Lodesun

Sun Sensor
Built in the USA for commercial space

Product Specifications	
Sampling Rate	> 10 Hz
Radiation Tolerance	30 krad
Field of View	120°
Angular Accuracy	< 1°
Communication nterface	Ethernet
Factory Calibration	Yes
# of Axes	2
Supply Voltage	20-32 V
Operating Temperature	-24°C to +61°C
Power Consumption	< 1 W
Temperature Compensation	Yes

Product Brief

Second Order Effects (SOE) Lodesun is a compact sun sensor for proliferated LEO and GEO missions. Using new space practices, we are optimizing how the commercial space industry engages with suppliers by reducing costs and securing domestic supply of GNC components using proven commercial technologies.

Design Philosophy

- Utilize proven sensing methodologies with modern compute and control architectures
- Right-size performative design for high volume, constellation customers
- Simple, robust interfaces for ease of integration

Highlights

- Versatile silicon quadrant photodiode sense element
- Wide field of view
- Ethernet interface for robust comms and simple integration
- Designed for high volume production

About Second Order Effects

Who we are

Founded in 2016, SOE specializes in electrical, electro-mechanical and embedded solutions for space applications, delivering high-reliability systems tailored to the demands of orbital and deep-space missions. With expertise spanning radiation-hardened designs, energy-efficient converters, and software, we provide custom architectures that ensure mission-critical performance and longevity in harsh space environments.

Flight heritage

SOE has built avionics across a range of aerospace vehicle subsystems. Our hardware has flown in space and even successfully reentered Earth's atmosphere, including:

- RF and propulsion power converters
- Battery and thermal controllers
- Flight computers and cameras
- Motor controllers

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