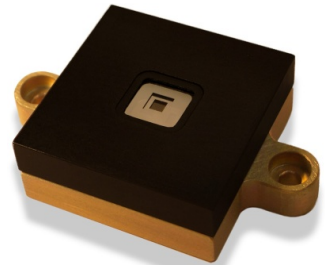


## Sun Sensor for small satellites with analog interface

The Sun Sensor on a Chip (SSOC) architecture, achieved through a MEMS fabrication process, results in a highly integrated sensing structure providing accurate and reliable sun-tracking, pointing and attitude determination.

[sales@spacequest.com](mailto:sales@spacequest.com)  
703-424-7801

The SSOC-A60 device measures the incident angle of the sun's rays in two orthogonal axes, leveraging the geometrical dimensions of the design to provide high sensitivity in a form factor perfect for small satellites.



Every analog sensor is calibrated, characterized, and provided with a look-up table. The use of a metal shield and cover glass over the optical eye minimizes ageing in higher radiation environments.

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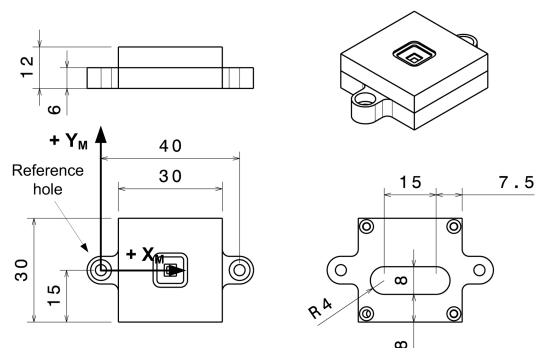
### Technical specifications:

Parameter	SSOC-A60	Unit	Comments
Sensor type	2 axes	-	Orthogonal
Field of view (FOV)	$\pm 60^\circ$	$^\circ$	Angular size of the view cone
Accuracy	$< 0.3$	$^\circ$	$3\sigma$
Precision	$< 0.05$	$^\circ$	-
Average consumption	$< 7.0$	mA	$< 3.0$ mA in dark
Supply voltage	3.3/5	V	-
Output voltages	0-3.3 / 0-5	V	4 analog output photodiode voltages
Mass	25	g	-
Housing	6082		Aluminum, black anodizing

### Qualification Data and Flight Heritage:

Data	Value
Operating Temperature	$-45^\circ$ to $85^\circ$ Celsius
Radiation	$> 100$ kRad (gamma) $6$ MeV 3000 kRad (protons)
Random vibration	$14,1g$ @ 20-2000 Hz
Shock	$3000g$ @ 1-100 ms

The unit includes MEMS technology from Solar MEMS, space grade electronic components and significant flight heritage. More than **50 flight models** have been delivered in support of more than 15 missions.



*Mechanical layout and interface dimensions*