

Datasheet for #sbcw23690 DN

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 be used with a high compliance CW laser driver capable of reaching the operating current and voltage indicated in this datasheet, or up to 2.5A/20V.



Figure 1: Mechanical and electrical interface for #sbcw23690 DN

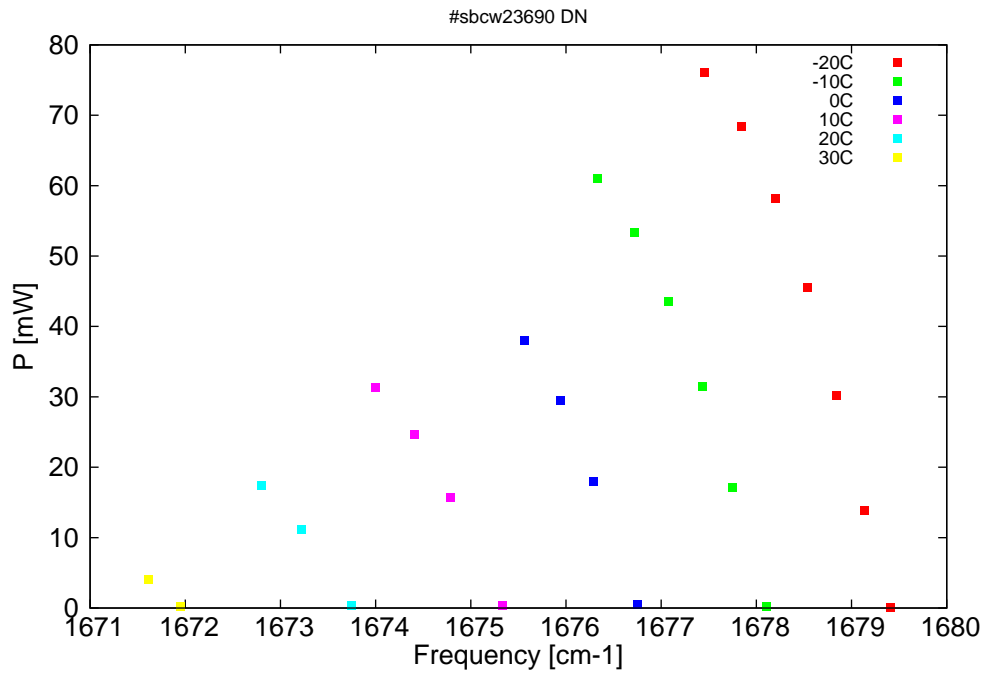


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

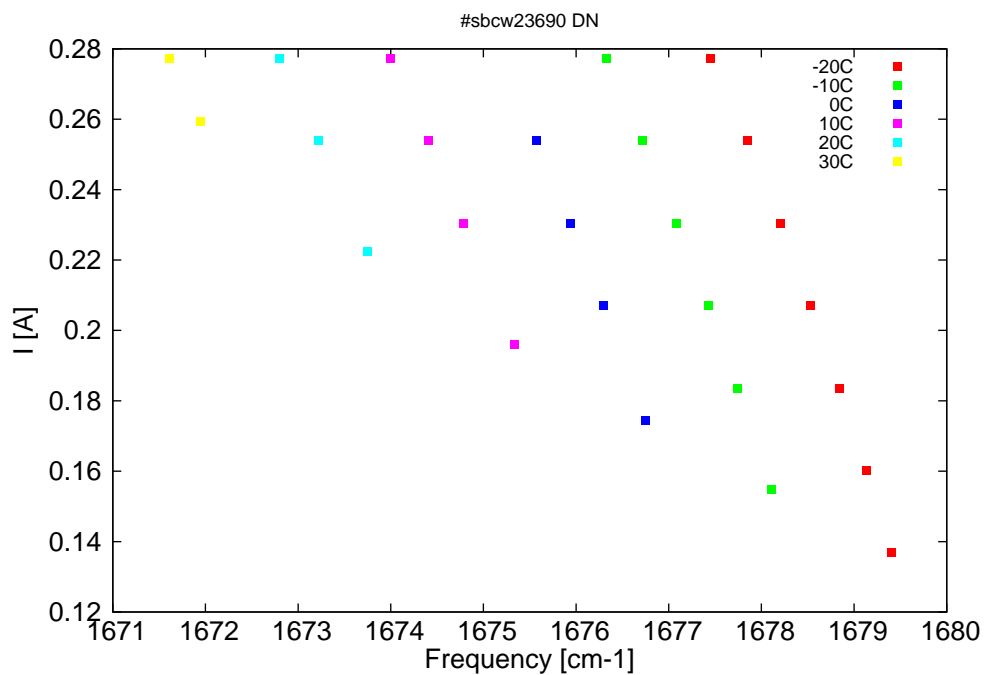


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5954.5	1679.4	0.1	-20	9.51	0.137
5955.5	1679.1	13.9	-20	9.78	0.16
5956.5	1678.8	30.2	-20	10.05	0.184
5957.6	1678.5	45.5	-20	10.31	0.207
5958.8	1678.2	58.2	-20	10.57	0.231
5960	1677.8	68.5	-20	10.82	0.254
5961.4	1677.5	76.1	-20	11.07	0.277
5959.1	1678.1	0.3	-10	9.64	0.155
5960.4	1677.7	17.1	-10	9.97	0.184
5961.5	1677.4	31.4	-10	10.23	0.207
5962.7	1677.1	43.5	-10	10.5	0.231
5964	1676.7	53.4	-10	10.75	0.254
5965.4	1676.3	61	-10	11	0.277
5963.9	1676.8	0.4	0	9.79	0.174
5965.5	1676.3	18	0	10.16	0.207
5966.8	1675.9	29.5	0	10.42	0.231
5968.1	1675.6	38	0	10.68	0.254
5969	1675.3	0.3	10	9.96	0.196
5970.9	1674.8	15.6	10	10.34	0.231
5972.3	1674.4	24.7	10	10.6	0.254
5973.7	1674	31.4	10	10.86	0.277
5974.6	1673.8	0.4	20	10.18	0.223
5976.5	1673.2	11.1	20	10.52	0.254
5978	1672.8	17.3	20	10.78	0.277
5981.1	1671.9	0.3	30	10.51	0.259
5982.3	1671.6	4	30	10.7	0.277

Table 1: Singlemode optical output power as function of operating parameters.

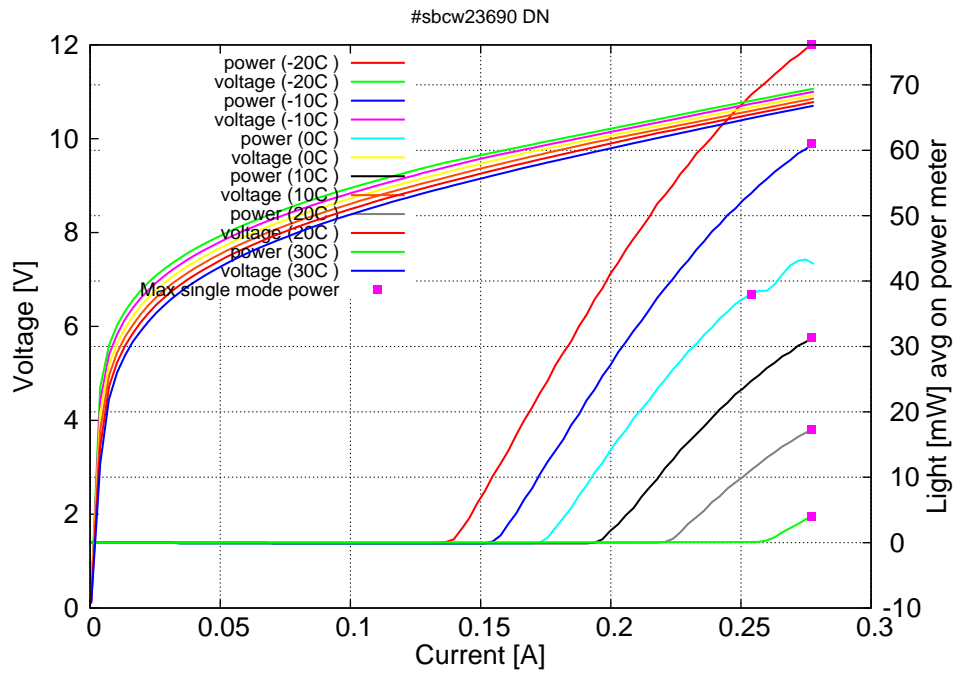


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=9.5V$ (2-wires measurements). Maximum operation current: 0.28A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

