



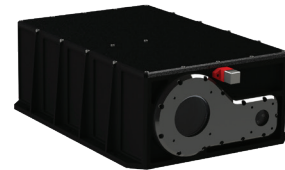
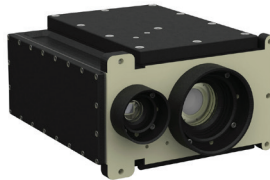
Advanced Scientific Concepts, LLC

INTELLIGENT 3D VISION SENSORS

Global Shutter Flash LIDAR Cameras for Space

GENERAL DESCRIPTION

ASC's GSFL-16KS series global shutter flash LIDAR (gsf-LIDAR) is designed for space applications, including close-proximity spacecraft operations, on-orbit debris removal, synthetic resident space object (RSO) detection, tracking, and characterization, as well as planetary landing hazard detection and avoidance. The GSFL delivers real-time 3D range and intensity video without the dynamic image distortion and sparse point densities common to scanning LIDAR, and it avoids the large data processing delays, as well as the size, weight, and power demands typically associated with single photon detection (SPD) LIDAR technologies. Each pixel is automatically correlated in both space and time. The GSFL-16KS-RH is a radiation-hardened, TRL-9 global shutter flash LIDAR designed for deep space and crewed space missions, while the GSFL-16K-RT model offers an affordable, radiation-tolerant option for short-duration missions.



Parameter	Units	GSFL-16KS-RH	GSFL-16KS-RT
Min / Max Range	m	0.5 / 5000	3 / 1000 0.5 / 1000 (option), 3 / 25,000 (option)
Range Resolution	cm	5	5
Format	Hz	128 x 128	128 x 128
Pixel Pitch	microns	100	100
Frame Rate	Hz	≤20	≤20
Scene Sampling		Global Shutter	Global Shutter
Laser			
Wavelength	nm	1064, 1570	1064, 1570 (option)
Pulse Energy	mJ	0.3-18	20
Width	ns	10	10
FOV	deg	2.5-45	7 2.5-45 (option)
Data		16K-point range and intensity map per frame	16K-point range and intensity map per frame
I/O		RS-422 / High Speed Serial	RS-422 / High Speed Serial Ethernet
Temperature			
Operating	C	-10 to +40	-10 to +40
Non-operating		-40 to +60	-40 to +60
Radiation Tolerance			
Total Ionizing Dose (TID)	Krad(Si)	100	20
Single Event Latchup (SEL)	MeV-cm ² /mg	70	50
Size	in	4.6(H) x 7.4 (W) x 7.7 (L)	4.2(H) x 8.5 (W) x 11.5(L)
Mass	lb	11.2	12.6
Power	W	40 @ 24-34VDC	40 @ 24-34VDC

* Actual range performance is dependent on the scene object size and albedo, the LIDAR laser energy, and the LIDAR FOV.

For additional information and pricing:

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