

ILM-HR Industrial Laser Module

ILM-HR DIMENSIONS

	ILM-35-HR	ILM-150-HR	ILM-500-HR	ILM-1200-HR
Key dimensions				
A	43 (Fig 1)	43 (Fig 1)	53 (Fig 2)	69 (Fig 3)
B	16 (Fig 1)	16 (Fig 1)	25 (Fig 2)	32 (Fig 3)
C	∅ 18 (Fig 1)	∅ 18 (Fig 1)	∅ 30 (Fig 2)	∅ 46 (Fig 3)
D	116	116	139	147
E	106	106	129	137
F	54	54	83	124
G	∅ 14	∅ 14	∅ 14	∅ 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	

Dimensions given in mm

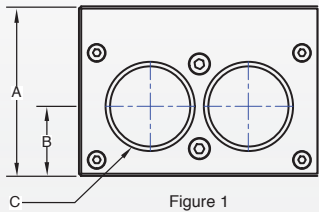


Figure 1

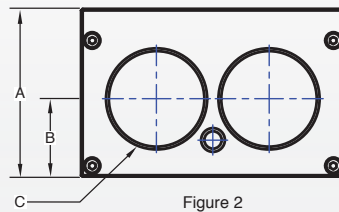


Figure 2

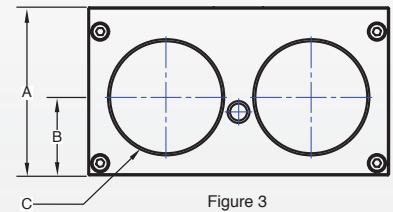
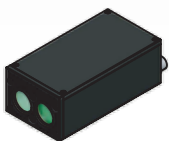
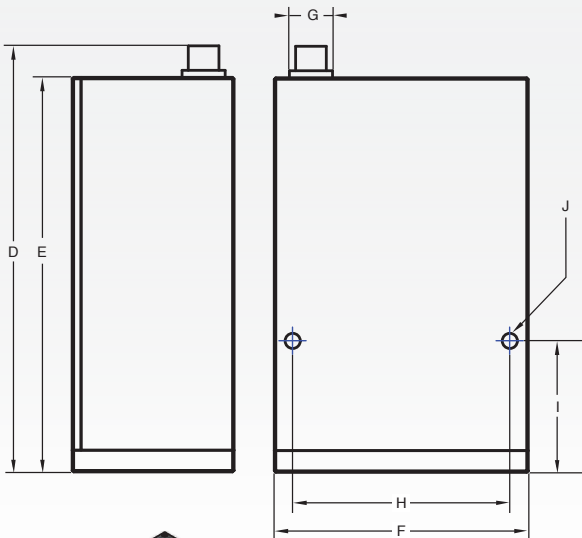


Figure 3



Electrical connections

- Fischer DBEE-102A054-130 is located on the rear of the ILM unit.
- A standard 2 m adaptor cable is available with each unit, which converts the Fischer connector to a 9-way D-type and two flying leads for power.

The pin outs for these connectors are described in the table below.

Function	Fischer pin number	9-way D-type pin number
GND (0 V)	1	5
+9 V to 24 V dc	2	Not connected
Data out	3	2
Data in	4	3
Trigger out	5	Not connected

** Max measuring ranges are recorded against Kodak white card (90% reflectivity) and grey card (18% reflectivity).
 ** Completed to Kodak white card, statistical error of 1σ. Both specifications are tested under standard Carlson test conditions.
 *** Viewing the laser output with certain optical instruments designed for use at distance (for example, telescopes and binoculars) may pose an eye hazard.
 **** Environmental compability requirements of EN 60529:1992+A1:2002.

Please note: Observed performance is application specific and dependent on a number of environmental and target parameters. As a result it may vary from the performance figures stated above. It is the customer's responsibility to confirm that laser performance is acceptable for their application. Please discuss with your local Carlson office or distributor for further information. The following clause applies for instruments delivered into the United States: Complies with 24 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice 50, dated 24 June 2007.

**CLASS 1
LASER PRODUCT**

**LASER RADIATION
DO NOT VIEW DIRECTLY
WITH OPTICAL INSTRUMENTS
CLASS 1M LASER PRODUCT**

	ILM-35-HR	ILM-150-HR	ILM-500-HR	ILM-500-HR
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	10 cm	10 cm	10 cm
Repeatability**	10 cm	10 cm	10 cm	8 cm
Date rate - output (max)	400 Hz	400 Hz	400 Hz	1000 Hz
Resolution	10 cm	10 cm	10 cm	1 cm
Electrical				
Power consumption	< 5 W	< 5 W	< 5 W	< 5 W
Supply voltage	9 tp 24 V dc	9 tp 24 V dc	9 tp 24 V dc	9 tp 24 V dc
Mechanical				
Dimensions (L x W x H)	116 x 54 x 43 mm	116 x 54 x 43 mm	116 x 54 x 43 mm	116 x 54 x 43 mm
Housing materials	Anodised aluminium	Anodised aluminium	Anodised aluminium	Anodised aluminium
Weight	320 g	320 g	710 g	1400 g
Optical				
Laser classification	Class 1	Class 1	Class 1 MM***	Class 1 MM***
Beam divergence	2.45 x 1.50 mrad	2.45 x 1.50 mrad	2.45 x 1.50 mrad	2.45 x 1.50 mrad
Typical spot size at distance	0.104 x 0.071 m (35m)	0.386 x 0.243 m (150m)	1.028 x 0.767 m (500m)	2.746 x 1.846 m (1200m)
Wavelength (peak)	905 nm	905 nm	905 nm	905 nm
Max pulse energy	306 nJ	306 nJ	1020 nJ	1100 nJ
Light source	InGaAs Laser diode	InGaAs Laser diode	InGaAs Laser diode	InGaAs Laser diode
Inputs / outputs				
Connection type	Fischer DBEE-102A054-130	Fischer DBEE-102A054-130	Fischer DBEE-102A054-130	Fischer DBEE-102A054-130
Standard adaptor cable	Fischer to 9-way D-type cable 2 m	Fischer to 9-way D-type cable 2 m	Fischer to 9-way D-type cable 2 m	Fischer to 9-way D-type cable 2 m
I/O	RS232	RS232	RS232	RS232
Baud rate	38400	38400	38400	115200
Environment				
IP degree of protection ****	IP67	IP67	IP67	IP67
Vibration resistance	BS EN 60068-2-6:2008 TR2130C-5-1:2002	BS EN 60068-2-6:2008 TR2130C-5-1:2002	BS EN 60068-2-6:2008 TR2130C-5-1:2002	BS EN 60068-2-6:2008 TR2130C-5-1:2002
Operating temperature range	-20 °C to +60 °C	-20 °C to +60 °C	-20 °C to +60 °C	-20 °C to +60 °C
Storage temperature	-20 °C to +90 °C	-20 °C to +90 °C	-20 °C to +90 °C	-20 °C to +90 °C
Tests and approvals				
CE conformity	DoC available	DoC available	DoC available	DoC available
Safety of laser products	BS EN 60825-1:2014	BS EN 60825-1:2014	BS EN 60825-1:2014	BS EN 60825-1:2014
FCC compliance	CFR47 Part 15	CFR47 Part 15	CFR47 Part 15	CFR47 Part 15
EMC	BS EN 61326-1:2013	BS EN 61326-1:2013	BS EN 61326-1:2013	BS EN 61326-1:2013

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