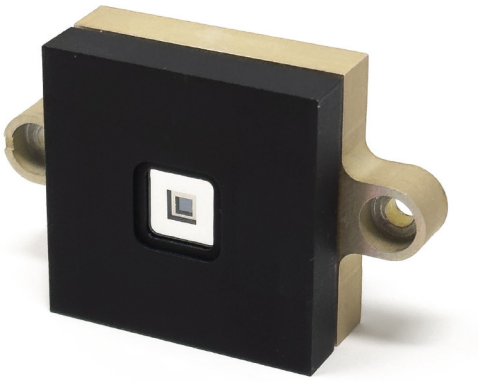
SSOC - A60

Sun Sensor for Nano-Satellites
Analog Interface

Space Qualified



Description

Sun Sensor on a Chip (SSoC), is based on MEMS fabrication processes to achieve highly **integrated sensing structures** for high accurate sun-tracking, positioning systems and attitude determination.

SSOC-A60 device measures the incident angle of a sun ray in two axes. The high sensitivity is based on geometrical dimensions of the design.

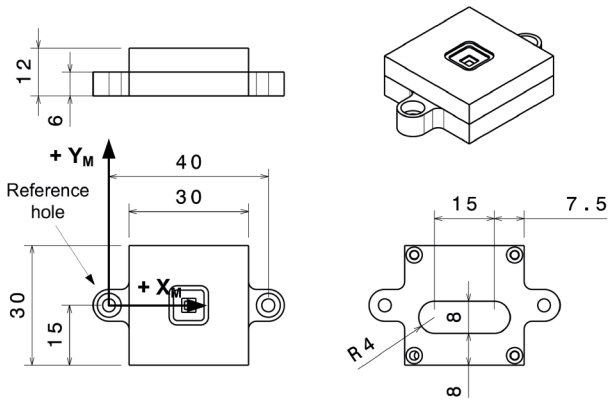
Every sensor is **calibrated and characterized**, and a look-up table is provided for its application. The use of a metal shield and a cover glass in the optical eye minimizes the ageing of the device under high radiation levels.

Qualification Data and Flight Heritage

Operating Temperature	-45° to 85° Celsius
Radiation	>100 kRad
Random vibration	28.5 g @ 20-2000 Hz
Shock	3000 g @ 1-100 ms

Flight heritage since 2009
with hundreds of units in orbit.

Mechanical Interface



Technical Characteristics

Type	2 orthogonal axes
Field of View	±60°
Accuracy	< 0.3° (3sigma) < 0.05° (precision)
Mass	25 g
Power supply	5V 0-5v < 25mA consumption
Mechanical interface	40 x 30 x 12 mm
Housing	Aluminum 6082 Alodine + black anodizing

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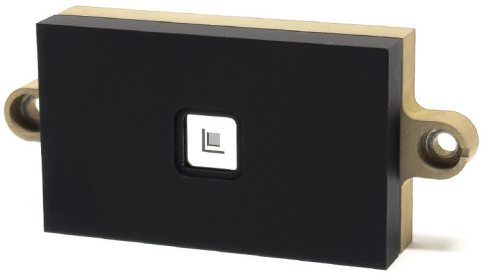
SOLARMEMS TECHNOLOGIES

SSOC - D60

Sun Sensor for Nano-Satellites
Digital Interface

Space Qualified



Description

Sun Sensor on a Chip (SSoC), is based on MEMS fabrication processes to achieve highly **integrated sensing structures** for high accurate sun-tracking, positioning systems and attitude determination.

SSOC-D60 device measures the incident angle of a sun ray in two axes. The high sensitivity is based on geometrical dimensions of the design.

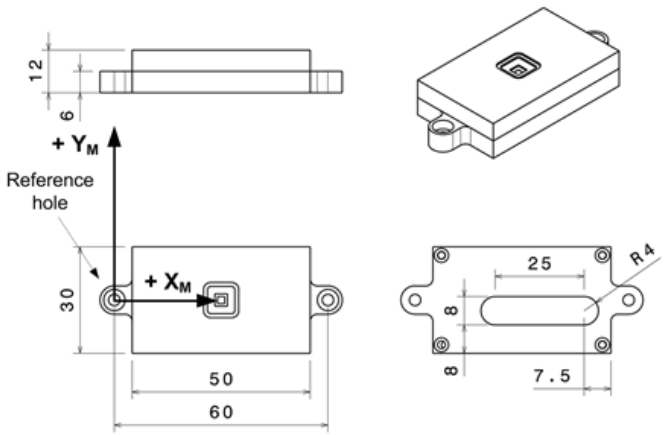
Every sensor is **calibrated and characterized**, and a look-up table is provided for its application. The use of a metal shield and a cover glass in the optical eye minimizes the ageing of the device under high radiation levels.

Qualification Data and Flight Heritage

Operating Temperature	-30° to 85° Celsius
Radiation	30 kRad
Random vibration	14,1g @ 20-2000 Hz
Shock	3000 g @ 1-100 ms

Flight heritage since 2009
with hundreds of units in orbit.

Mechanical Interface



Technical Characteristics

Type	2 orthogonal axes
Field of View	±60°
Accuracy	< 0.3° (3sigma) < 0.05° (precision)
Mass	35 g
Power supply	5V 75 mA consumption
Mechanical interface	60 x 30 x 12 mm
Housing	Aluminum 6082 Alodine + black anodizing

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