

# Earth Sensor for Satellite



## Outline

The Earth sensor is a device for determining the attitude of a micro satellite at an altitude of about 500 km.

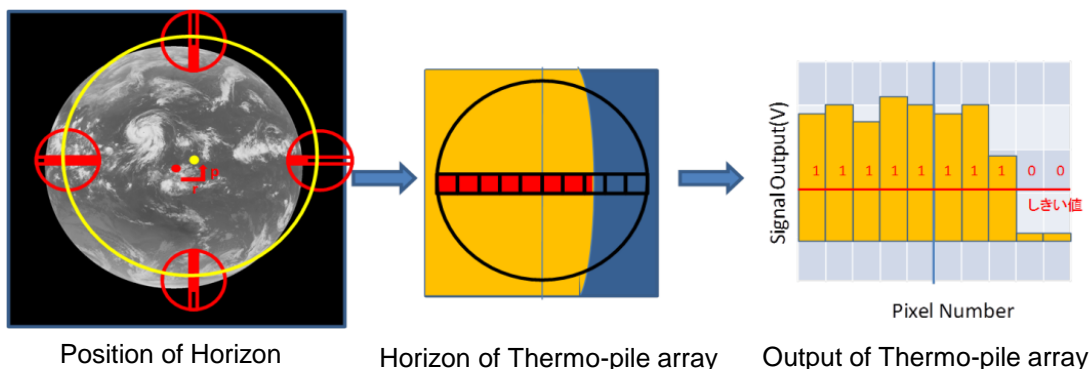
4 pieces of multi-pixel array of thermopile sensors detect Earth edge to calculate the roll angle and the pitch angle. Its compact design is suitable for Micro-Satellites.

## Features

- **Flight proven**
- Lower cost using COTS parts.
- Can be used for both of sunlight and eclipse.
- No cooling system required
- Suitable for Earth oriented micro-satellites
- ITAR free
- RoHS nonconformity
- Made in Japan

# SPECIFICATIONS

Items	Performance
Detector	COTS based Thermopile Sensor
FOV	33 degrees x 4 arrays
Accuracy	4.125° Weighting calculation around Earth edge: ~1.5° (reference)
Power voltage	+5 V
Power consumption	< 1 W
Operating temperature range	-25 to +60 °C
Weight	< 250 g
Dimensions	40 x 40 x 55 mm (flange and screw not included)
Telemetry / command interface	RS485
Lead time	About 9 months after receiving orders.
Flight heritage	SOCRATES



## Theory of measurement

- \* This product was developed with the support of JAXA (Japan Aerospace Exploration Agency)
- \* Above-mentioned specification is an example. The specifications will be customized to suit your request.

### ⚠ Caution

- For safe and correct usage, please read the "Operation Manual" prior to the use of the products.
- Specifications and designs are subject to change without notice.
- Specifications and designs are based on the standard model. Please contact us regarding further customization to suit your project's needs.
- This products may be subject to the application of the Foreign Exchange and Foreign Trade Act and other related laws and regulations in Japan. Customer agrees to comply with such regulations and acknowledges that it is their responsibility to obtain any required licenses to export, re-export, or import this products.
- We shall not be liable for any damages arising out of or in connection with the use of specifications herein, including liability for lost profit, business interruption, or any other damages whatsoever.
- The color of the product photography on catalog might be different from that of actual product because of printing.

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