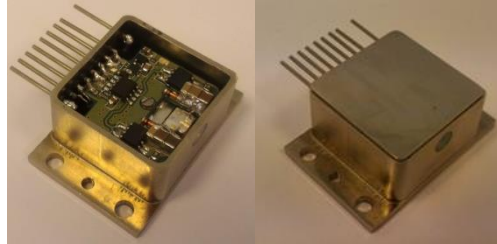


200W pulsed laser 905nm in HHL package with open window including integrated driver inside

(P/N FB-M905D-200HO-PLSD)



### Output technical parameters

Parameter	Unit	Symbol	Value		
			Min	Nominal	Max
Maximum peak optical power <sup>1)</sup>	W	$P_{op}$	180	200	250
Pulse duration <sup>2)</sup>	ns	$\tau$	40	100	300
Pulse frequency <sup>3)</sup>	Hz	$F$	-	1000	2000
Operating temperature range	$^{\circ}\text{C}$	$T_{op}$	+10	+25	+40
Wavelength	nm	$\lambda$	880	905	930
Wavelength Temperature Coefficient	nm/K	$\Delta\lambda/\Delta T$	0.3	0.35	0.4
Emitting aperture	um	$W \times d$	-	800x200	850x250
Radiation divergence along the vertical axis at half height <sup>4)</sup>	degree	$\theta_{\perp}$	20	30	35
Radiation divergence along the horizontal axis at half height	degree	$\theta_{\parallel}$	5	12	20

- 1) The amplitude of the optical power can be controlled during the operation of the Product
- 2) The duration is fixed, set during the manufacture of the Product
- 3) The pulse repetition rate is set by applying external trigger pulses
- 4) Radiation divergence along the vertical axis can be modified using microlenses installed in the Product.

Table 1 – Laser PIN OUTS

№	Assignment	Abbreviation	Maximum voltage, V
1	Peltie element “-“	TEC-	-
(2)	No contact		
3	Trigger signal	Trig	+6 (GND)
4	Common	<b>Gnd</b>	-
5	Feed 2	U2	+15 (GND)
6	Common	<b>Gnd</b>	-
7	Feed 1	U1	+55 (GND)
8	Thermistor	Rt	-
9	Thermistor	Rt	-
10	Peltie element “+“	TEC+	±5 (TEC-)

**Feed 1 - U1 - (constant tunable voltage) is a main power supply of the board 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 dose 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 .....	.0-1000 Hz
Recommended pulse duration .....	100 ns
Affordable pulse duration . . . . .	50 ns – 900 ms

**Peltie Element - TEC** – is a thermoelectric module to support satable temperature of the laser. Electrically isolated from pumping board. Petie element can be controlled both by voltage and by current. To switch between heating and cooling modes voltage polarity (or current direction) must be changed.

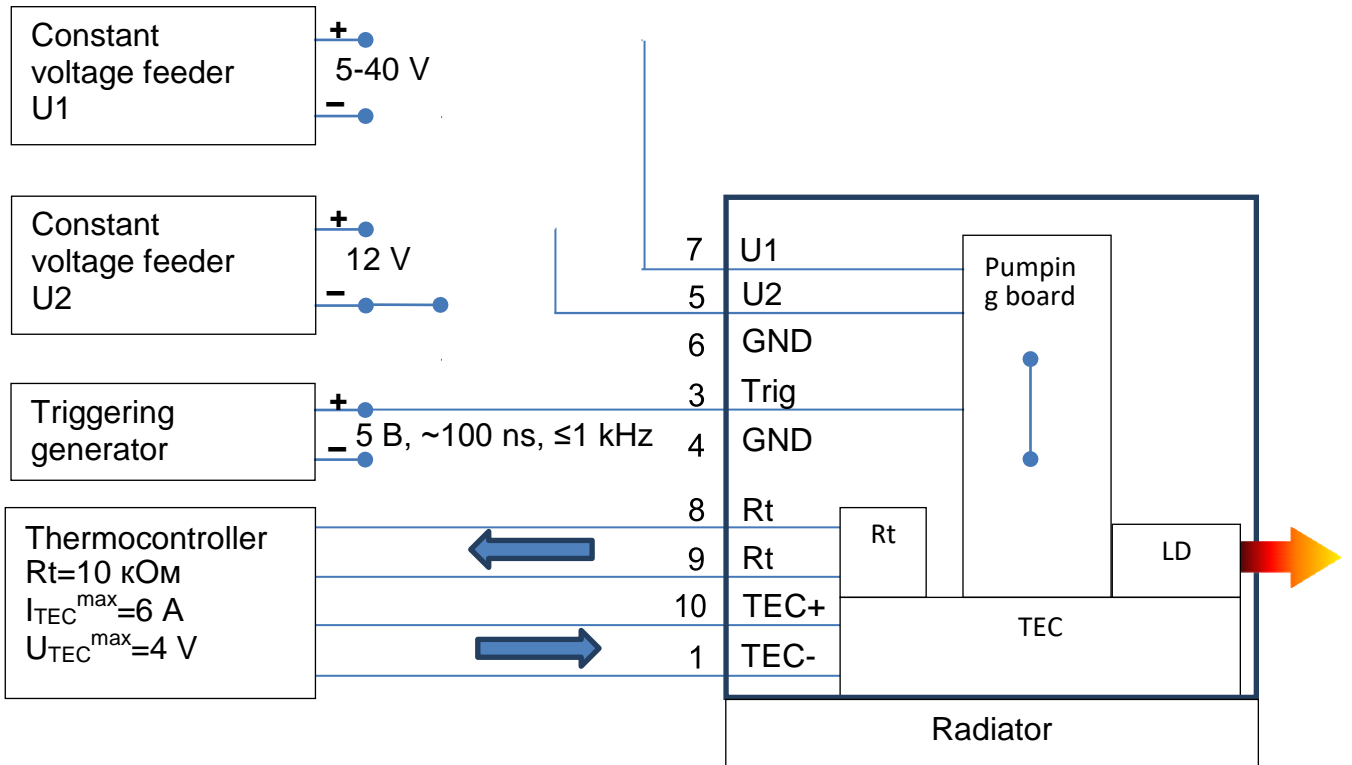
Maximum voltage (at any polarity) .....	4 V
Maximum current (at any polarity) . . . . .	6 A
Maximum heat sink power (at null temperature difference)) . . . . .	14.6 W

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

Resistance at 25 <sup>0</sup> C .....	10 kOhm
Parameter B25/100 .....	3988 K
Resistance and B parameter accuracy .....	1%
Maximum dispersed power at 25 <sup>0</sup> C .....	60 mW

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

# LASER CONNECTIONS DIAGRAM



# Drawings:

