## Benewake TF-NOVA Datasheet

TF-NOVA is a small size, line pattern laser beam LiDAR developed by Benewake, which is particularly suitable for applications such as obstacle detection, presence activation trigger. Multiple parameters are available for customers to customize and configure to meet various application requirements.

## **Technical Specifications**

Measurement Performance		
Detection range $^{ ext{@}}$	≥14m @90%reflectivity, 0Klux ≥13m @10% reflectivity, 0Klux ≥7m @90% reflectivity, 100Klux ≥4m @10% reflectivity, 100Klux	
Blind zone <sup>②</sup>	≤ 0.1m	
Accuracy <sup>②</sup>	± 5cm @ 0.1-4m	
Repeatability <sup>②</sup>	< 1cm (1 sigma) @ 0.1-4m	
Distance resolution	1cm	
Default frame rate	Default 100Hz, 1-900Hz customizable	
Optical Parameters		
Light source	VCSEL	
Central wavelength	905nm	
FoV of laser emission <sup>③</sup>	Typ. 14°×1°	
Eye safety	Class 1 Eye-safe[EN60825]	
Mechanical/Electrical		
Average power consumption <sup>(4)</sup>	< 500mW	
Peak current when starting <sup>4</sup>	< 850mA	
Start-up time	< 1s	
Power supply	DC 5±5%V	
Operating temperature	-25°C ~ +70°C	

Storage temperature	-30°C ~ +80°C	
Dimensions	TYP. 26.5x 21.05 x 12.0mm <sup>3</sup>	
Weight	<5g	
Connector	1.25mm-5P	
Protection Level	N.A.	
Front window protection level	IP65	
Cable length	10cm	
	Communication Protocol	
Communication Interface	UART, IIC, I/O	
Baud rate	Default 115200	
Data bit	8	
Stop bit	1	
Parity	None	
Dimensions ( Unit: mm )		
26.5±0.1 18±0.1	4.25 ∞ Ø1'0.1	

## Notes to the specifications:

- (1) The measurement range is measured when all light spots are placed on the target board, at 25 °C.
- 2 The parameter is measured at 25 °C, OKlux, when all the light spots are placed on the target board with a reflectivity of 10%.
- 3 This angle is the design divergence angle of the laser spot. The actual field of view angle that can trigger distance measurement depends on specific conditions such as the measured object and background. Please confirm according to the specific application.
- 4 Measured at 25 °C, changes in conditions may cause variations in the measurement results.

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