HYBRID LIDAR SYSTEMS AG

ABSTRACT

The new LiSSA 4D-LiDAR sensor with patented hybrid technology makes autonomous driving possible.

With our product LiSSA 4D LiDAR we can offer the first system that meets the requirements of the automotive industry and is a true solid-state sensor. Compared to other LiDAR manufacturers, LiSSA 4D LiDAR is much more cost-effective and enables parallel measurements in the far and near field at the same timeslot. The high resolution and the simultaneous scanning of far and near field are only possible with Hybrid Lidar due to the protected USPs.
The central image area is multispectral scanned, which allows better data quality and redundancy.

TECHNICAL DATA LISSA-AUTOMOTIVE G25

	LONG RANGE	SHORT RANGE (2 parts)
OPTICAL PERFORMANCE		
TECHNOLOGY	SEQUENTIAL SOLID-STATE LIDAR (NO MOVING PARTS), 4D DATA OUTPUT VIA ETHERNET	
WAVE LENGTH	850, 905, 940 nm (customized)	
LASER CLASS	CLASS 1, EYE-SAFETY	
RANGE (10% OBJECT REFLECTIVITY)	Up to 220 m	65 m
RESOLUTION (H x V)	400 x 300 px	1600 x 300 px
RESOLUTION px	120,000 px	480,000px
RESOLUTION ANGULAR	0,1° x 0,033°	0,1° x 0,1°
FIELD OF VIEW (H x V, CUSTOMIZABLE)	40° x 10°	160° x 30°
NUMBER OF ECHOS	4-16	
FRAME RATE	25	
Measured points (1/s)	30,000,000,000 measured points per second	
MECHANICS/ ENVIRONMENT/ CONSUMPTION		
DIMENSIONS (W x H x D, CUSTOMIZABLE)	126 x 79 x 98 mm	
WEIGHT	1290 g (triple sensor)	
OPERATING TEMPERATURE RANGE	-40° to +85°C	
PROTECTION CLASS (DUST, WATER)	IP6K9K	
SUPPLY VOLTAGE (CUSTOMIZABLE)	12V (FROM CONTROL UNIT)	
POWER CONSUMPTION	< 40 W	
INTERFACE		
POWER SUPPLY	ACC. CUSTOMER	
DATA	ETHERNET ACC. CUSTOMER	

This data sheet shows the Automotive series product, which is currently under development.

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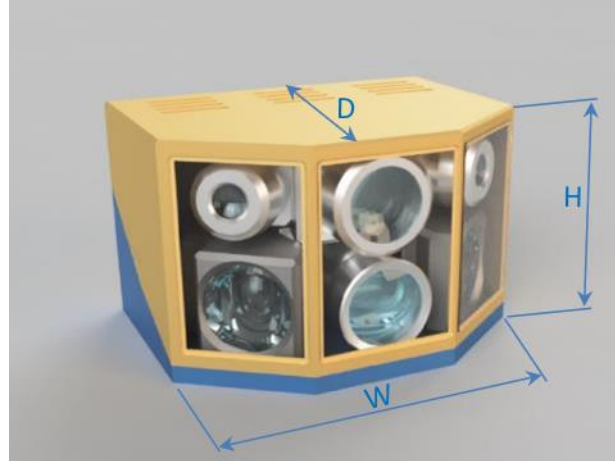
W 126 / H 79/ D98

Automotive Triple Sensor.

Can be customized according to customer requirements

Example for position of LiSSA Automotive in the car
Automotive wide short & long range

80°
65m

Near-Field

40°
220m

Multispectral
Lidar Area

Far-Field

120.000 Pixel Far-Field
+
480.000 Pixel Near-Field

⇩

Up to 30.000.000.000 events
per second (25fps)

80°
65m

30° 65m

10°
220m

Far-Field Area

Near-Field Area