense.ACP

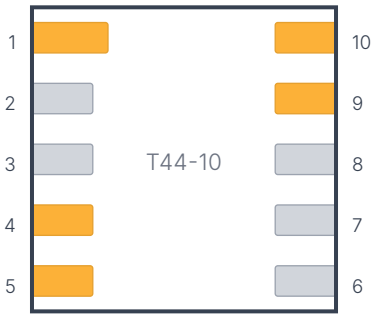
ambient light, RGB color, proximity

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

I2C

Mode

Max Clock

Address

Format

slave

400kHz

0x39

7-bit addr

| FUNCTION | REQ | PAD(S) |
|----------|-----|--------|
| I2C.CLK | Yes | 4 |
| I2C.DAT | Yes | 5 |