Leddar®
sensor evaluation kit

High-performance, cost-effective, detection and ranging for any environment.

The Leddar Sensor Evaluation Kit is designed to let you test the power of Leddar in your application, before you commit to mass deployment. Leddar sensor modules can be easily integrated into almost any system. Their compact size, low weight, ease of integration, low power consumption, and high reliability enables developers and integrators to add advanced sensing capabilities with unmatched flexibility.

Leddar sensors provide continuous, rapid and accurate detection and ranging — including lateral discrimination — in the entire wide beam, without any moving parts. After a successful trial validating the benefits of our cutting-edge technology, you can choose the module that's right for you and adapt it to suit the specific requirements of your application.

Features
- 16 independent segments with simultaneous acquisition and lateral discrimination capabilities
- 45º beam
- 0 to 50 m detection range (165 ft.)
- Highly adaptable: various form factors, ranges and beams available

Benefits
- Proven reliability, even in harsh conditions
- Immune to ambient light
- No moving parts, for ultimate robustness
- Easy to integrate, includes Leddar Enabler SDK
- Low power consumption
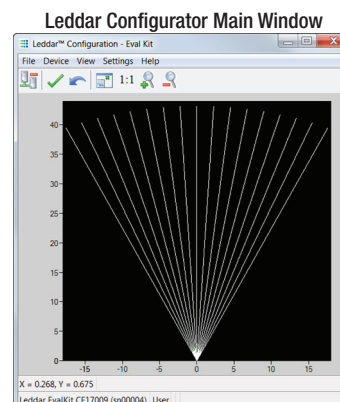- Best cost/performance ratio
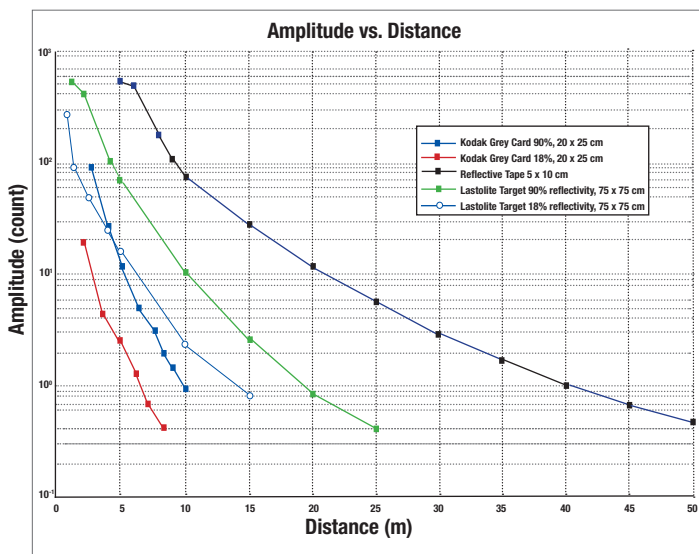
Receiver Assembly
The Leddar receiver includes 16 independent segments with simultaneous acquisition capabilities. Several beam options are available, ranging from 9° to 95° (see back page). The beam width and height depend on the selected beam option.

Source and Control Assembly
The Leddar source and control assembly includes IR LED emitters with a dominant wavelength of 940 nm and incorporates the processing and I/O for the targeted applications. The source and control assembly beam matches the receiver assembly.

Software Development Kit
The Leddar Enabler SDK provides a user-friendly application programming interface (API) with .Net and C libraries and code examples. Sample code for RS-485/MODBUS for both Windows and Linux, as well as LabVIEW and MATLAB integration examples, are also provided.

Amplitude vs. Distance

Legend:
- Kodak Grey Card 90%, 20 x 25 cm
- Kodak Grey Card 18%, 20 x 25 cm
- Reflective Tape 5 x 10 cm
- Lastolite Target 90% reflectivity, 75 x 75 cm
- Lastolite Target 18% reflectivity, 75 x 75 cm

Amplitude (count) vs Distance (m)

Leddar Configurator Main Window

Raw Detections Dialog Box

Segm...	Distance	Amplitude	Flags
1	3.07	20.14	01
2	0.90	26.10	01
3	0.58	39.79	01
4	2.34	28.41	01
5	2.81	48.48	01
6	2.84	66.23	01
7	2.84	72.82	01
8	2.82	70.76	01
9	2.83	61.80	01
10	2.83	30.29	01
11	2.84	24.34	01
12	2.90	23.02	01
13	2.94	40.71	01
14	2.97	42.62	01
15	3.05	33.35	01
16	3.09	21.41	01

Min Amplitude: 0
Max Amplitude: 1024.0
Min Distance: 0
Max Distance: 100.0

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Features

Beam	45°
Interfaces	USB, RS-485, CAN
Wavelength	940 nm
Power supply	12 or 24 VDC
Dimensions	114 mm x 76 mm x 46 mm
Weight	265 g

System performance

Detection range	0 to 50 meters (165 ft.) [1]
Accuracy	5 cm
Data refresh rate	1.5625 to 100 Hz
Operating temperature range	-40°C to + 85°C
Meets IEC 62471: 2006 criteria	Exempt lamp classification
Acquisition	16 segments simultaneously
Distance precision	6 mm
Distance resolution	10 mm
Power consumption	4 W

[1] Varies according to target.

Height and Width of 45° Beam Option

7.5°

2.8°
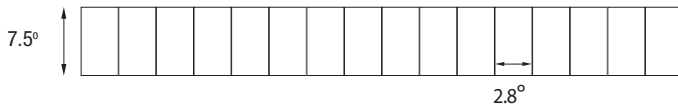
Ordering Information

LED - EVAL - 45 - 10

Interfaces
10 = USB, RS-485, CAN

Beam
45°

Included with the Leddar™ Evaluation Kit:
- Receiver assembly
- Source and control assembly
- Mounting bracket
- Power supply
- Leddar Configurator CD
- USB cable

DIFFERENT LEDDAR SENSOR MODULES FOR DIFFERENT NEEDS

	M16						IS16	LeddarOne
	MULTI-ELEMENT MODULES							SINGLE-ELEMENT MODULE
Beam (°)	9	18	24	36	45	95	45	3
Range (m)	100	80	70	60	50	20	50	40
Wavelength (nm)	940						940	850
Data refresh rate (Hz)	Up to 100						Up to 50	Up to 70
Accuracy (cm)	5						5	5
Distance precision (mm)	6						6	5
Distance resolution (mm)	10						10	3
Dimensions (mm)	104 x 66 x 48						136 x 86 x 70	50.8 (diameter)
Power consumption (W)	4						5.6	1.3
Interfaces	USB, RS-485, CAN, UART						USB, RS-485	3.3 V UART or RS-485
IP67 weather-resistant enclosure	NO						YES	NO

LeddarTech®
www.leddartech.com