Pulsed laser 1550nm coupled with multimode 200mkm fiber HHL package with integrated driver board inside

(Model FB-M1550D-10HF-PLSD)

Technical parameters

Parameter	Symbol	Value	Conditions
Peak pulsed optical power	W	10	25^0C
Maximum frequency	kHz	2	-
Minimum pulse duration (pulse width)	ns	30	25 ^{0}C
Laser operation temperature range	^{0}C	-20 … +40	-
Peak wavelength	nm	1550±30	25 ^{0}C
Wavelength temperature shift coefficient	nm/^{0}C	0.5	-
Spectrum Half-Width (FWHM)	$\Delta\lambda$	<10	nm
Fiber core/coating diameter		200/220	μm
Optical Connector Type		FC	-

Table 1 – Laser PIN DESCRIPTION

№	Assignment	Abbreviation	Maximum voltage, V
1	Thermoelectric cooler “-“	TEC-	-
(2)	No connection		
3	Trigger signal	Trig	+6 (GND)
4	Common	**Gnd**	**-**
5	Feed 2	U2	+15 (GND)
6	Common	**Gnd**	**-**
7	Feed 1	U1	+55 (GND)
8	Thermistor	Rt	-
9	Thermistor	Rt	-
10	Thermoelectric cooler “+“	TEC+	±5 (TEC-)

Feed 1 - **U1** - **(constant tunable voltage) is a main power supply of the circuit and enables to tune optical pulse amplitude (peak power amplitude) of the laser.**

Voltage range (regarding to GND) . . . . . 5 - **40 V**

Maximum current consumption . . . . . .100 mA

Feed 2 - **U2** - **(constant voltage) is an additional power supply of the board.**

Nominal voltage (regarding to GND) . . . . . .**12 V**

Affordable voltage range 9-14

Maximum current consumption. . . . . .10 mA

Trigger signal - **Trig** - **(cocking pulses) is a signal that trigs pumping current pulse of the laser by its increasing front. Duration of trigger signal has no influence on the laser operation. However, to provide minimum jitter, short fore front may require.**

Any interference in this channel may cause false triggering of the laser. To suppress short interference pulses a resistor of about 5 kOhm by nominal and a capacitor of 10-100 pF by nominal are installed in parallel at input of trigger signal.

Nominal amplitude (regarding to GND)..... 5 V

Frequency range ..... . .0-2000 Hz

Recommended pulse duration.....30 ns

Thermoelectric cooler (TEC) supports stable temperature of the laser. It is electrically isolated from pumping circuit. TEC can be controlled both by voltage and by current. To switch between heating and cooling modes voltage polarity (or current direction) must be changed.

Maximum voltage (at any polarity).....4 V

Maximum current (at any polarity) . . . . . 6 A

Maximum thermal power sinking

(at null temperature difference)) . . . . . 14.6 W

Thermistor - **Rt** – is a temperature control and feedback sensor for thermo stabilization. NTC thermistor B57861S0103F040. Electrically isolated from pumping circuit.

Resistance at 25^0C.....10 kOhm

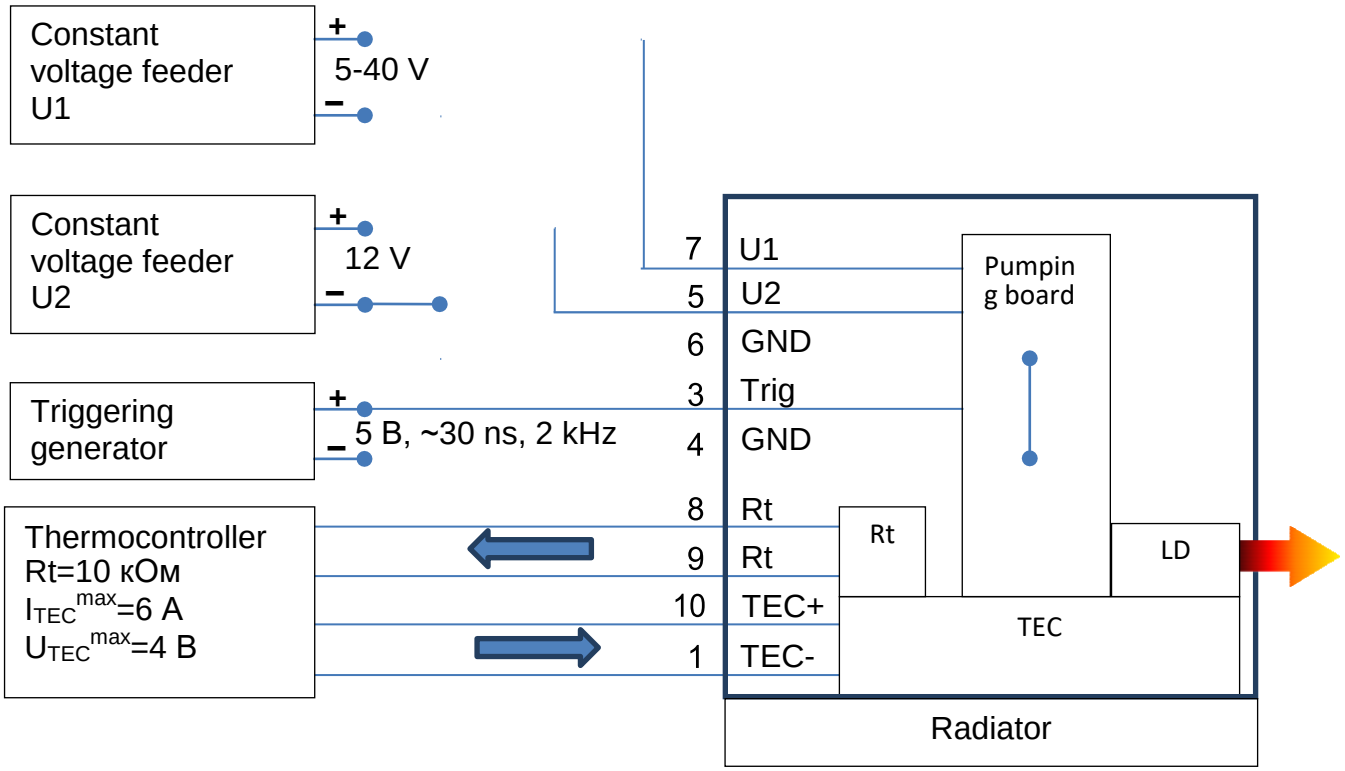
Parameter B25/100 .....3988 K

Resistance and B parameter accuracy 1%

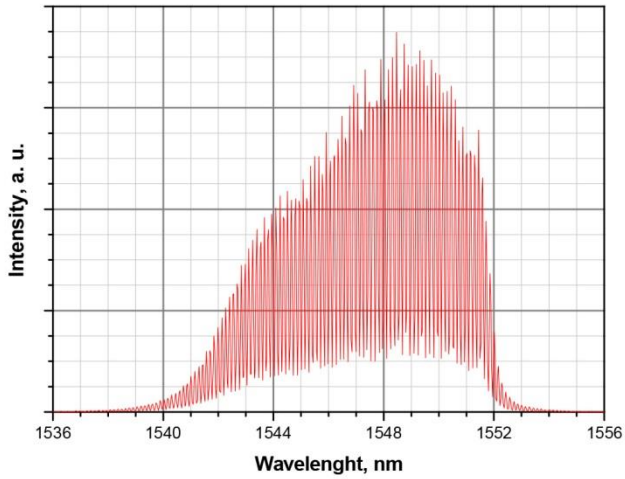
Maximum dispersed power at 25^0C ..... 60 mW

Package of the laser is electrically isolated from all inner components.

LASER CONNECTIONS DIAGRAM



Typical Spectrum



Dimensions and pinouts