Value Stocks: Could This Be Canada's Cheapest Tech Stock?

Description

Photon Control (TSX:PHO) is a leading developer and supplier of optical sensor temperature and position measurement systems to the original equipment manufacturer (OEM) industry. Photon's products are designed to perform in extreme conditions and are supported by a team of experts that offers custom design, rapid prototyping, on-site installation, training, and support. Photon also provides engineering services for customized optical measurement systems.

Through the company's subsidiary, Micronor, it also provides fibre optic kinetic sensors for medical applications and various industrial market segments including energy, transportation, and process. The semiconductor capital equipment industry offers several significant and growing applications for the company's technology and is the primary source of revenue for Photon's business.

High-volume manufacturing capabilities

The company designs and produces precision temperature and position sensors used by semiconductor manufacturers. The manufacturing of silicon wafers for semiconductors involves a multitude of complex processes. Monitoring and maintaining the correct wafer position and wafer temperature during these processes is critical to achieving the product yield and productivity required for high-volume manufacturing.

The measurement accuracies required of such sensors are becoming more challenging, as semiconductor devices scale to atomic level dimensions and become more three-dimensional (3D) in nature. Furthermore, these sensors must maintain their accuracy in harsh environments encountered in critical semiconductor equipment.

Significant product demand drivers

Photon's fibre optic sensors are immune to radio frequency interference and are thus able to deliver the high accuracies required for state-of-the-art process control. The need for scaling semiconductor devices to atomic level dimensions has also created a need for more measurement points inside the

chamber. Temperature and position anomalies have a greater impact on yield at atomic level dimensions and must be measured and controlled more precisely, which increases the value and use of fibre optic sensors.

In addition, as semiconductor process nodes get smaller, the number of measurement points has increased more than four-fold. Similarly, the proliferation of 3D and advanced memory chip designs have become more common and comprise an increasingly significant percentage of total chips manufactured. These factors are expected to continue to drive demand for the company's products.

Increasing market share

Photon sells products globally with sales to OEM's primarily in the United States and Japan, who, in turn, sell products to manufacturers in the United States, Asia, and Europe. Revenue for 2020 was $64.7 million, representing an increase of $32.0 million, or 98%, compared to $32.7 million reported in 2019. The increase in reported revenue for the year was strongly influenced by the overall capital expenditure in the semiconductor industry, which is reflective of the company's success in increasing market share.

The global semiconductor industry is fast-paced, competitive, and constantly innovating to increase processing speed and power of semiconductor devices. Memory bit density and logic transistor counts are increasing every year to meet the demands driven by the proliferation of artificial intelligence, high-performance computing, the internet of things, and 5G. The ability to anticipate these technological changes and meet customer needs without compromising quality is a key competitive advantage for Photon. This should serve shareholders well in the long term.

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