SOLARMEMS TECHNOLOGIES

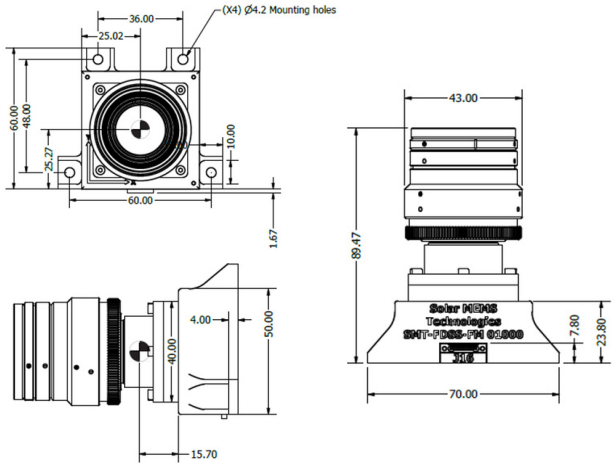
STELION® GEOLOCATION

PROTOTYPE
Engineering Model





Mechanical Interface



measuring scale: mm

Description

STELION-SGS is an advanced optical sensor designed for autonomous, high-precision geolocation and orientation during nighttime operations. By combining multispectral imaging with integrated navigation capabilities, it ensures reliable positioning even when conventional systems like GNSS are unavailable or compromised. Its plug-and-play architecture allows for rapid deployment and seamless integration into existing platforms, while its robust design guarantees resilience against electromagnetic interference and extreme environmental conditions.

For defense clients, STELION-SGS offers critical advantages: it enables secure and accurate location data in GNSS-denied environments, supports mission autonomy without reliance on external electronics, and provides immunity to electronic warfare tactics. These features make STELION-SGS an ideal solution for defense operations requiring dependable geolocation, operational flexibility, and enhanced survivability in contested or harsh scenarios.

Features

Operation	Nighttime
Accuracy	<500m (depending on INS)
Physical Layer	NMEA RS-422 - production units Quaternions - prototype units
Weight	<360g
Power supply	5VDC
Consumption	<3W

Degraded GPS detection capability

Calculates attitude and geolocation using stellar objects

Knowing time and date to determine geographical position.

High-accuracy geolocation when GNSS is denied or critical.

Easy plug-and-play design enabling rapid system integration.

Fully autonomous operation with no external electronics required.