



TF-Luna LiDAR module (Short-range distance sensor)

Product specification SJ-GU-TF-Luna A01

TF-Luna is a single-point ranging LiDAR, based on TOF principle.

Mainly used for stable, accuracy and high-frame rate range detection.

The product is built with algorithms adapted to various application environments and adopts multiple adjustable configurations and parameters so as to offer excellent distance measurement performances in complex application fields and scenarios.

Main product features

- Small size
- Light weight
- Low power consumption

Main application scenario

- Auxiliary focus
- Elevator projection
- Intrusion detection
- Level measurement



Technical Specifications and Parameters

| Description | | Parameter value |
|-----------------------|-------------------------|--|
| Product performance | Operating range | 0.2m~8m(90%reflectivity) ¹ |
| | Accuracy | ±6cm@(0.2m-3m) ² ±2%@(3m-8m) |
| | Distance resolution | 1cm |
| | Frame rate | 100Hz ³ |
| | Ambient light immunity | 70Klux |
| | Operation temperature | -10°C~60°C |
| | Enclose rating | / |
| Optical parameters | Light source | VCSEL |
| | Central wavelength | 850nm |
| | Photobiological safety | Class1(IEC60825) |
| | FOV | 2° ⁴ |
| Electrical parameters | Supply voltage | 5V±0.1V |
| | Average current | ≤70mA |
| | Power consumption | ≤0.35W |
| | Peak current | 150mA |
| | Communication level | LVTTL(3.3V) |
| | Communication interface | UART / I2C |
| Others | Dimension | 35mm*21.25mm*13.5mm (L*W*H) |
| | Housing | ABS+PC |
| | Storage temperature | -20°C~75°C |
| | Weight | < 5g |

¹ Range based on the indoor test with the standard white board (90% reflectivity) at 25°Cas the detection object;

² Accuracy based on the indoor test with the standard white board (90% reflectivity) at 25°Cas the detection object;

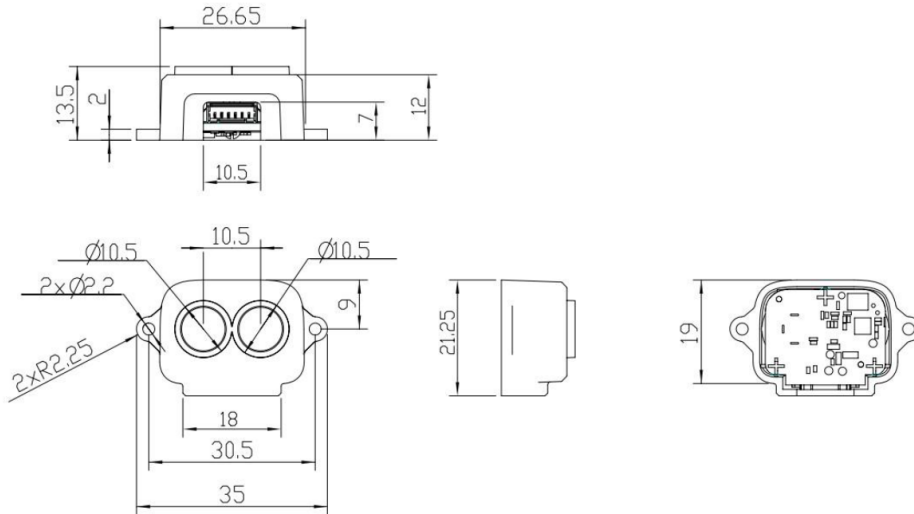
³ The Highest frame rate 250Hz, default setting is 100Hz;

⁴ This is a theoretical reference value .





Product Appearance and Structure



TF-Luna dimensions (Unit: mm)

Communication Interface

TF-Luna supports two interfaces: UART and I²C.

Communication Interface--UART

| | |
|-------------------|---------------------|
| Default baud rate | 115200 (adjustable) |
| Data bit | 8 |
| Stop bit | 1 |
| Parity | None |

Communication Interface--I²C

| | |
|-----------------------|-----------|
| Max transmission rate | 400kbps |
| Master/Slave mode | Slave |
| Default address | 0x10 |
| Address range | 0x01~0x7F |



Configurable parameters

| Parameters | UART | | I ² C | |
|-------------------------|-----------------------------------|-----------------|-----------------------------------|------------------|
| | Description | Default setting | Description | Default setting |
| Communication interface | UART, I ² C and I/O | UART | UART, I ² C and I/O | I ² C |
| Frame rate | Adjustable, 1~2500Hz | 100Hz | Adjustable, 1~250Hz | / |
| Baud rate | Adjustable, 9600-921600bps | 115200bps | Fast mode, 400Kbps | / |
| Reset to default | Reset all the settings to default | / | Reset all the settings to default | / |

Note: Refer to user manual for more information

