

Integratable Laser Module

Carlson's Integratable Laser Module (ILM) is an OEM laser module designed to be integrated into third party products which require raw distance measurement. ILM modules may be configured to output distance measurements, speed or a customizable digital trigger.

The ruggedised nature of the ILM makes the module capable of being integrated in products used in demanding industries such as transport, law enforcement, mining, quarrying, military and drones.

There are four hardware varieties: ILM-35, ILM-150, ILM-500 and ILM-1200.

All ILM units run the same firmware and the setup of each ILM can be configured using the ILM Configuration Tool.

This software allows you to customise firing rates, filters, averaging, speed measurements, triggers and output formats.



Hardware Model	Max Range	Laser Class
ILM-35	35 m	Class 1M
ILM-150	150 m	Class 1M
ILM-500	500 m	Class 1M
ILM-1200	1200 m	Class 1M

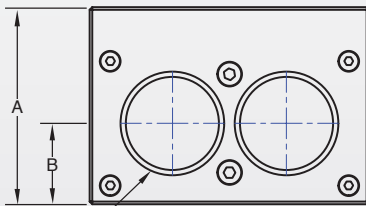


Figure 1: ILM-35 and ILM-150

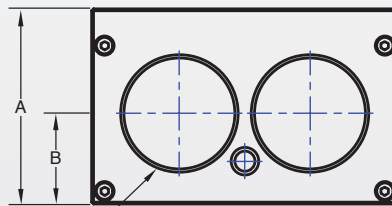


Figure 2: ILM-500

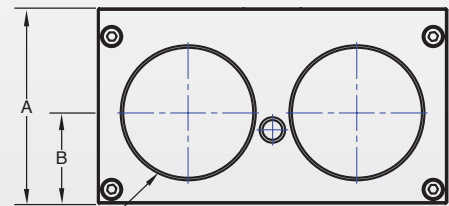
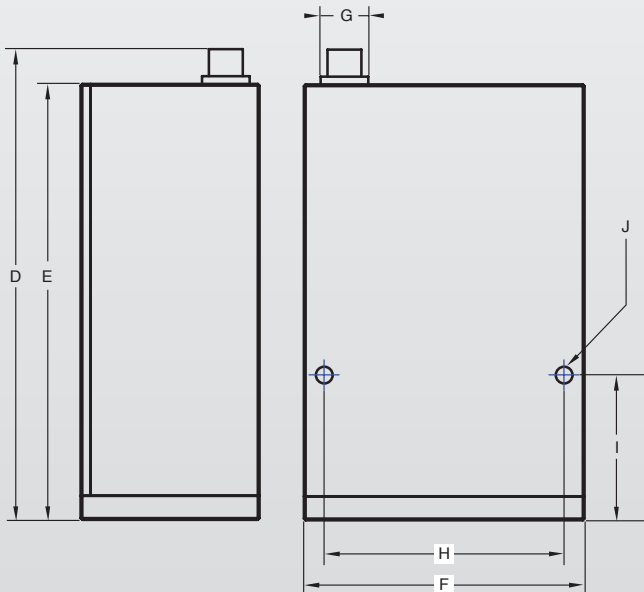


Figure 3: ILM-1200



ILM Dimensions

	ILM-35-HR	ILM-150-HR	ILM-500-HR	ILM-1200-HR
Key dimensions				
A	38* (Fig 1)	38* (Fig 1)	53 (Fig 2)	69 (Fig 3)
B	16 (Fig 1)	16 (Fig 1)	25 (Fig 2)	32 (Fig 3)
C	ø 18 (Fig 1)	ø 18 (Fig 1)	ø 30 (Fig 2)	ø 46 (Fig 3)
D	113*	113*	139	147
E	103*	103*	129	137
F	54	54	83	124
G	ø 14	ø 14	ø 14	ø 14
Mounting dimensions				
H	46	46	71	Please contact Carlson for dimensions.
I	40	40	43	
J	M4 x 0.7	M4 x 0.7	M6 x 1.0	

*Modified dimension only applicable when purchased from Mindrum Precision

	ILM-35	ILM-150	ILM-500	ILM-1200
Performance				
Max measuring range (90%)	35 m	150 m	500 m	1200 m
Max measuring range (18%)	17.5 m	75 m	250 m	600 m
Min measuring range	0.5 m	0.5 m	1 m	10 m
Accuracy	10 cm			
Data rate	1000 Hz			
Resolution	1 cm			
Electrical				
Power consumption	< 5 W			
Supply voltage	9 to 24 V dc			
Mechanical				
Housing materials	Anodised aluminium			
Weight	320 g	320 g	710 g	1400 g
Optical				
Laser classification	Class 1 M			
Typical spot size at distance	24 x 115 m (35 m)	46 x 435 mm (150 m)	103 x 1152 mm (500 m)	198 x 2667 mm (1200 m)
Average power	Up to 250 µW	Up to 250 µW	Up to 450 µW	Up to 1.5 mW
Wavelength (peak)	905 nm			
Pulse energy	250 nJ	250 nJ	450 nJ	1.5 nJ
Inputs / outputs				
Connection type	Fischer DBEE-102A054-130			
Standard adaptor cable	2 m Fischer to D-type serial			
I/O	RS232			
Baud rate	9600-115200			
Trigger out (digital)	FET open drain			
Environment				
IP degree of protection	IP67			
Vibration resistance	BS EN 60068-2-6:2008 TR2130C-5-1:2002			
Operating temperature range	-20 °C to +60 °C			
Storage temperature	-20 °C to +90 °C			



For further information and the best possible application and performance support please contact Carlson at lasermeasurement@carlsonsw.com