

Datasheet for #sbcw24099 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 bias and positive bias on the specific zones drawn below. 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 #sbcw24099 DN (please note that AlN submount numbering is A120F)

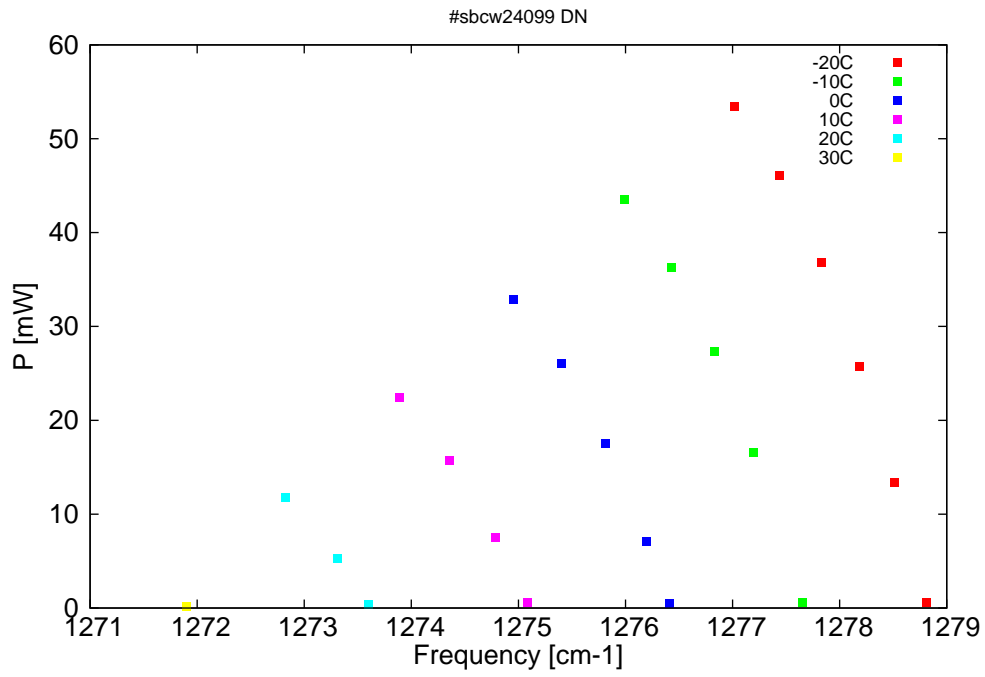


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

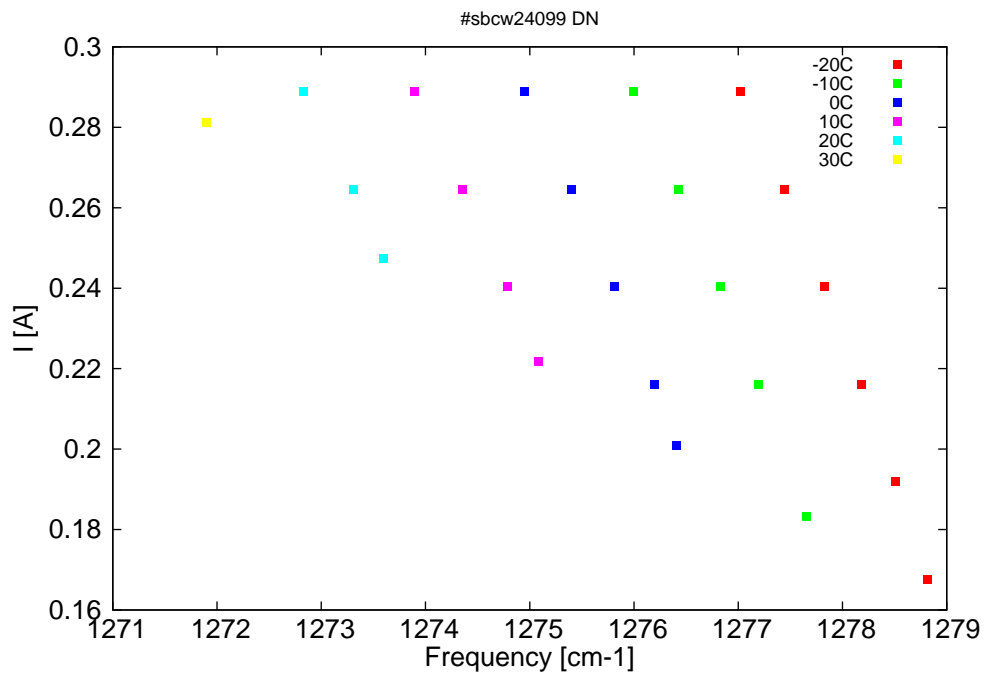


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7819.8	1278.8	0.6	-20	8.74	0.168
7821.6	1278.5	13.3	-20	8.95	0.192
7823.6	1278.2	25.7	-20	9.17	0.216
7825.8	1277.8	36.8	-20	9.38	0.24
7828.2	1277.4	46.1	-20	9.6	0.265
7830.7	1277	53.5	-20	9.82	0.289
7826.9	1277.7	0.6	-10	8.76	0.183
7829.7	1277.2	16.6	-10	9.05	0.216
7831.9	1276.8	27.3	-10	9.26	0.24
7834.4	1276.4	36.2	-10	9.48	0.265
7837	1276	43.5	-10	9.69	0.289
7834.5	1276.4	0.5	0	8.81	0.201
7835.8	1276.2	7.1	0	8.94	0.216
7838.1	1275.8	17.5	0	9.15	0.24
7840.7	1275.4	26	0	9.37	0.265
7843.4	1275	32.9	0	9.59	0.289
7842.6	1275.1	0.5	10	8.91	0.222
7844.5	1274.8	7.6	10	9.07	0.24
7847.1	1274.4	15.7	10	9.29	0.265
7850	1273.9	22.4	10	9.5	0.289
7851.8	1273.6	0.4	20	9.05	0.248
7853.5	1273.3	5.3	20	9.2	0.265
7856.5	1272.8	11.7	20	9.42	0.289
7862.3	1271.9	0.2	30	9.27	0.281

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

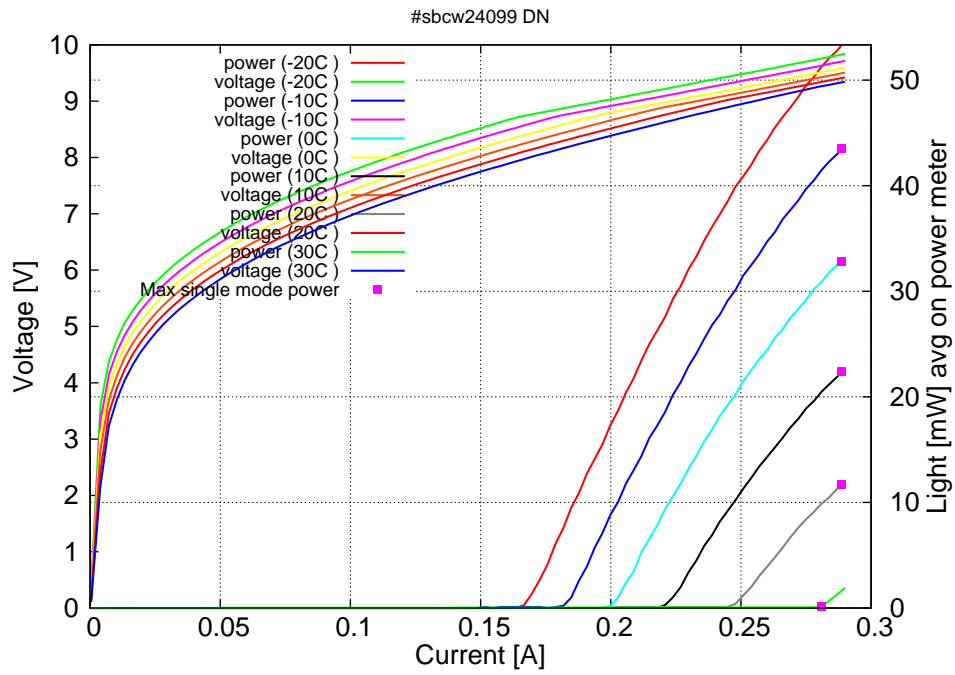


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

