

Benewake TFA300 Series

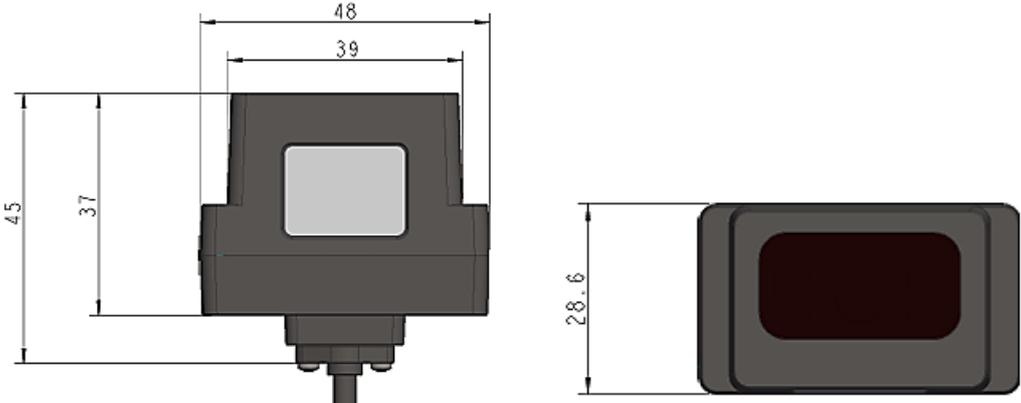
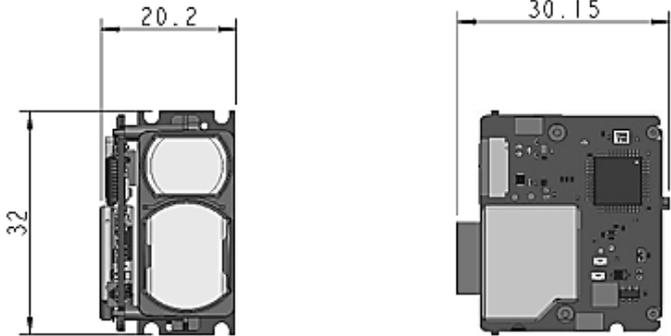
Datasheet



TFA300 series is a mid-long range single-point LiDAR of Benewake. Features a compact size and lightweight design, along with an IP67 protective housing. Supports dual communication protocol via UART and CAN. Multiple built-in operating modes let customers to change its parameters and configuration to meet different applications.

Technical Specifications

Performance Parameters		
Model	TFA300	TFA300-L
Detection range ^①	270 m @ 90% ref. 100 KLux 150 m @ 30% ref. 100 KLux 90 m @ 10% ref. 100 KLux	290 m @ 90% ref. 100 KLux 170 m @ 30% ref. 100 KLux 100 m @ 10% ref. 100 KLux
Blind zone	≤ 0.1 m	
Accuracy ^②	± 10 cm (< 10 m), 1% (≥ 10 m)	
Repeatability ^②	< 3 cm @ 1σ	
Distance resolution	1 cm	
Default frame rate	Up to 10,000 Hz (1 ~ 10,000 Hz configurable, default 50 Hz)	
Ambient light resistance	100 KLux	
Optical Parameters		
Light source	EEL	
Central wavelength	905 nm	
FoV	< 0.5°	
Eye safety	Class1 (IEC 60825-1:2014; EN 60825-1:2014+A11:2021)	
Mechanical and Electrical Parameters		
Average power consumption ^③	≤ 0.45 W	
Peak current ^③	< 0.75 A	
Power supply	DC 5 V ± 10%	
Logical voltage	3.3 V TTL	
Connector	JST GH 1.25 mm 6 pin	
Operating temperature	- 20 °C ~ + 60 °C	

Storage temperature	- 40 °C ~ + 80 °C	
Protection level	IP67	NA
Typ. Dimensions ^④	48.0 mm × 37.0 mm × 28.6 mm	32.0 mm × 30.2 mm × 20.2 mm
Typ. Weight ^④	34.5 g (excluding cables)	10.5 g
Communication Protocol		
Communication Interface	UART / CAN (Can be switched by command)	
Baud rate	Default 115200 (Configurable)	
Data bit	8	
Stop bit	1	
Parity	None	
Dimensions (Unit: mm)		
 <p style="text-align: center;">TFA300</p>		
 <p style="text-align: center;">TFA300-L</p>		

Notes:

1. Measured when the whole light spot falls on the target;
2. 100 KLux, 90% reflectivity target, measured when all light spots fall on the target object;
3. Measured at a temperature of 25 °C, 50 Hz;
4. The weight and size are typical values for reference only. For detailed tolerance parameters, please consult the technical personnel of Benewake.