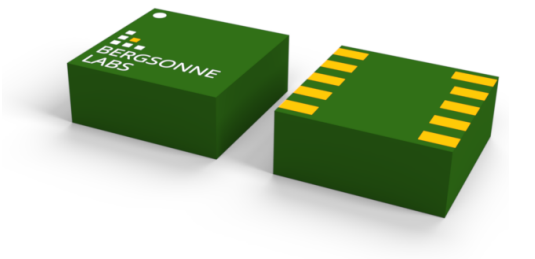




Sense.TOF

time-of-flight distance

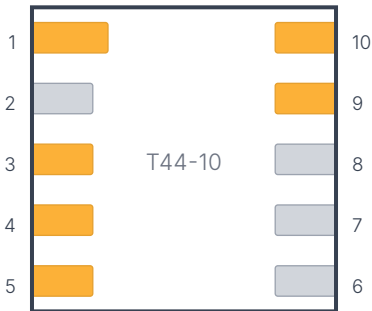
The Sense.TOF is a single-zone time-of-flight distance sensor based on the ams-Osram TMF8806, which uses a Class-1 eye-safe 940 nm VCSEL laser emitter with SPAD detection. It provides 1-mm sensing resolution over a range from 1 centimeter to 5 meters (extendable to 10 meters) with a max output data rate of 30Hz. The sensor features on-chip histogram processing, a 30-degree field of view (52 degrees below 20 cm), and pre-installed firmware suitable for obstacle detection, proximity sensing, collision avoidance, and autofocus applications.



Overview

Revision	a
Package	T44-10
Packaging	12 mm tape and reel, 500 per 7 in reel
Power	2.7–3.5V (32.5 mA peak while ranging; about 26 mA average at 30 Hz (2.5 m mode), 85 µA standby)
Component	TMF8806
Interfaces	I2C

Pad Assignments



(top view)

PAD	TYPE	FUNCTION	NOTE
1	power	GND	
3	digital	GPIO	TMF8806 GPIO0, 100 kΩ pull-up to V+ on the tile. The sensor enable (EN) is tied to V+, so the sensor is always powered.
4	digital	I2C.CLK	
5	digital	I2C.DAT	
9	digital	INT	programmable interrupt output
10	power	V+	2.7–3.5V



Interfaces

I2C

I2C

Mode

slave

Max Clock

1MHz

Address

0x41 (default)

Format

7-bit addr

FUNCTION	REQ	PAD(S)
I2C.CLK	No	4
I2C.DAT	No	5

Packaging

Method	Tape and reel, EIA-481
Carrier tape	12 mm embossed, cold seal cover tape
Pocket	4.3 × 4.3 × 1.8 mm (A0 × B0 × K0)
Pocket pitch	8 mm (P1)
Reel	7 in (178 mm)
Quantity	500 per reel
Pin 1	Quadrant 1 per EIA-481: keyed land toward the sprocket holes, tile face up
	Tape and reel drawing (PDF)

