



LIPSedge™ T235

RGB-D 3D ToF Camera

[Datasheet](#)

May 2026
Revision 1.0



© Copyright LIPS Corporation 2026. All rights reserved.

Under the Intellectual Property Law, no part of this book may be copied in any form or used by any means without the written consent of LIPS Corporation. Violation to the said law results in consequences and those who failed to comply could be susceptible to penalties.

Although every effort has been made to ensure the accuracy of this manual, errors and inconsistencies may remain. The manufacturer assumes no liability resulting from errors or omission in this manual, even if damages arises from the use of the information. All contents are subject to constant revision to improve its reliability and may be changed without prior notice.

May 2026

Contents

Revision History	2
1. Package & Hardware Overview	3
2. Specifications	4
3. Hardware Details	5
3.1 General Characteristics	5
3.2 Host Connectivity	6
3.3 Thermal	7
4. Optical System	8
5. Mechanical Engineering	11

Revision History

Revision	Description	Date
1.4	1. Modification of Weight 2. Modification of Power Consumption and Current	Feb. 2026
1.3	1. Modification of Depth Camera and RGB Camera Frame Rate 2. Modification of Camera Module Dimensions and Module Drawing	Dec. 2025
1.2	1. Modification of Depth Camera Frame Rate	Nov. 2025
1.1	1. Modification of Depth Camera Frame Rate 2. Modification of Camera Module Dimensions	Oct. 2025
1.0	Preliminary	Jul. 2025

1. Package & Hardware Overview

LIPSedge™ T235 3D ToF camera consists of a 640x480 resolution depth sensor and a 940nm illuminator, using short pulse technology to provide depth information.

It is designed for fast but low-power operation, delivering full resolution capture at up to 60 frames per second (fps) for raw image data.

Features

- Integrate compute and neural network inference for low-latency and instant analytics capabilities.
- 0.3 to 6+ meters detection range
- Sunlight Resistance: 80K Lux , operates in all lighting conditions (from darkness to daylight)

Application Use Cases

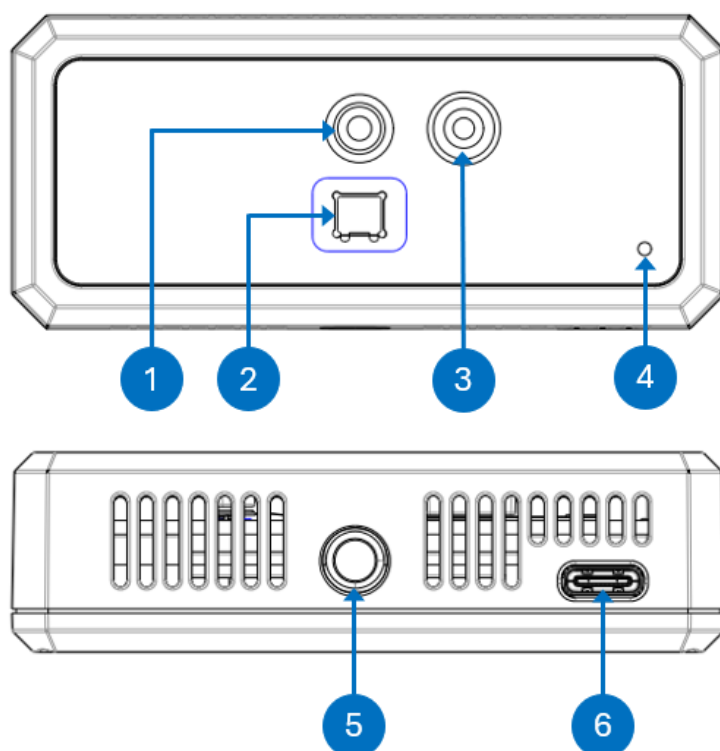
- Object Dimensioning, Packing Completeness
- Body pose and gesture recognition
- Driver monitoring, skeleton tracking
- People or Obstacle detection

2. Specifications

Image	
Technology	TOF
Maximum Working Distance	6 m +
Minimum Working Distance	0.3 m
Frame Rate	640 × 480 @ 60fps
FoV (H × V × D)	85.1° x 69° x 98.9° (Standard model)
Shutter Type	Global Shutter
Z Accuracy	≤ 1%
Resolution	640 × 480 @ 60fps
FoV (H × V × D)	71.1° x 56.8° x 84°
Shutter Type	Rolling Shutter
Illumination	
Illumination Type	Infrared
IR Wavelength	940 nm
Illuminating Component	Vertical-Cavity Surface-Emitting Laser (VCSEL)
General	
Dimension (mm)	81.9 x 35.7 x 23.0
Weight (g)	98
Ambient Temperature (° C)	0 - 50
Storage Temperature (° C)	-20 - 60
Output Interface	USB Type-C
Power	DC 5V2A
Supported OS	Windows 11 / Linux 24.04 LTS / Jetson Linux
Working Environment	Indoor

3. Hardware Details

3.1 General Characteristics



No.	Name	Functions
1	Depth Camera	Captures depth information for distance measurement.
2	NIR illuminator	Emits IR signal for measuring depth value.
3	RGB Camera	Captures RGB image data.
4	Power LED	Indicates the power and operational status of the device.
5	Tripod Socket	Secures the camera to a tripod / camera stabilizer.
6	USB 3.0 Interface	Connects to a USB 3.0 Type C to C Cable.
Note: Do NOT obscure or block the opening of the camera's optical components to ensure the optimal performance of the camera.		

3.2 Host Connectivity

USB Type-C connector consists of 24 signal pins designed in a symmetrical way. The connector z-height is as low as 3 mm and enables enhanced user by allowing the USB Type-C plug to be plugged into a receptacle either right side up or upside down.

Pin	Signal	Function	Description
A1	GND	Power Delivery	Ground
A2	TX1+	USB 3.1 Gen 1 Data	First SuperSpeed TX Differential Pair Positive
A3	TX1-	USB 3.1 Gen 1 Data	First SuperSpeed TX Differential Pair Negative
A4	VBUS	Power Delivery	5 V
A5	CC1	Control	Configuration Channel 1
A6	D+	USB2.0 Data	USB 2.0 differential pair positive
A7	D-	USB2.0 Data	USB 2.0 differential pair negative
A8	SBU1	Sideband	Sideband Use Signal 1
A9	VBUS	Power Delivery	5 V
A10	RX2-	USB 3.1 Gen 1 Data	Second SuperSpeed RX Differential Pair Negative
A11	RX2+	USB 3.1 Gen 1 Data	Second SuperSpeed RX Differential Pair Positive
A12	GND	Power Delivery	Ground
B1	GND	Power Delivery	Ground
B2	TX2+	USB 3.1 Gen 1 Data	Second SuperSpeed TX Differential Pair Positive
B3	TX2-	USB 3.1 Gen 1 Data	Second SuperSpeed TX Differential Pair Negative
B4	VBUS	Power Delivery	5 V
B5	CC2	Control	Configuration Channel 2
B6	D+	USB 2.0 Data	USB 2.0 differential pair positive
B7	D-	USB 2.0 Data	USB 2.0 differential pair negative
B8	SBU2	Sideband	Sideband Use Signal 2
B9	VBUS	Power Delivery	5 V
B10	RX1-	USB 3.1 Gen 1.0 Data	First SuperSpeed RX Differential Pair Negative
B11	RX1+	USB 3.1 Gen 1.0 Data	First SuperSpeed RX Differential Pair Positive
B12	GND	Power Delivery	Ground

3.3 Thermal

3.3.1 Temperature Specification

Items	MIN	NOM	MAX	UNIT
Storage Temperature	-20	-	+60	°C
Ambient Operation Temperature	0	-	+50	°C

3.3.2 Power Consumption and Current

Items	Values
Average Power Consumption	7.5W
Continuous Current	1.5A
Peak Current	2.8A

4. Optical System

4.1 Cameras

ToF Sensor RX

- 640 x 480 Indirect ToF Sensor
- 1/6.3" optical time-of-flight sensor
- 3.5 x 3.5 μm pixels
- I2C slave interface for configuration and control
- SPI Master for peripheral configuration
- Dual Modulation frequency @ 100Mhz & 20Mhz

Lens for ToF camera

- Lens Effective Focal Length : 1.22 mm
- Lens Fno.: 1.3
- Lens FoV : (D) 98.9°×(H) 85.1°×(V) 69°
- Distortion : < 3%
- Relative Illumination 50% : $y=1.0F$ (Ref.)

RGB Sensor

- 1/4" 500 MP(2592 x 1944) CMOS Image Sensor
- 1.4 μm x 1.4 μm pixels
- Data interfaces: MIPI CSI-2 2 Lanes

Lens for RGB camera

- Lens Effective Focal Length : 2.56 mm
- Lens Fno.: 2.2
- Lens FoV : (D) 84°×(H) 71.1°×(V) 56.8°
- CRA : 32.7°

T235 Camera sensor table

Items	ToF Sensor	RGB Sensor
Image	NIR/Depth	RGB
Lens FoV	85.1° H * 69° V * 98.9° D	71.1° H * 56.8° V * 84° D

4.2 Illuminators

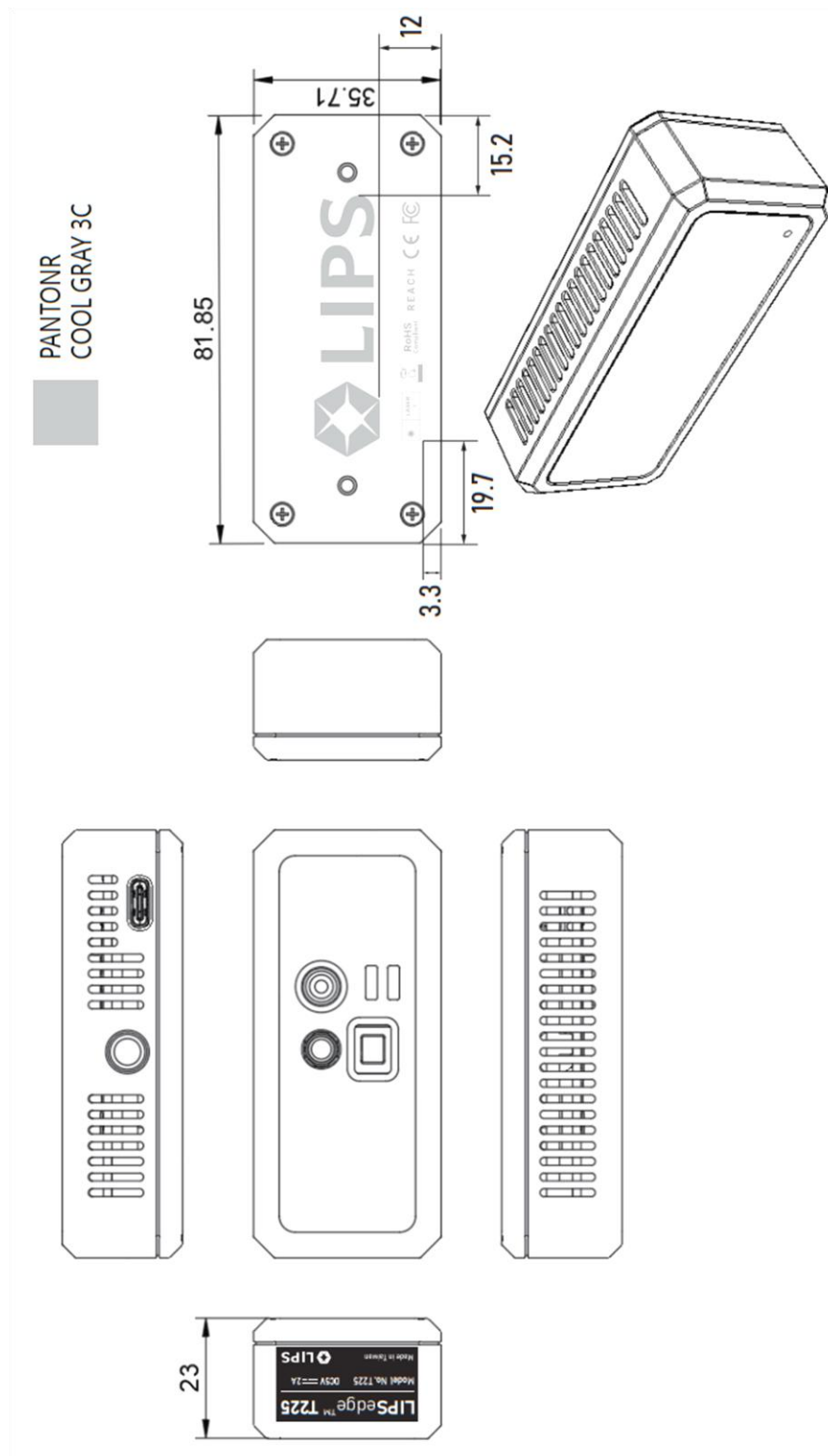
- IF current: 3.5A
- Radiant Power: 6W
- Rectangular emission FoV: 110° x 90°
- Peak wavelength: 940nm
- Modulation Frequency: 100/30 MHz(Dual), 50MHz(Single)

Illuminator parameters

Items	Dot Projector
Illuminating Component	Vertical-Cavity Surface-Emitting Laser (VCSEL)
Wavelength	940 nm

5. Mechanical Engineering

5.1 Mechanical Dimensions of LIPSedge™ T235





LIPS CORPORATION

2F, No. 100, Ruiguag Road, Neihu District,

Taipei City 114, Taiwan

Tel.: + 886-2-8791-6998

Fax: +886-2-8791-8996

Official Website: <https://www.lips-hci.com/>

E-Mail: info@lips-hci.com