

## Product Description

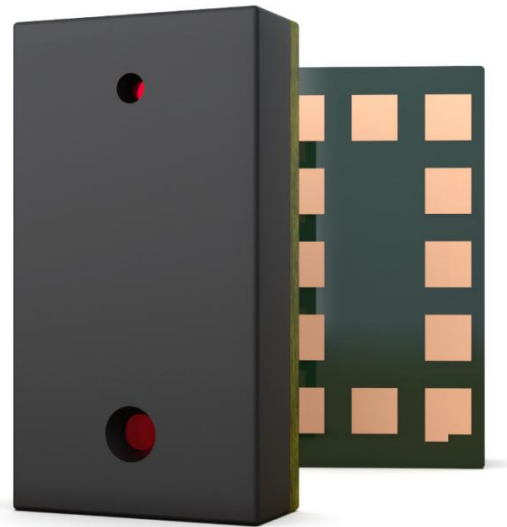
DTS6007M is a 1D-dToF SiP module that integrates a high-performance dToF SoC developed by PolarisIC as well as a VCSEL emitter, which is capable of high-precision distance measurements within a range of 5m with a frame rate up to 120Hz. DTS6007M is based on high-performance SPAD sensor integrates high-precision TDC and co-processor on-chip, thus measure distance efficiently. DTS 6007M provided histogram algorithm, by which have excellent resistance to ambient light and the ability to calibrate for contamination and reflectance.

DTS6007M utilizes a 940nm laser and meets Class 1 human eye safety requirements. Powered by a single power supply and based on an I2C interface for data communication, it is easy to integrate and use.

Visit [www.polarisic.com](http://www.polarisic.com) to get more product details.

### Product Features:

- Highly integrated miniature dToF SiP with dimensions as 4.4 x 2.4 x 1.0 mm;
- Based on high-performance SPAD sensors with a range of up to 5m;
- Using histogram algorithm to obtain highly accurate distance data;
- Integrated time-dependent photon thresholding ambient light immunity algorithm and narrow-band filters for superior ambient light immunity;
- Carrying self-developed co-processor, can adapt to different application scenarios;
- High-accuracy TDC with built-in SPAD, full-scale measurement accuracy up to  $\pm 3\%$ ;
- Support multiple access to the same set of I2C bus, saving host interface resources;
- Glass contamination correction and multipath reflection immunization;
- Reflowable compact package;



## DTS6007M

### dToF Sensor Module

### Application Areas:

- Mobile Phone Laser Assisted Focusing (LAF)
- Obstacle avoidance and wall-side sensing for robot clearer and AGV
- Obstacle Avoidance and Assisted landing
- Projectors focus assist.
- Presence or absence detection
- Capacity management
- Proximity detection

## 1.1 Technical Specification

Feature	Detail
Package	OLGA12
Size	4.4×2.4×1.0mm
Operation Voltage	2.6-3.6V
Maximum Range	4.5m
Frame Rate	120Hz
FOV	25°
Operation Temperature	-20~85°C
Infrared Emitter	940nm
I2C	Baud rate up to 1Mbps (Fast mode plus)

**System block diagram**

