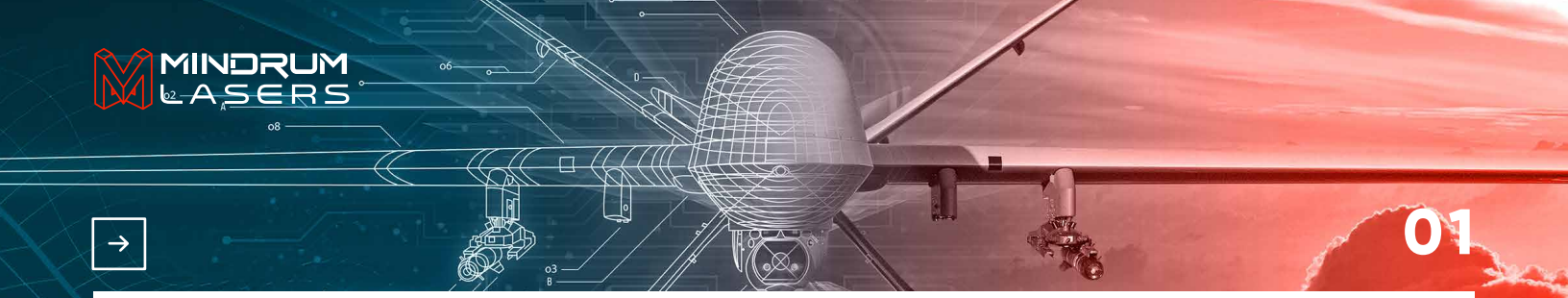


01

ILM Industrial Laser Module

T VARIANT - TRIGGER

This high-end measurement system is designed for constant use, when the reliability and dependability of your data is of the utmost importance. Measurement outputs include distance, or detection triggers, or can be customized to include any combination of these three elements.

02

KEY DIMENSIONS (MM)

	ILM-35	ILM-150	ILM-500
A	38	38	53
B	16	16	25
C	⌀ 18	⌀ 18	⌀ 30
D	113	113	139
E	103	103	129
F	54	54	83
G	⌀ 14	⌀ 14	⌀ 14

MOUNTING DIMENSIONS (MM)

H	46	46	71
I	40	40	43
J	M4 x 0.7	M4 x 0.7	M6 x 1.0

ILM-35/150

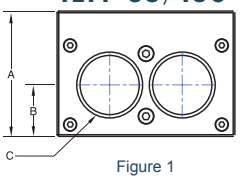


Figure 1

ILM-500

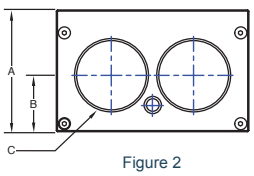
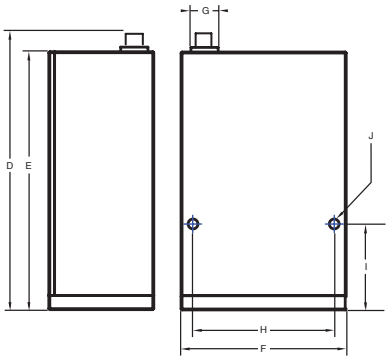


Figure 2

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.

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, which may result in variations from the performance figures stated above. It is the customer's responsibility to confirm that laser performance is acceptable for their application. Please contact Mindrum with any related questions, and we will be happy to assist you. Complies with 21 CFR 1040.10 and 1040.11 except for conformance with IEC 60825-1 Ed. 3., as described in Laser Notice 56, dated May 8 2019.

Specifications

PERFORMANCE	ILM-35-T	ILM-150-T	ILM-500-T
MAX MEASURING RANGE (90%)*	35 m	150 m	500 m
MAX MEASURING RANGE (18%)*	17.5 m	75 m	250 m
MIN MEASURING RANGE	0.5 m	0.5 m	1m
ACCURACY**	10 cm	10 cm	10 cm
REPEATABILITY**	10 cm	10 cm	10 cm
DATE RATE - OUTPUT (MAX)	750 Hz	750 Hz	750 Hz
RESOLUTION	1 cm	1 cm	1 cm
ELECTRICAL			
POWER CONSUMPTION	< 5 W	< 5 W	< 5 W
SUPPLY VOLTAGE	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	139 x 83 x 53 mm
HOUSING MATERIALS	Anodised aluminium	Anodised aluminium	Anodised aluminium
WEIGHT	320 g	320 g	710 g
OPTICAL			
LASER CLASSIFICATION	Class 1 M	Class 1 M	Class 1 M
BEAM DIVERGENCE	2.45 x 1.50 mrads	2.45 x 1.50 mrads	2.45 x 1.50 mrads
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)
WAVELENGTH (PEAK)	905 nm	905 nm	905 nm
MAX PULSE ENERGY	306 nJ	306 nJ	1020 nJ
LIGHT SOURCE	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
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
I/O	RS232	RS232	RS232
BAUD RATE	115200	115200	115200
TRIGGER OUT (DIGITIAL)	FET open drain	FET open drain	FET open drain
ENVIRONMENT			
IP DEGREE OF PREOTECTION ****	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
OPERATING TEMPERATURE RANGE	-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
TESTS & APPROVALS			
CE CONFORMITY	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
FCC COMPLIANCE	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