ibeo
LUX

ibeo LUX

ibeo sensors are the perfect basis for sophisticated and reliable automotive applications. They offer all the benefits of scanning LIDAR systems, are multi-application, weather proof and at the same time unbelievably compact.

The ibeo LUX is a real all-rounder for use in urban traffic and on the motorway. From the ACC application to pedestrian protection. ibeo LUX sensors work accurately and reliably even at high speeds, in poor weather conditions and heavy traffic.

ibeo LUX advantages:

- **High field of view** up to 200 m
- **All-weather capability** thanks to ibeo multi-echo technology
- **Object tracking** (embedded data processing)
- **Wide horizontal field of vision**

IBEO LUX (model 2010) - Technical facts

Laser

Laser class:	Class 1, Eye safe
Wave length:	905 nm
Technology:	Time of flight
	Output of distance and echo pulse width
Range:	200 m/ 650 ft (average distance)
	50 m/ 164 ft @ 10% remission

Measurement

Horizontal field of view:	2 layers: 110 deg (50 deg to -60 deg)
	4 layers: 85 deg (35 deg to -50 deg)
Vertical field of view:	3.2 deg
Multi layer:	4 scanning layers
Multi echo:	Up to 3 distance measurements per laser pulse (allow measurements through atmospheric clutter like rain and dust)
Data update rate:	12.5/ 25.0/ 50.0 Hz
Operating temperature range:	-40 to 85 deg C/ -40 to 185 deg F
Accuracy (distance independent):	10 cm/ 3.9 in
Angular resolution:	Horizontal: up to 0.125 deg
	Vertical: 0.8 deg
Distance resolution:	4 cm/ 1.57 in

Software

Raw data pre processing (embedded):	All measurements will be classified and tagged as valid/ ground/ clutter
Real time object tracking (embedded):	Object properties: position, size, speed
Ego motion compensation (embedded):	Requires vehicle ego motion data
Fusion:	Up to 6 sensors, also in combination with ibeo LUX HD.

Mechanical/ Electrical

Power supply:	9 to 27 V
Power consumption:	8 W (average), < 10 W (max)
Dimensions (W x D x H):	164.5 x 93.2 x 88 mm³/ 6.4 7 x 3.67 x 3.46 in³
Protection class:	IP 69 K (IEC 60529, DIN 40050-9 (using protected plug connectors))
	IP 68 (IEC 60529 (2 m, 24 h))

Data I/O

100 MBit Ethernet:	Output: Raw- and object data
	Input: Configuration
CAN:	Output: Object data
	Input: Ego motion data
RS232:	Sync