

Datasheet for TO3-L-22

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

WARNING: Operating the laser with higher current or voltage than specified in this document may cause damage and will result in loss of warranty, unless Alpes Lasers has permitted to do so!

WARNING: Beware of the polarity of the laser. This laser has to be powered with negative current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). To use with a power-supply ILX Lightwave LDX-3232 or equivalent.

MODULE PIN-OUT	Pin n°
TEC +	1
Thermistor	2
Thermistor	3
Negative contact of the laser	4
Positive contact of the laser	5
Not connected	6
Not connected	7
TEC -	8

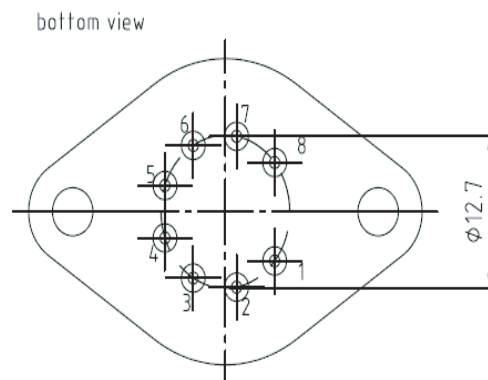


Figure 1: Support mounting for TO3-L-22 (specifications of the TO-3 module)

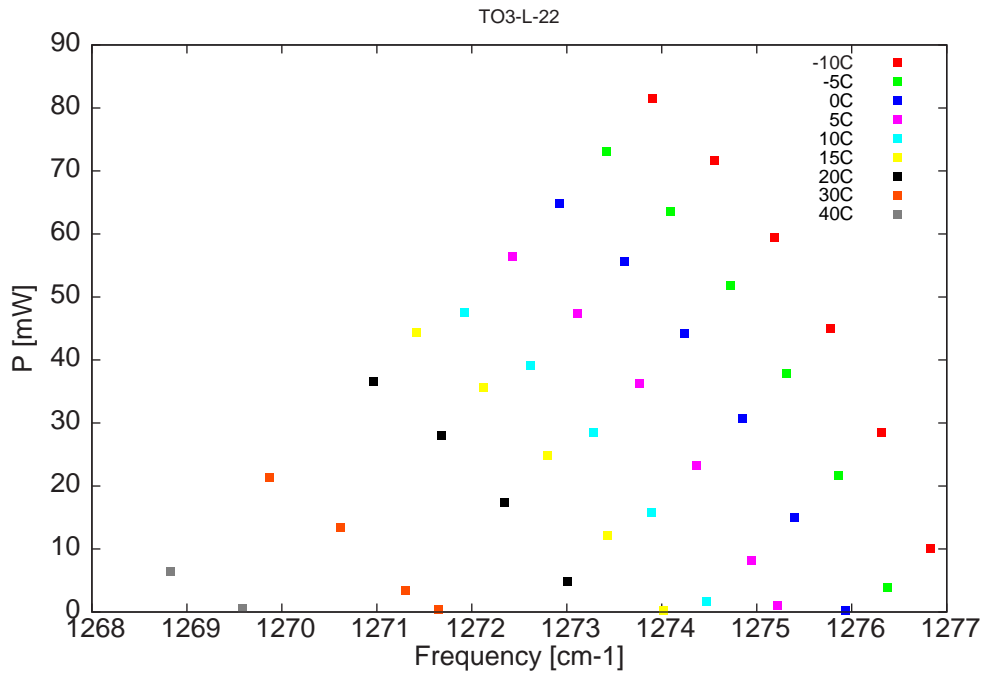


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

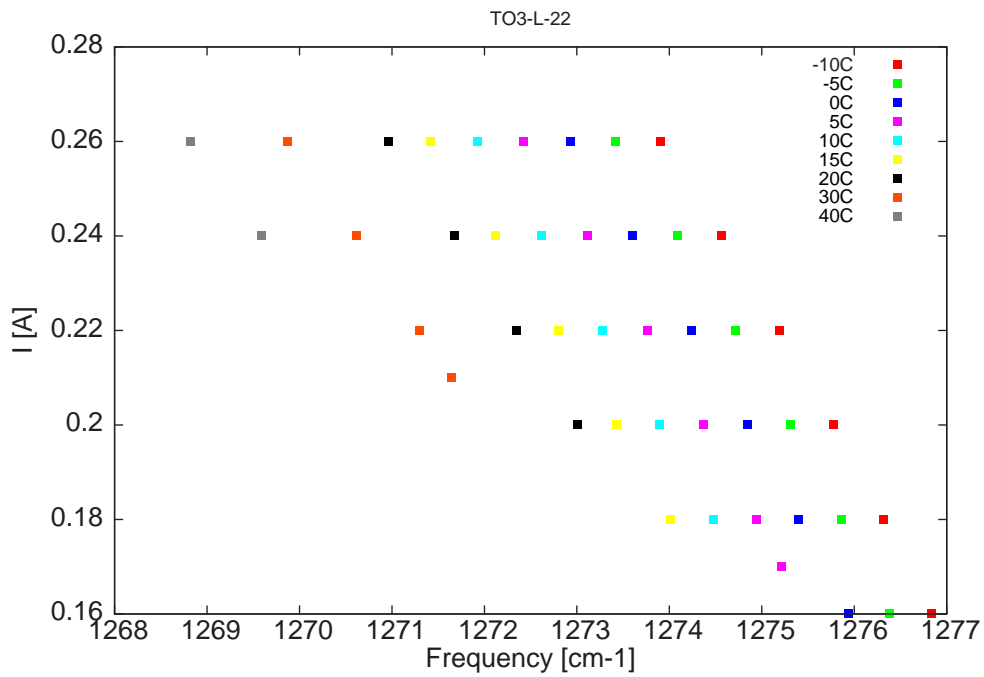


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7831.9	1276.8	10	-10	8.2	0.16
7835	1276.3	28.4	-10	8.4	0.18
7838.4	1275.8	44.9	-10	8.5	0.2
7842	1275.2	59.4	-10	8.7	0.22
7845.9	1274.6	71.6	-10	8.8	0.24
7849.9	1273.9	81.5	-10	9	0.26
7834.7	1276.4	3.9	-5	8.2	0.16
7837.8	1275.9	21.6	-5	8.3	0.18
7841.2	1275.3	37.8	-5	8.5	0.2
7844.9	1274.7	51.8	-5	8.6	0.22
7848.7	1274.1	63.5	-5	8.8	0.24
7852.9	1273.4	73.2	-5	8.9	0.26
7837.4	1275.9	0.3	0	8.1	0.16
7840.7	1275.4	15	0	8.3	0.18
7844.1	1274.8	30.7	0	8.4	0.2
7847.8	1274.2	44.1	0	8.6	0.22
7851.7	1273.6	55.6	0	8.7	0.24
7855.9	1272.9	64.9	0	8.9	0.26
7841.8	1275.2	1	5	8.2	0.17
7843.5	1274.9	8.1	5	8.2	0.18
7847	1274.4	23.3	5	8.4	0.2
7850.8	1273.8	36.3	5	8.5	0.22
7854.7	1273.1	47.4	5	8.7	0.24
7859	1272.4	56.4	5	8.8	0.26
7846.4	1274.5	1.7	10	8.2	0.18
7850	1273.9	15.8	10	8.4	0.2
7853.7	1273.3	28.4	10	8.5	0.22
7857.8	1272.6	39.2	10	8.7	0.24
7862.1	1271.9	47.6	10	8.8	0.26
7849.2	1274	0.3	15	8.2	0.18
7852.8	1273.4	12.1	15	8.3	0.2
7856.7	1272.8	24.9	15	8.5	0.22
7860.9	1272.1	35.7	15	8.6	0.24
7865.2	1271.4	44.4	15	8.8	0.26
7855.4	1273	4.9	20	8.3	0.2
7859.5	1272.3	17.4	20	8.4	0.22
7863.6	1271.7	28	20	8.6	0.24
7868.1	1271	36.5	20	8.7	0.26
7863.8	1271.6	0.4	30	8.3	0.21
7866	1271.3	3.4	30	8.4	0.22
7870.2	1270.6	13.4	30	8.5	0.24
7874.8	1269.9	21.3	30	8.7	0.26
7876.6	1269.6	0.6	40	8.5	0.24
7881.3	1268.8	6.4	40	8.6	0.26

Table 1 : singlemode optical output power as function of operating parameters

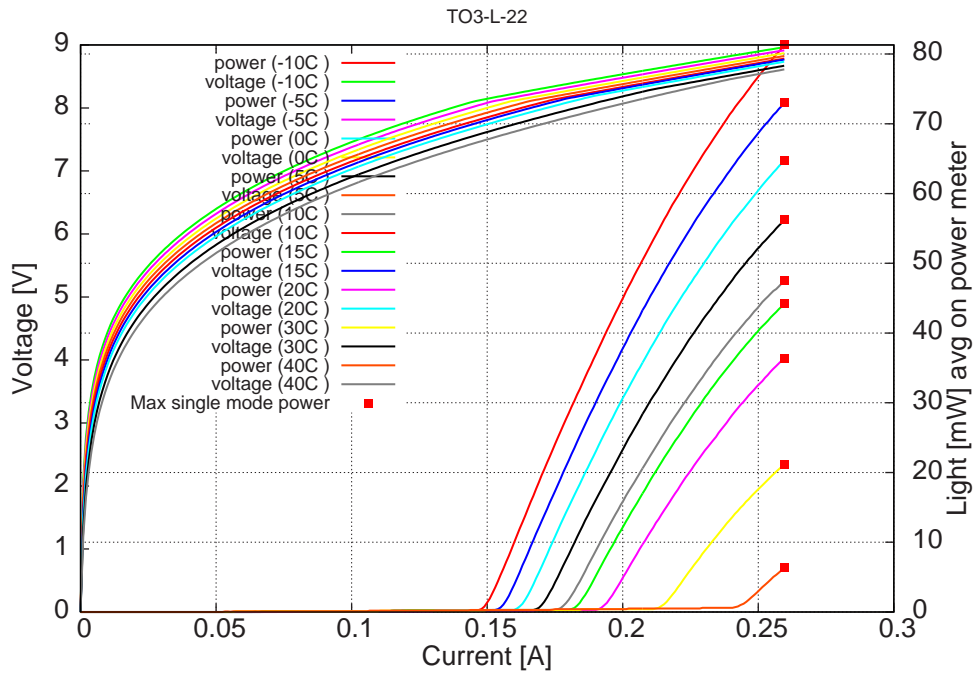


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.15A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.26A for all temperatures.

