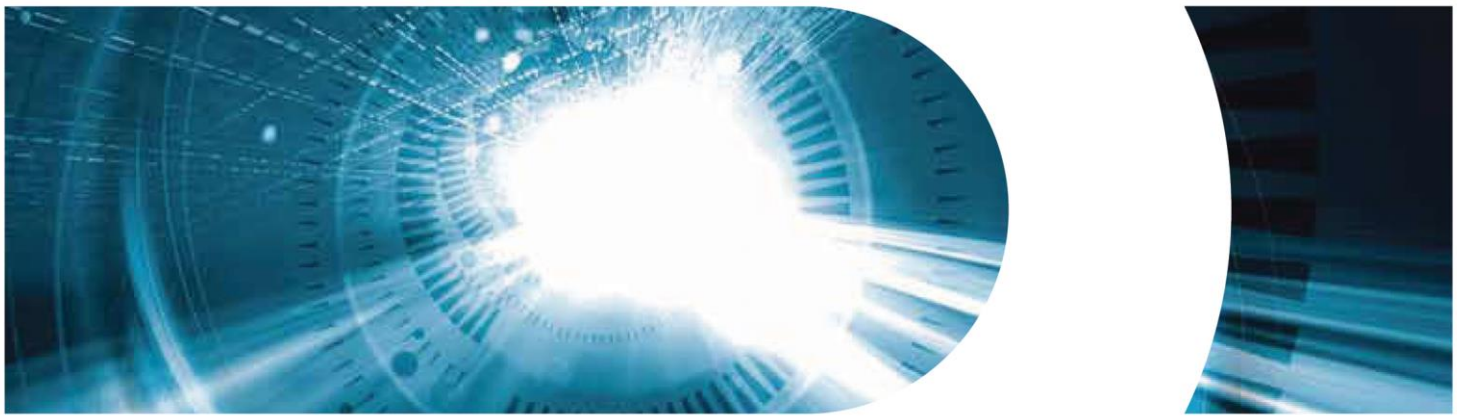


Sub-Systems
Continuous Fiber Lasers

Key Features

- Up to 50 W output power
- Excellent beam quality
- Maintenance free operation
- OEM format or rackmount
- Air cooled

Applications

- Cutting
- Marking
- Sintering
- Soldering
- Welding

TARV

1.0 µm CW High Power Fiber Laser

The TARV is a compact CW fibre laser delivering up to 50 W of output power through a near diffraction limited beam.

The excellent beam quality and power stability make this fibre laser a multi-propose tool.

Our patented “Injection Technology” allows the use of highly reliable broad area laser diode pumps, for a cost-effective and maintenance-free operation.

The all fibre design guarantees the robustness of the laser, without any optical parts to align or to stabilize. The simple integration of the system requires no after-installation service.

3SPGroup offers two formats: OEM modules or rackmount.

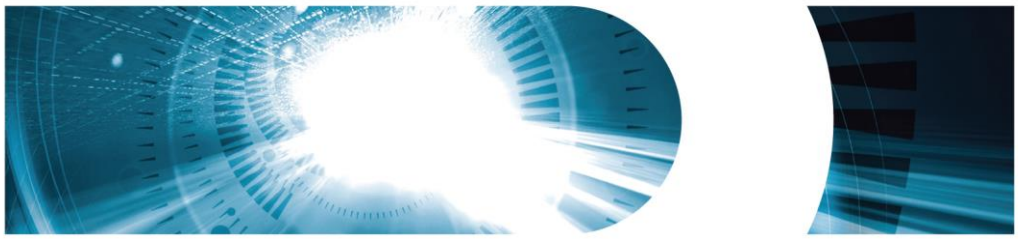
The TARV is the ideal solution for a broad range of material processing and scientific applications.

For more Info

Please contact us at:
Europe & Asia: +33 169 805 833
North America: +1 514 748 4848
+1 888 922 1044
sales@3spgroup.com

TARV

1.0 µm CW
High Power
Fiber Laser



ELECTRO-OPTICAL **CHARACTERISTICS**

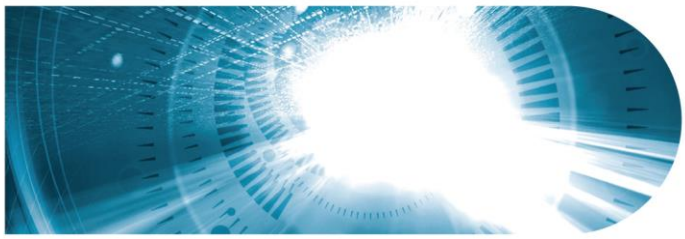
Parameters		Value					Unit
Operating mode		CW - Modulated					-
Central wavelength	(1)	1064				1080	nm
Nominal output power		5	10	20	30	50	W
Output power tunability	(2)	10 - 100					%
Long term stability	(3)	< 2					%RMS
Modulation bandwidth		up to 10					kHz
Signal linewidth		< 1.0				< 3.0	nm
Polarization		Random					-
Output fibre length		1	3				m
Output fibre termination		Collimator					-
Beam diameter (at 1/e²)		2.2	5				mm
Beam quality		< 1.1					M²
Output isolator	*	Optional					-
Control mode	*	ACC / APC				ACC	-
OEM HOUSING							
Model		OEM45	OEM65			OEM75	-
Storage temperature		-20 to +60					°C
Operating temperature	(4)	0 to +50					°C
Control interface	*	RS232	Analog or RS232			RS232	-
Operating voltage DC		12				24	V
Power consumption		< 30	< 60			< 300	W
Dimensions		150x150x45	230x178x65			270x255x75	mm³
Weight		< 1.0	< 3.5			< 6.0	kg
RACK HOUSING							
Model		TKS					-
Storage temperature		0 to +50					°C
Operating temperature		+15 to +35					°C
Control interface		Front panel or USB					-
Operating voltage AC		88 to 264 (50 to 600 Hz)					V
Power consumption		< 900					W
Dimensions		3U 19”: 448x451x132					mm³

* see the available options codification in the ORDERING **INFORMATION** section.

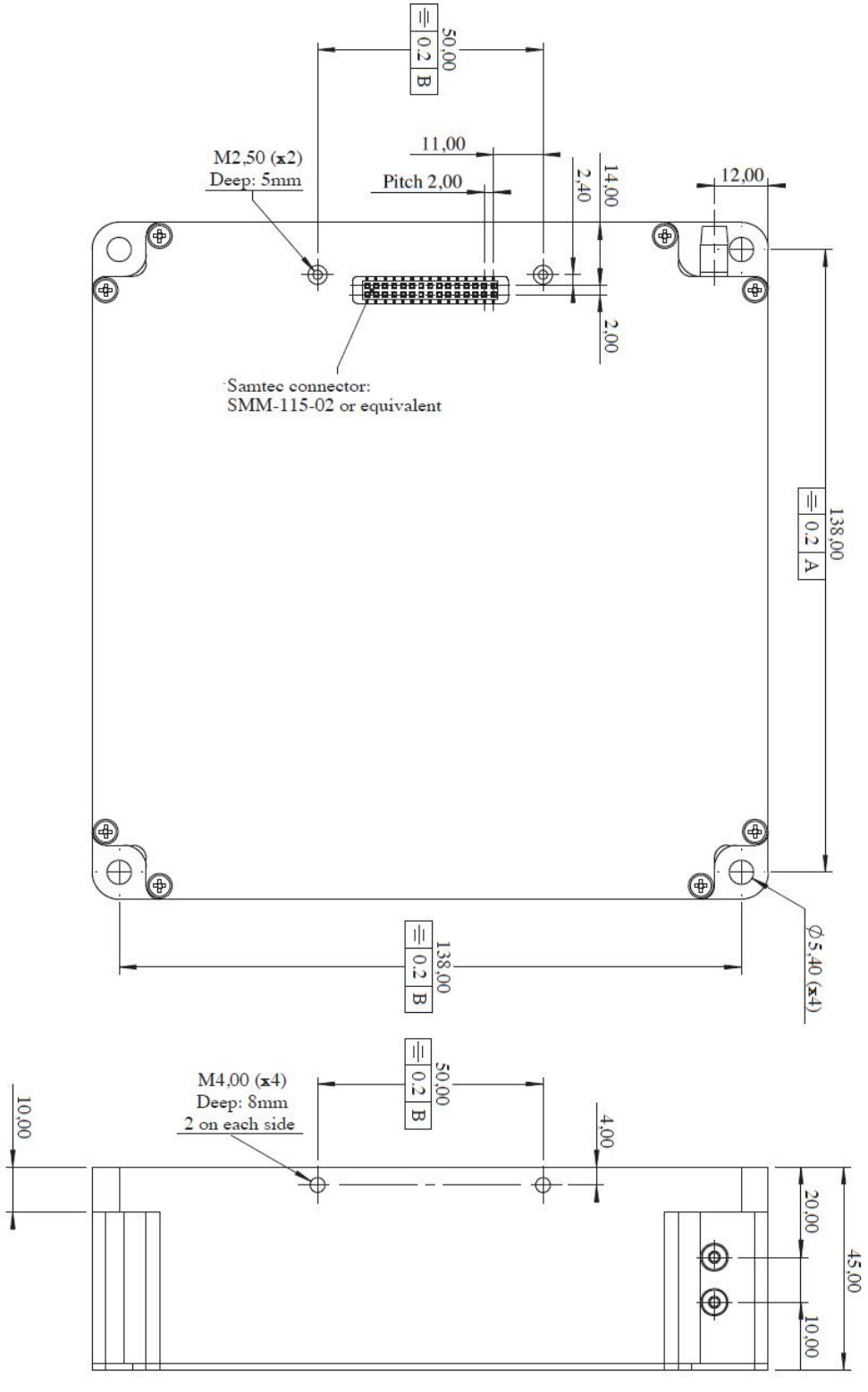
(1) other wavelengths available in the range 1030-1100 nm
(2) RS232 adjustment or analog output power adjustment (optional)
(3) over 1h@25°C, 1 sec sampling rate
(4) optional extended range from -35 °C to +65 °C

TARV

1.0 µm CW
High Power
Fiber Laser



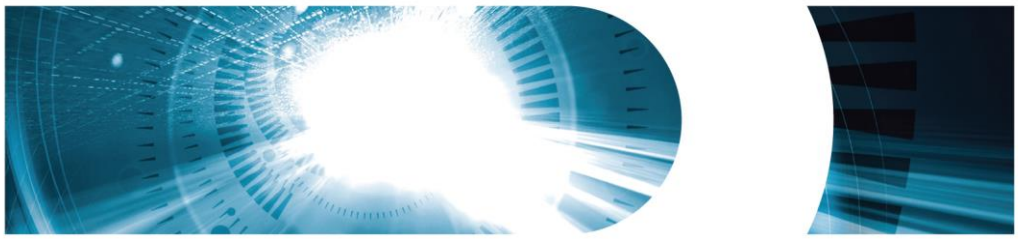
MECHANICAL **DETAILS – OEM45**



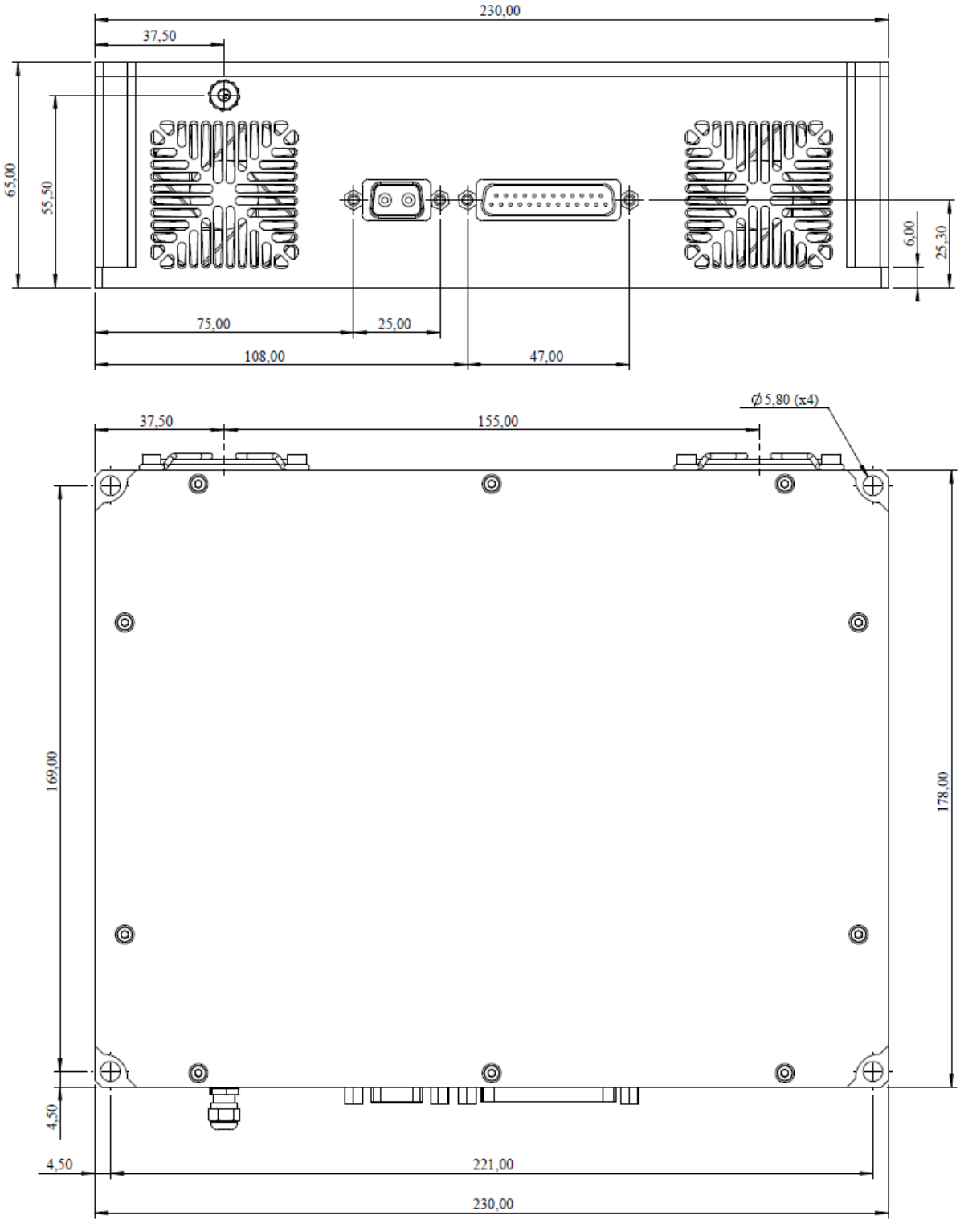
Dimensions are in mm

TARV

1.0 µm CW
High Power
Fiber Laser



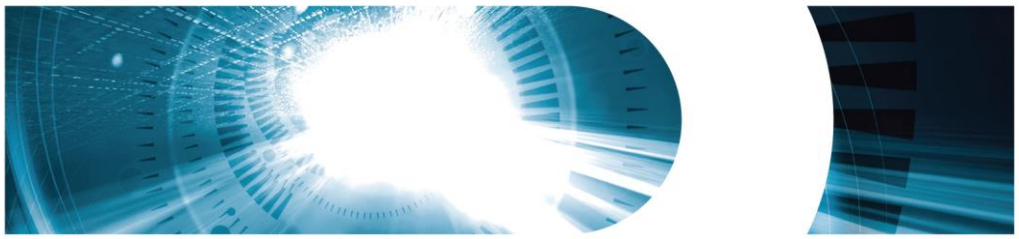
MECHANICAL **DETAILS – OEM65**



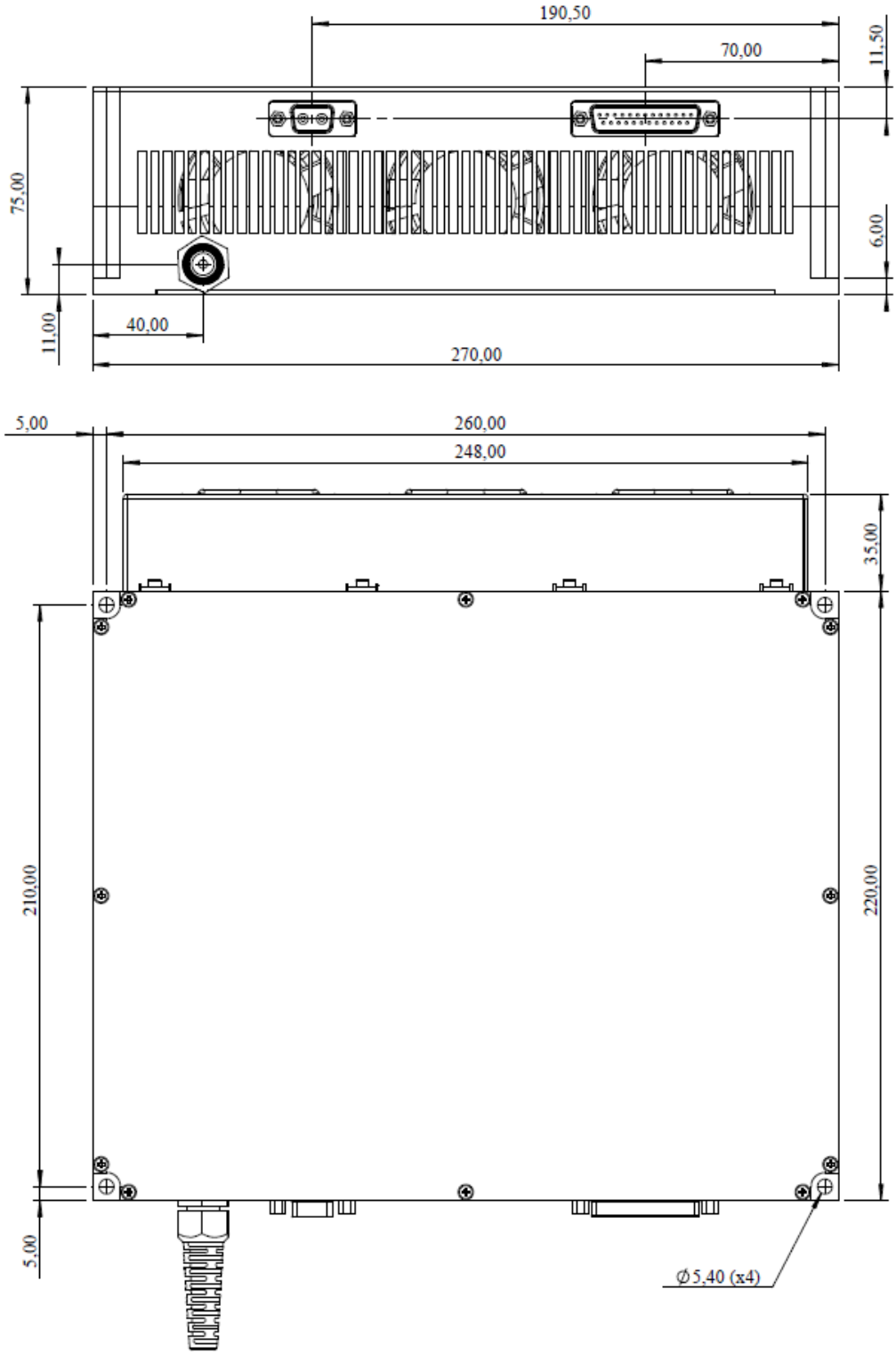
Dimensions are in mm

TARV

1.0 µm CW
High Power
Fiber Laser



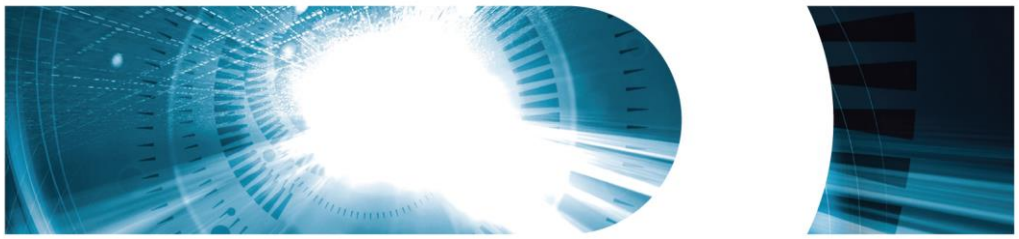
MECHANICAL **DETAILS – OEM75**



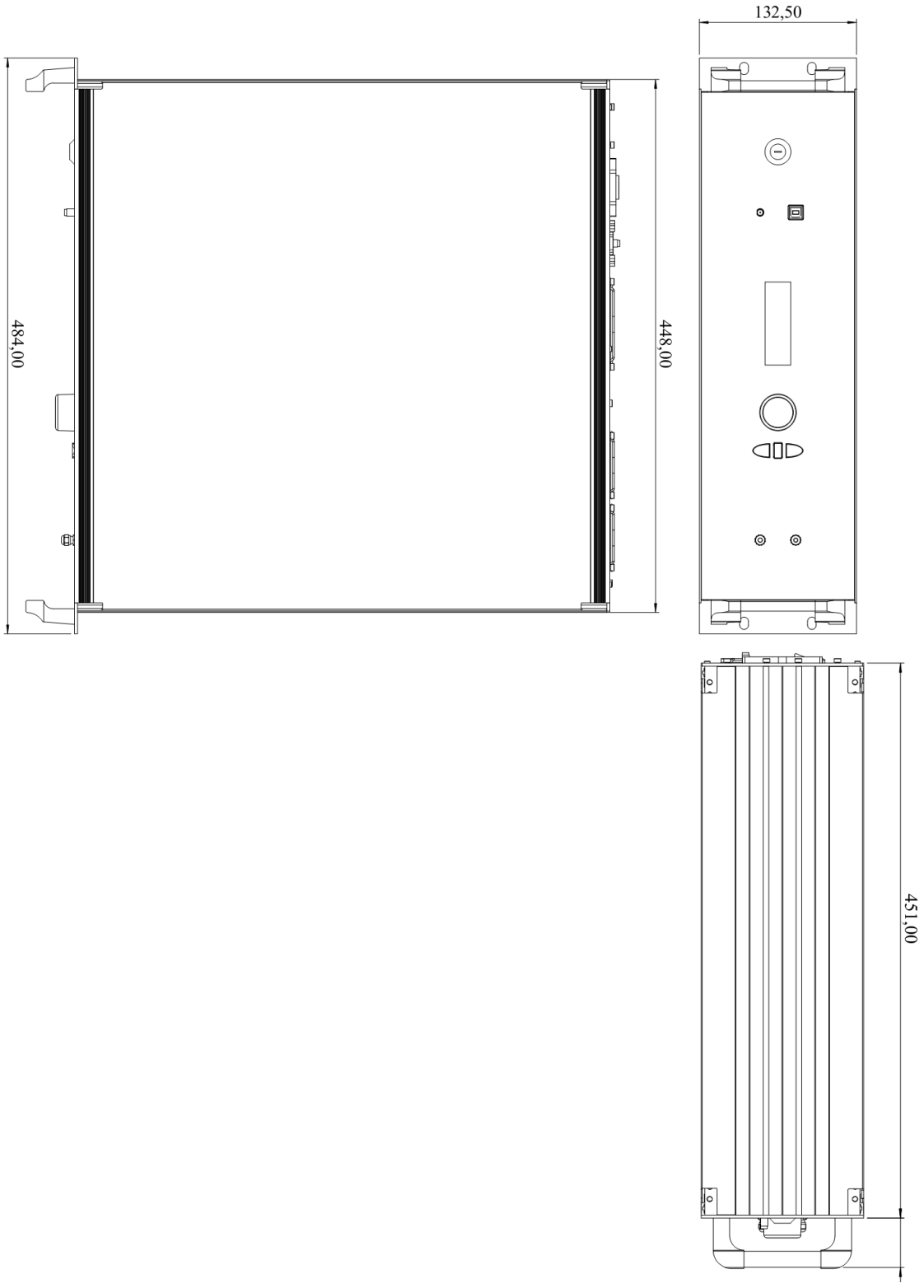
Dimensions are in mm

TARV

1.0 µm CW
High Power
Fiber Laser



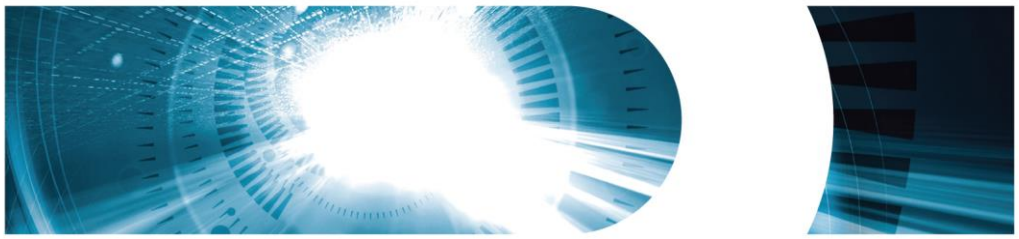
MECHANICAL **DETAILS – TKS**



Dimensions are in mm

TARV

1.0 µm CW
High Power
Fiber Laser



PIN **ASSIGNEMENT for OEM45 – TTL Trigger**

SAMTEC SMM-115-02-S-D-30 female connector

Description	Pin N°		Description
+12 V DC	2	1	+12 V DC
+12 V DC	4	3	+12 V DC
GND	6	5	GND
RS232 TX (TTL input)	8	7	RS232 RX (TTL output)
GND	10	9	GND
Reserved - do not connect	12	11	External trigger input (TTL, high impedance)
Burst input (TTL input)	14	13	Laser activation input ADI *TTL low : laser ON* *TTL high or disconnected : laser OFF*
Reserved - do not connect	16	15	Unit case temperature alarm (TTL output)
Laser diodes current alarm (TTL output)	18	17	Laser temperature alarm (TTL output)
Laser operating status output (TTL output)	20	19	Trigger alarm (TTL output)
GND	22	21	GND
Reserved - do not connect	24	23	Reserved - do not connect
GND	26	25	GND
+12 V DC	28	27	+12 V DC
Void	30	29	+12 V DC

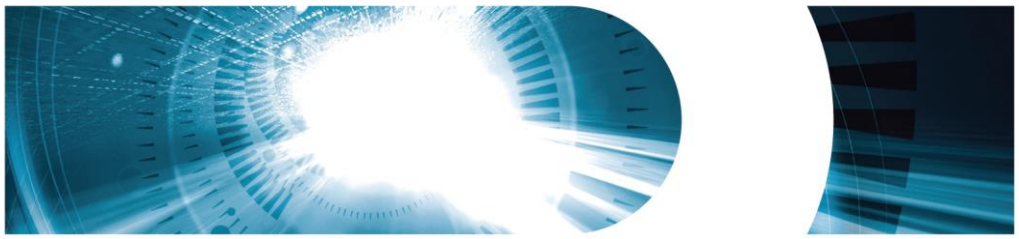
PIN **ASSIGNEMENT for OEM45 – LVDS Trigger**

SAMTEC SMM-115-02-S-D-30 female connector

Description	Pin N°		Description
+12 V DC	2	1	+12 V DC
+12 V DC	4	3	+12 V DC
GND	6	5	GND
Reserved - do not connect	8	7	Reserved - do not connect
GND	10	9	GND
Reserved - do not connect	12	11	Reserved - do not connect
Burst input (TTL input)	14	13	Laser activation input ADI *TTL low : laser ON* *TTL high or disconnected : laser OFF*
Reserved - do not connect	16	15	Unit case temperature alarm (TTL output)
Laser diodes current alarm (TTL output)	18	17	Laser temperature alarm (TTL output)
Laser operating status output (TTL output)	20	19	Trigger alarm (TTL output)
GND	22	21	GND
External trigger LVDS B	24	23	External trigger LVDS A
GND	26	25	GND
+12 V DC	28	27	+12 V DC
Void	30	29	+12 V DC

TARV

1.0 µm CW
High Power
Fiber Laser



PIN **ASSIGNEMENT for OEM65 and OEM 75**

SUB-D 25 connector

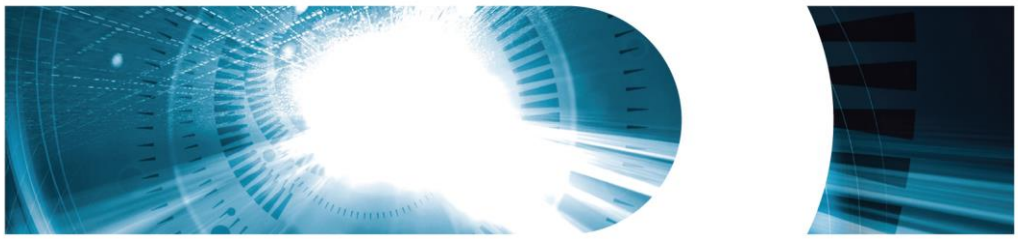
Description	Pin N°		Description
GND	14	1	Pump power analog modulation input (0-10 V) - optional
Current alarm (active TTL high)	15	2	Reserved - do not connect
Temperature alarm (active TTL high)	16	3	Reserved - do not connect
+5 V DC output	17	4	Reserved - do not connect
Global enable (TTL input)	18	5	Reserved - do not connect
Power amplifier modulation input (active TTL high)	19	6	Reserved - do not connect
Reserved - do not connect	20	7	Reserved - do not connect
Reserved - do not connect	21	8	Reserved - do not connect
Reserved - do not connect	22	9	Reserved - do not connect
Emergency stop input *TTL high : laser ON* *TTL low or disconnected : laser OFF*	23	10	GND
Reserved - do not connect	24	11	RS232 RX
GND	25	12	RS232 TX
		13	GND

SUB-D 2W2 connector

Description	Pin N°		Description
GND	A2	A1	+12 V DC

TARV

1.0 µm CW
High Power
Fiber Laser



LASER SAFETY **INFORMATION**

This fiber laser emits invisible light. Take appropriate precautions to prevent undue exposure to naked eye when the laser is in operation. This product is classified Class 4 Laser Product according to IEC-60825-1. This laser is only intended for integration into other equipment. The system does not comply with CDRH 21 CFR 1040.10 or EN 60825-1. The customer is responsible for CDRH and/or 60825-1 compliance of their system.

HANDLING

Caution! Handle the sub-system by its package only; never hold it by its pigtail.
Care should be taken to avoid supply transient currents and voltages.
Drive voltage out of the specified electro-optical characteristics section may cause permanent damage to the device.

ORDERING **INFORMATION**

TARV FIBER LASER PRODUCT FAMILY

Nominal Power	Part number	
	OEM	RACK
5 W	ML5-CW-R-OEM45-i-m	ML5-CW-R-TKS
10 W	ML10-CW-R-OEM65-i-m-e	ML10-CW-R-TKS
20 W	ML20-CW-R-OEM65-i-m-e	ML20-CW-R-TKS
30 W	ML30-CW-R-OEM65-0-m-e	ML30-CW-R-TKS
50 W	ML50-CW-R-OEM75-0-0-0	ML50-CW-R-TKS

Available options codification:

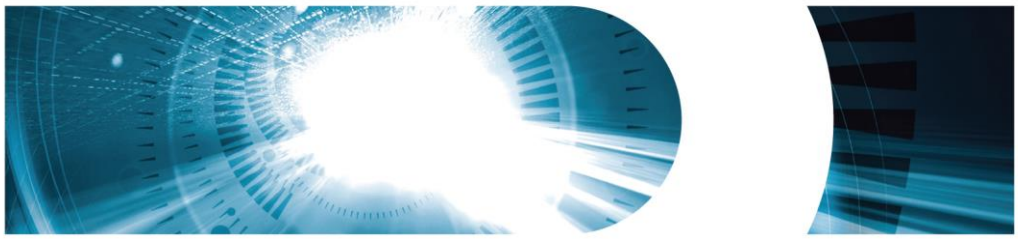
Symbol	Description	0	1
i	output isolator	Not installed	Installed
m	control mode	ACC only	ACC & APC
e	control interface	E204 interface board for RS232	E229 interface board for analog

Other options upon request:
- Custom collimator
- Extended warranty

3SPGroup can also develop custom products to meet a wide range of technical requirements. Please contact your Sales Manager for details.

TARV

1.0 µm CW
High Power
Fiber Laser



CONTACT **INFORMATION**

Europe & Asia: +33 169 805 833
North America: +1 514 748 4848
+1 888 922 1044

sales@3spgroup.com
www.3spgroup.com

IMPORTANT **NOTICE**

Information in this document is typical and must be specifically confirmed in writing by your supplier before it becomes applicable to any order or contract.

Information is subject to change without notice.

NOTES