

PPCL700 Quick Start Guide

GENERAL

The Pure Photonics PPCL700 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 PPCL700 requires:

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



ELECTRICAL INTERFACE

20-pin Samtec male connector for power supplies, hardware lines and communications interface.

DIS	SRQ	MS	TX	RX	RST	AM	CM1	FM
+3.3V	GND	-5.2V						CM2

Samtec male connector

MECHANICAL INTERFACE

Mount the laser with 4 M1.6 screws to heatsink. **Screws should only hold the baseplate. PCB holes are for access from above**

Do not operate the laser without a proper heatsink.

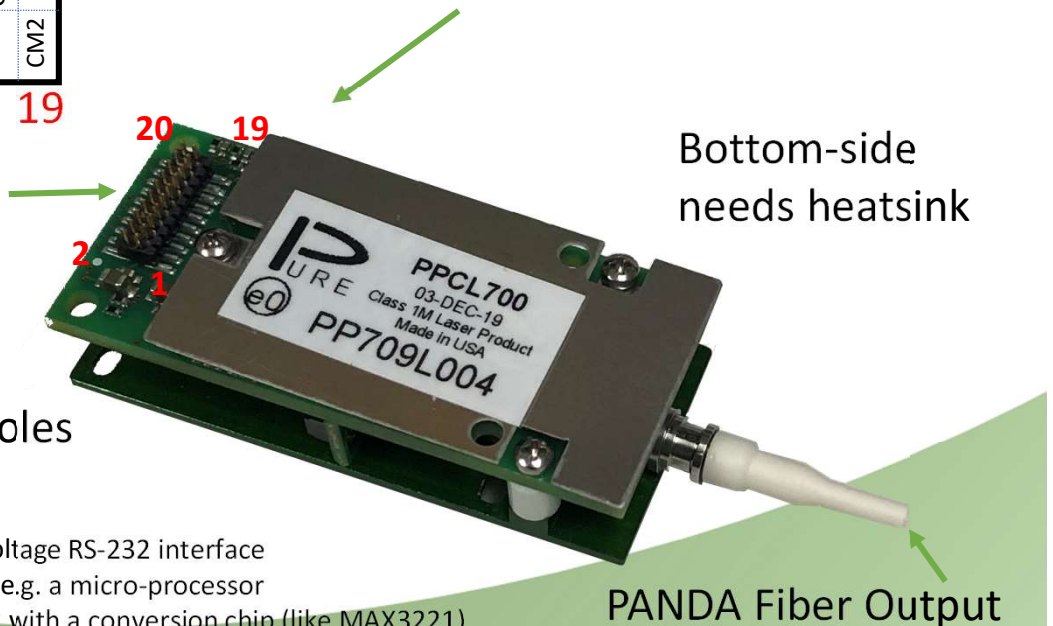
Monitor heatsinking by the temperature of the goldbox.

4x M1.6 mounting holes

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)



Bottom-side needs heatsink

PANDA Fiber Output

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EVALUATION SOLUTIONS

PPEB700

The PPEB700 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.



PPEB250

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

PPEB610-14

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



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.

Make sure that the firmware is specifically for the PPCL700 architecture.

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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