

Fizoptika Malta TO SHOWCASE ITS LATEST INERTIAL PRODUCTS

AT OCEANOLOGY INTERNATIONAL LONDON 2024

Mosta, Malta (EU), January 3, 2024 - Fizoptika Malta will be showcasing its latest inertial products – the smallest fiber optic gyroscopes (FOGs), highly-precision FOGs, ultra-compact three-axis FOGs, miniature FOG-based inertial measurement units (FOG IMUs) - at Oceanology International London (March 12-14, London, UK, [Booth A203](#)).

The [fiber optic gyro VG221](#) is a revolutionary small and lightweight sensor with an ultra-low power consumption – measuring just $\varnothing 33 \times 12$ mm, weighing 15 gr, and consuming 0.3W. It features low noise performance with $0.05^\circ/\text{vh}$ ARW (angle random walk) and a bias stability of $1^\circ/\text{h}$. The [fiber optic gyro VG1703SPE](#) is another sensor offering a combination of a very small ($\varnothing 40 \times 12$ mm), lightweight (18 gr) design and super low power consumption of 0.25W. It features low noise performance with $0.025^\circ/\text{vh}$ ARW and a bias stability of $1^\circ/\text{h}$.

At the other end of the form-factor scale is the bigger [fiber optic gyro VG035LND](#) which delivers outstanding performance with $0.0015^\circ/\text{vh}$ ARW and a bias stability of $0.03^\circ/\text{h}$. The FOG sensor offers ultimate magnetic immunity due to its built-in magnetic shield.

The company will also present its triple-axis fiber optic gyroscopes which offer low noise performance in ultra-compact and lightweight units with low power consumption of 2W.

The [G181](#) is a cylinder-shaped unit measuring $\varnothing 46 \times 111$ mm and weighing 160 gr. This 3-axis gyro delivers excellent performance with $0.015^\circ/\text{vh}$ ARW and a bias stability of $1^\circ/\text{h}$. The [three-axis fiber optic gyroscopes G121](#) feature a compact footprint of 52×58 mm and light weight of 125 gr. These industry-leading SWaP parameters are combined with low noise performance of $0.025^\circ/\text{vh}$ ARW and a bias stability of $1^\circ/\text{h}$.

Additionally, Fizoptika Malta will be displaying a range of newly developed FOG-based inertial measurement units (FOG IMUs). They combine the company smallest fiber optic gyroscopes and MEMS accelerometers.

The [FOG IMU U121D](#) is housed in a compact aluminium case ($63 \times 56 \times 40$ mm) and consumes just 1.5W of power. It features bias of $3^\circ/\text{h}$ and ARW of $0.05^\circ/\text{vh}$. The [FOG IMU U123D](#) has an ultra-compact cylindrical design ($\varnothing 40 \times 100$ mm) and delivers low noise performance with $1^\circ/\text{h}$ bias and $0.05^\circ/\text{vh}$ ARW. The unit has very low power consumption of 1.5W, too. Another FOG IMU with a cylindrical form-factor is the [U183\(M\)](#). It is 46mm in diameter and weighs 200 gr. The unit consumes as low as 2W, and features $0.03^\circ/\text{vh}$ ARW, $1^\circ/\text{h}$ bias stability.

Fizoptika Malta inertial sensors are designed to suit various space- and layout-limited applications including inertial navigation systems (INSs) in UAVs / UUVs / USVs / ROVs.

Fizoptika Malta is a manufacturer of the smallest fiber optic gyroscopes (FOGs) and FOG-based inertial measurement units (FOG IMUs) with 35 years of industrial experience and over 190,000 units supplied worldwide.

For more information, please visit <https://fizoptika.com/>.

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