SUMITOMO PRECISION PRODUCTS CO., LTD.

News Release

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MEMS Foundry to be expanded

Silicon Sensing Systems Ltd. (head office: Plymouth, UK), established by Sumitomo Precision Products Co., Ltd. in a joint venture with Collins Aerospace, expands MEMS foundry to deliver fivefold increase in

output

· Significant rise in demand

·2-year upgrade programme commenced with move to new facility

·Immediate doubling of wafer production achieved

Silicon Sensing Systems is to expand its MEMS foundry in Japan, moving into a new purpose built facility,

allowing the company to meet significantly increased demand for its MEMS inertial sensors and sputtered

thin film PZT MEMS device wafers. The new facility will increase floor space to 3,000m2, immediately

more than doubling current wafer throughput and delivering scope for a five-fold increase in output over

the next five years, in line with current market growth predictions. To keep up with the volume and price

pressures in the thin film PZT MEMS sector Silicon Sensing is already expanding its 8" wafer line

production.

This expansion forms part of a major two-year programme of investment which will upgrade tooling,

capabilities and capacity, and comes as Silicon Sensing celebrates 20 years in the MEMS business during

which time the company has delivered over 30m devices worldwide.

Eric Whitley, Business Development Manager, Silicon Sensing Systems explains: "Silicon Sensing is

known for its own precision MEMS inertial sensors and has recently opened up its foundry to fabless

customers who need a reliable source for their PZT based MEMS devices. In the last 3 years we have seen

strong demand as customers in many markets ramp up production and look for a reliable supply of effective,

precision MEMS units. As a team, we are excited to be part of this significant evolution and growth in the

business."

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Mr. Hiroshi Tanaka, General Manager (Japan site), is overseeing the expansion plan and adds: "This is an

important milestone in the continuing evolution of the Silicon Sensing company.
Our aim is to make a

smooth transition from the current facility into our new, earthquake resistant building by the end of 2020.

At the same time, we are adding many additional depositions and etch tools, including a new ALD (Atomic

Layer Deposition) tool to offer a solution for environmental protection of our PZT films for use in harsh

environments."

Thin Film PZT MEMS

Silicon Sensing launched its first sputtered thin film PZT (Lead Zirconate Titanate) MEMS gyroscope

sensor in 2010; the PinPoint® gyro. Since then more than 10M PinPoint® gyros have been produced and

are used in a diverse range of applications in automotive, industrial and commercial markets. This gyro

remains a best-selling product and has gained an excellent reputation as an ultra-reliable (Oppm return – last

3 years), precise and affordable MEMS sensor.

Building on the strengths of PinPoint® Silicon Sensing has developed its thin film sputtering material and

process technology to an advanced level. Silicon Sensing is supplying its PZT film to a global customer

base for use in many varied MEMS devices such as mirrors, inkjet printhead nozzles and acoustic devices.

In many cases Silicon Sensing is an enabler for the transition from use of bulk piezo-electric to thin film,

with the associated benefits of economy, size and power consumption.