PURE PHOTONICS

GENERAL

The Pure Photonics tunable laser is a high performance micro-ITLA with narrow intrinsic linewidth, reduced low-frequency noise in whisper mode and a customized firmware for special performance features.
Proper operation of the PPCL600 requires:

- Mechanical interface / heatsink
- Electrical interface / power supplies
- Communications interface

ELECTRICAL INTERFACE

14-pin AIC connector for power supplies, hardware lines and communications interface.

2					14
DIS	SRQ	MS	TX	R X	RST
+3.3V		GND		-5.2V	
1					13

MECHANICAL INTERFACE

Mount the laser with 4 M1.6 screws to heatsink. **Do not operate the laser without a proper heatsink.**
Monitor heatsinking by the temperature of the goldbox.

4x M1.6 mounting holes

AIC male connector

PANDA Fiber Output

Bottom-side needs heatsink
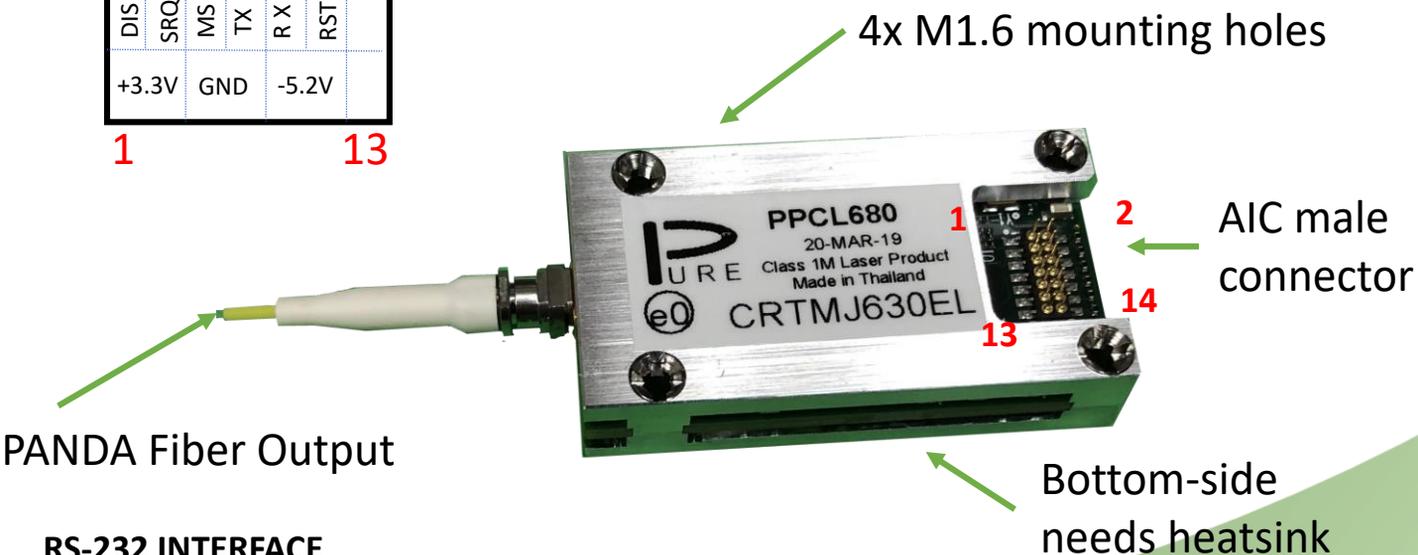
RS-232 INTERFACE

The ITLA comes with a low-voltage RS-232 interface

- Connect direct, through e.g. a micro-processor
- Use High-voltage RS-232 with a conversion chip (like MAX3221)
- Use USB interface through a conversion chip (like FT234XD)

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EVALUATION SOLUTIONS

PPEB700

The PPEB700 (as well as the legacy PPEB200) provides a built-in power supply, mechanical interface and communications interface, as well as access to the other hardware pins.

PPEB600

The PPEB600 is a plug-on board onto a PPCL600 that converts the RS-232 to a micro-USB connector.

PPEB610-14

This is a 14-pin conversion from the custom AIC connector to a more generic IDC connector/ribbon cable.

PPEB250

A mechanical interface plate with mounting holes. It provides a first level heatsink and makes it easier to connect to a larger heatsink.

MICRO-USB INTERFACES

For optimal operation of any USB-interface (on PPEB600 or on an RS-232 dongle), set the latency time of the interface to 1ms (see instructions in section 4 of the feature guide). This is critical for firmware upgrade.
The micro-USB interface should be recognized and installed as a virtual COM port. If the interface is not recognized, you may need to install the VCP driver from FTDI (see below).

FIRMWARE UPGRADE

Firmware upgrade can only be done through the CLI (or through the customers own program). An application note on the upgrade process is available on our website (support section). **Make sure that the upgrade process is not interrupted.**
In case the firmware upgrade fails, in most cases it can be corrected through the CLI.

RESOURCES

Connectors: *https://www.advanced.com/products/board-to-board-connectors/mezza-pede-smt-connectors*
MSA micro ITLA: www.oiforum.com/wp-content/uploads/2019/01/OIF-Micro-ITLA-01.1.pdf
MSA ITLA: *www.oiforum.com/wp-content/uploads/2019/01/OIF-ITLA-MSA-01.3.pdf*
Software (GUI and CLI): *www.pure-photonics.com/downloads1/*
FTDI VCP drivers: *www.ftdichip.com/Drivers/VCP.htm*
Application notes: *www.pure-photonics.com/downloads1/*

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