

October 2, 2006

Epson Toyocom Announces World's Smallest High-Precision Gyro Sensor for Car
Navigation Systems

Epson Toyocom Corporation, the leader in quartz devices, has announced the successful commercialization of the XV-8000CB, the world's smallest^{*1} high-precision gyro sensor with an ultra-compact and ultra-thin design that enables greater system performance. The XV-8000CB is ideal for DR (dead reckoning)^{*2}, the positioning method used in car navigation systems. It is expected to become one of the core products of Epson Toyocom's sensing device business. Samples will begin shipping in December 2006.

The XV-8000CB leverages the excellent stability of crystal-based gyro elements in addition to Epson Toyocom's original crystal microprocessing technology, low-power analog circuit technology, and packaging technology to achieve a gyro sensor that is both highly accurate and the world's smallest at just 5.0 x 3.2 x 1.3 mm. In addition, its unique device structure gives superior resistance to shock and vibration.

Consumers are demanding more features and better accuracy for car navigation systems and other GPS applications. The ultra-compact and thin structure of the XV-8000CB gives more freedom in design and makes it possible to squeeze more features into a compact space.

Epson Toyocom develops gyro sensors and a variety of other sensing devices to provide solutions that meet the needs of our customers.

This product will be on display at CEATEC JAPAN 2006 being held at Makuhari Messe from October 3. Visit the Epson Toyocom booth (No. 5E03) to see our line-up of gyro sensor products up close.

Features

1. Ultra-compact and thin size (5.0 × 3.2 × 1.3 mm)
2. Stable output with built-in crystal gyro elements and temperature compensation circuit
3. Superior resistance to shock and vibration; ideal for automobile applications
4. Thermal sensor output terminal enables use for correcting system temperature
5. Airtight structure gives excellent environmental resistance
6. Lead-free^{*3}

Specifications

Item	Specification	Unit
Supply voltage	4.75 to 5.25	V
Operating temperature range	-40 to +85	°C
Sensitivity	25.0	mV/deg/sec
Zero-point voltage	2.5	V
Zero-point voltage temperature variation	±3.5	%
Detection range	±60	deg/sec
Dimensions	5.0 × 3.2 × 1.3	mm

Glossary

- *1 Among gyro sensors for car navigation systems (according to Epson Toyocom research as of October 2, 2006)
- *2 Accuracy of DR processing in estimating vehicle location in a car navigation system can be improved by adding angle calculations based on speed pulse and gyro sensors to the GPS positioning calculations.
- *3 No lead is used on the terminals or inside of this product. EU RoHS Directive compliant.