

Interferometric Fiber Optic Gyro i-FOG

TA7774



High accuracy [0.1°/h] Gyro (1-axis), which is a key technology to realize fully autonomous driving.

FEATURES

i-FOG

- 01 High-accuracy**
Achieved [0.1°/h] which is required for fully autonomous driving.
- 02 Low-price**
Our unique technology for winding and Fiber Optical IC realizes cost reduction.
- 03 Closed-loop Type**

i-FOG Promotional Video

See the demonstration of i-FOG localization.

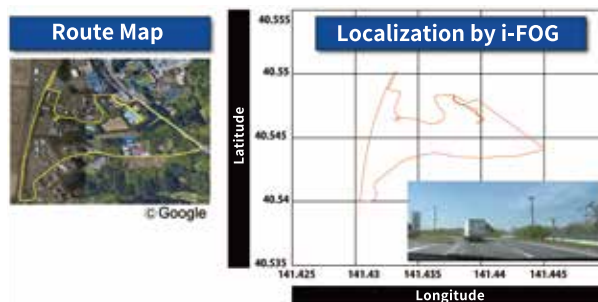
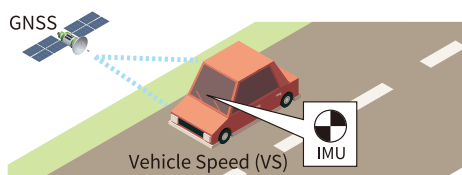


<https://www.tamagawa-seiki.co.jp/products/gyro/1-axis-gyro-TA7774.html>

CENTIMETER CLASS LOCALIZATION

The accuracy of localization of vehicles is increased to centimeter class by using i-FOG.

It is necessary to maintain the accuracy of localization at centimeter class under GNSS-denied environment.

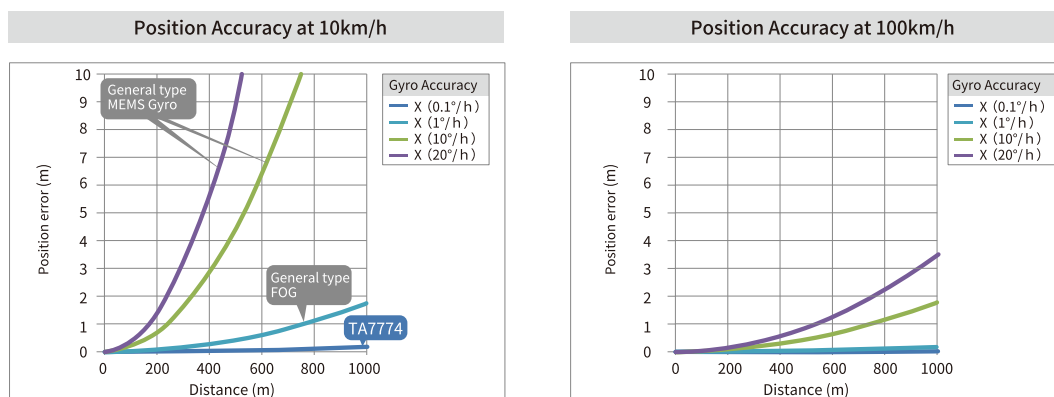


Red line is the track of localization by i-FOG

POSITION ACCURACY BY GYRO ERROR & VEHICLE SPEED

i-FOG

The accuracy of i-FOG (TA7774) is 0.1°/h, which is able to keep high accuracy localization for a certain period of time.



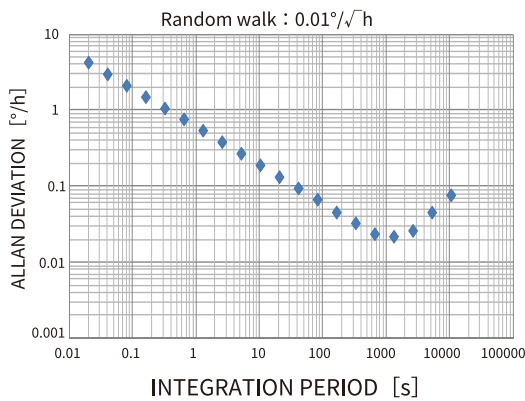
SPECIFICATION

i-FOG

Part Number	TA7774
Dynamic Range	$\pm 200^\circ/\text{sec}$
Bias Repeatability	$0.1^\circ/\text{h}$ (1 σ) (25°C static)
Bias Instability	$0.1^\circ/\text{h}$ Max.
Random Walk	$0.01^\circ/\sqrt{\text{h}}$ Max.
Scale Factor Accuracy	$\pm 100\text{ppm}$
Scale Factor Linearity	$\pm 100\text{ppm FS}$
Mass	400g Max.
Power-supply voltage	$\pm 5\text{V}, \pm 15\text{V}$
Power Consumption	$\pm 5\text{V}: 1.5\text{A Max.}$ $\pm 15\text{V}: 0.2\text{A Max.}$
Interface/ Baud rate	RS232 : 115.2kbps (fixed)
Output Cycle	50Hz
Operating Temperature	$-20\sim+60^\circ\text{C}$
Non-operating Temperature	$-30\sim+70^\circ\text{C}$

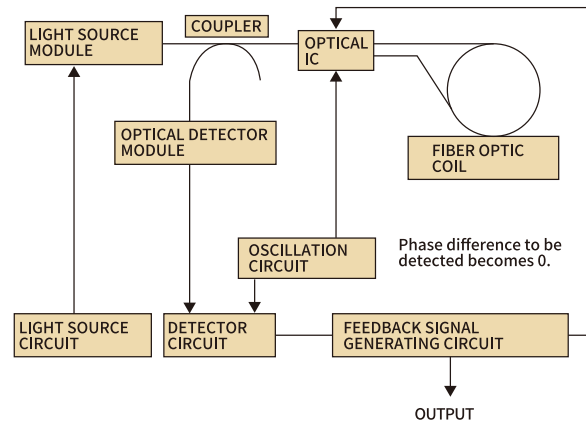
ALLAN VARIANCE

i-FOG



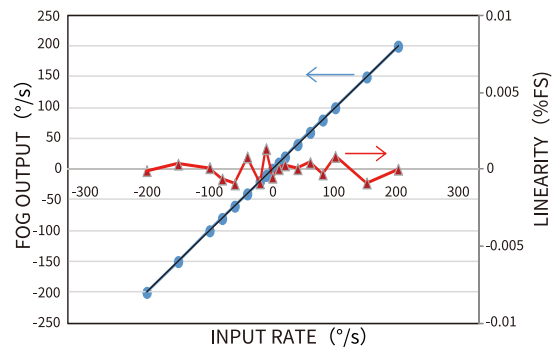
CONFIGURATION

i-FOG



SCALE FACTOR & LINEARITY

i-FOG

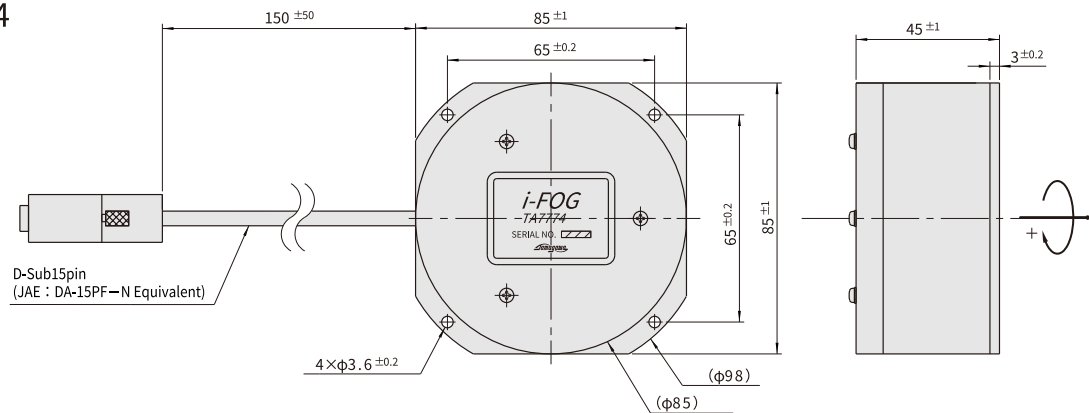


*For more details, contact to our technical support written in the last page.

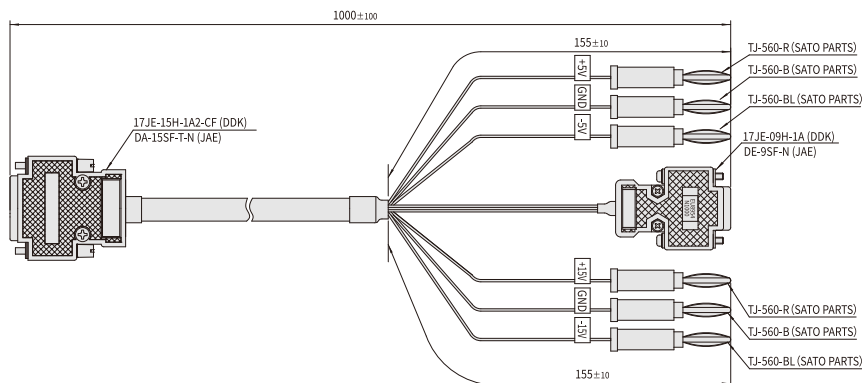
OUTLINE DRAWING Dimension : mm

i-FOG

TA7774



Interface Cable EU8954N1000 (sold separately)



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This catalogue is current as of 2020.12
All Specifications are subject to change without notice.