

TF02-Pro is a single-point ranging LiDAR based on TF02 upgrade. The performance and accuracy of different reflectivity are improved, it can achieve stable, accuracy, sensitive and high frequency range detection.

Main features of product

- The range up to 40 meters
- Ambient light resistance (Up to 100Klux)
- High frame rate(up to 1000Hz)
- Low power consumption

Main applications

- Intelligent traffic
- Intelligent parking lots
- Material level monitoring
- UAV

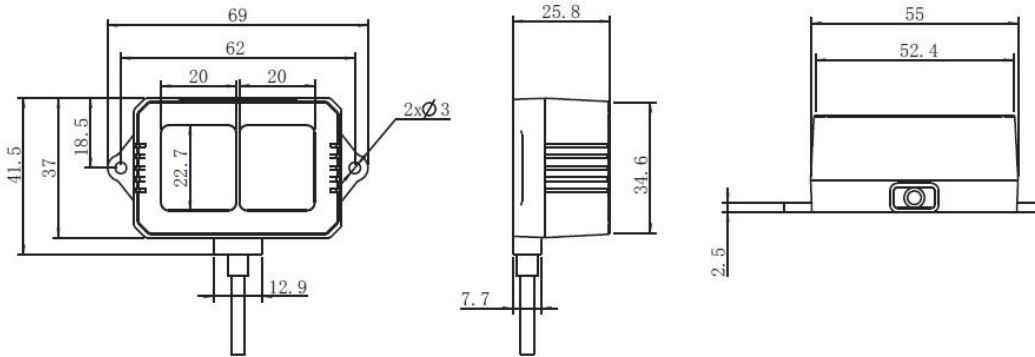


■ Technical Specifications and Parameters

| Parameter Name | | Value |
|-----------------------|--------------------------|--|
| Product performance | Operating Range | 0.1~40m@90%reflectivity 0.1~13.5m@10%reflectivity 0.1~40m@90% reflectivity (100Klux) 0.1~13.5m@10% reflectivity (100Klux) |
| | Accuracy | ±5cm (0.1~5m) ±1% (5~40m) |
| | Repeatability | 1σ: < 2cm (0.1~35m@90% reflectivity) |
| | Distance Resolution | 1cm |
| | Frame rate | 1-1000Hz (default 100Hz) |
| | Ambient light resistance | 100Klux |
| | Operation temperature | -20~60°C |
| | Protection Level | IP65 |
| Optical Parameters | Light source | VCSEL |
| | Central wavelength | 850nm |
| | Photobiological safety | Class 1 (EN60825) |
| | FoV | 3° |
| Electrical Parameters | Supply voltage | DC 5V~12V |
| | Average Current | ≤200mA |

| | | |
|-------------------------|-------------------------|-----------------------------|
| | Power consumption | ≤1W |
| | Peak Current | 300mA |
| | Communication level | LVTTTL (3.3V) |
| | Communication interface | UART, I ² C, I/O |
| Other Parameters | Dimensions | 69mmx41.5mmx26mm (L*W*H) |
| | Enclosure material | PC/ABS |
| | Storage temperature | -30~80°C |
| | Weight | 50g (with cables) |
| | Cable length | 80cm |

■ Product Appearance and Structure



Dimension of TF02-Pro (Unit: mm)

■ Communication Interface

Communication Interface--UART

| Interface parameters | Value |
|--------------------------|--------|
| Default Baud rate | 115200 |
| Data bits | 8 |
| Stop bit | 1 |
| Parity | None |

Communication Interface--I²C

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

■ Configurable Parameters

| Parameters | UART | |
|--------------------------------|-----------------------------------|-----------------|
| | Description | Default setting |
| Communication interface | UART, I ² C, I/O | UART |
| Frame rate | Adjustable, 1~1000Hz | 100Hz |
| Baud rate | Adjustable, 9600~921600bps | 115200bps |
| Reset to default | Reset all the settings to default | / |

PS: Refer to user manual for more information

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