

Datasheet for #sbcw22713 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.

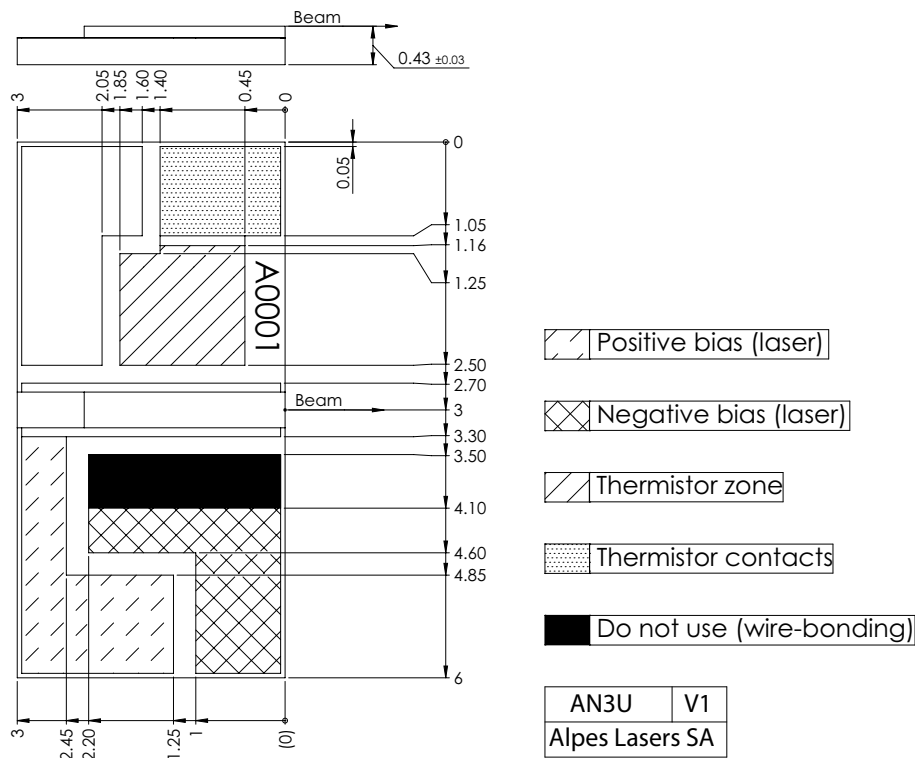


Figure 1: Mechanical and electrical interface for #sbcw22713 DN (please note that AlN submount numbering is A0X5K)

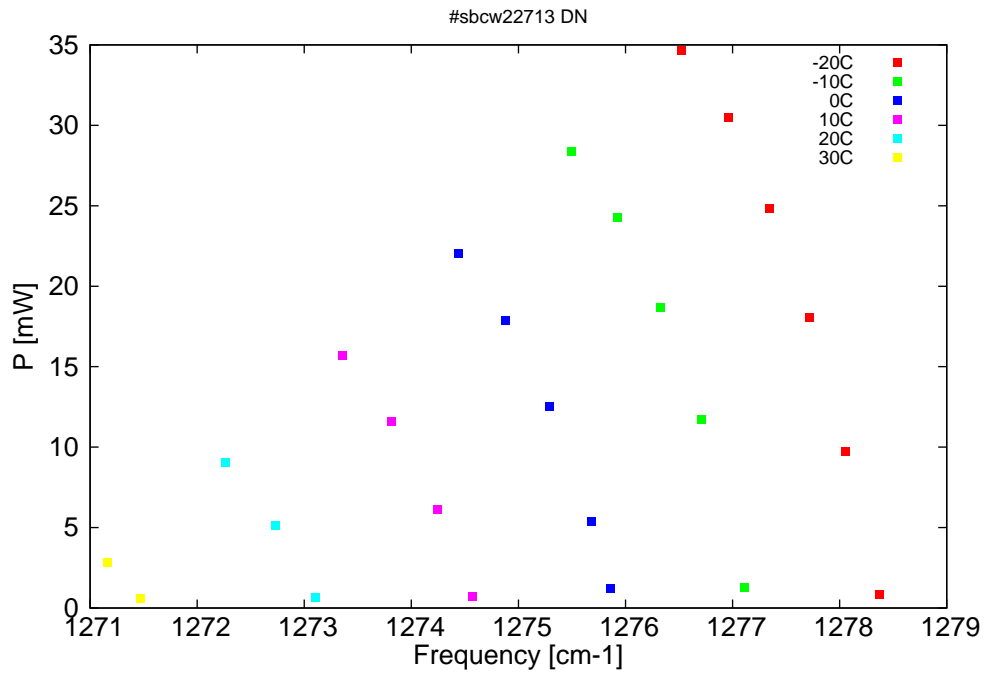


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

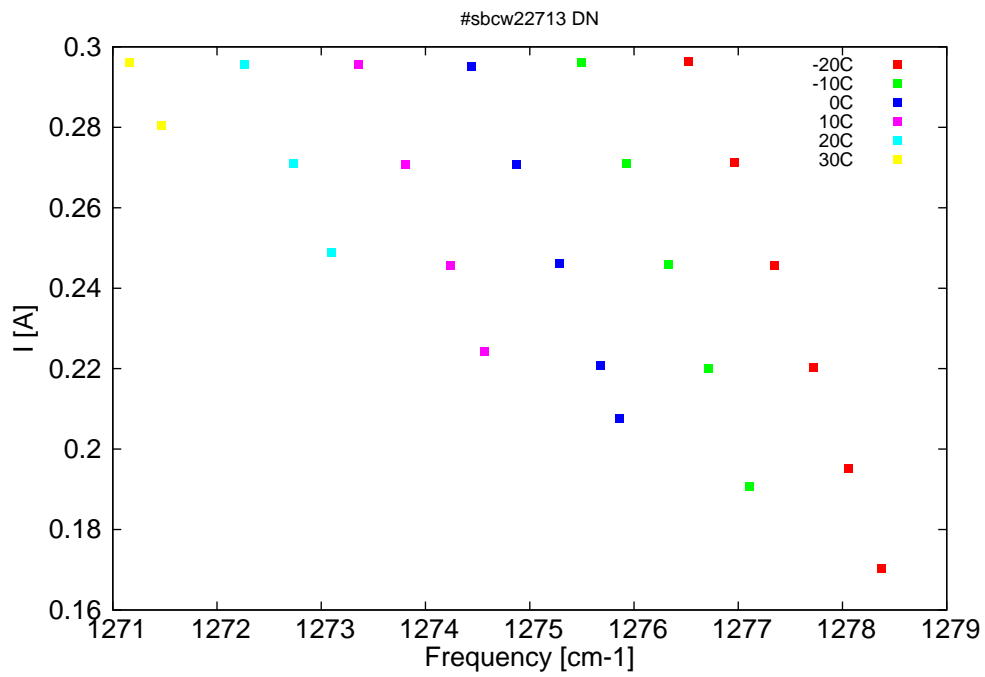


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7822.4	1278.4	0.8	-20	9.04	0.17
7824.4	1278.1	9.7	-20	9.26	0.195
7826.4	1277.7	18.1	-20	9.47	0.22
7828.7	1277.3	24.8	-20	9.68	0.246
7831.1	1277	30.5	-20	9.87	0.271
7833.7	1276.5	34.7	-20	10.08	0.296
7830.2	1277.1	1.3	-10	9.04	0.191
7832.6	1276.7	11.7	-10	9.3	0.22
7835	1276.3	18.7	-10	9.5	0.246
7837.4	1275.9	24.3	-10	9.71	0.271
7840.1	1275.5	28.4	-10	9.9	0.296
7837.8	1275.9	1.2	0	9.02	0.208
7838.9	1275.7	5.4	0	9.13	0.221
7841.4	1275.3	12.5	0	9.34	0.246
7843.9	1274.9	17.9	0	9.54	0.271
7846.6	1274.4	22.1	0	9.74	0.295
7845.8	1274.6	0.7	10	9.01	0.224
7847.8	1274.2	6.1	10	9.19	0.246
7850.5	1273.8	11.6	10	9.4	0.271
7853.3	1273.4	15.7	10	9.6	0.296
7854.8	1273.1	0.7	20	9.08	0.249
7857.1	1272.7	5.1	20	9.26	0.271
7860	1272.3	9	20	9.47	0.296
7864.9	1271.5	0.6	30	9.23	0.28
7866.8	1271.2	2.8	30	9.35	0.296

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

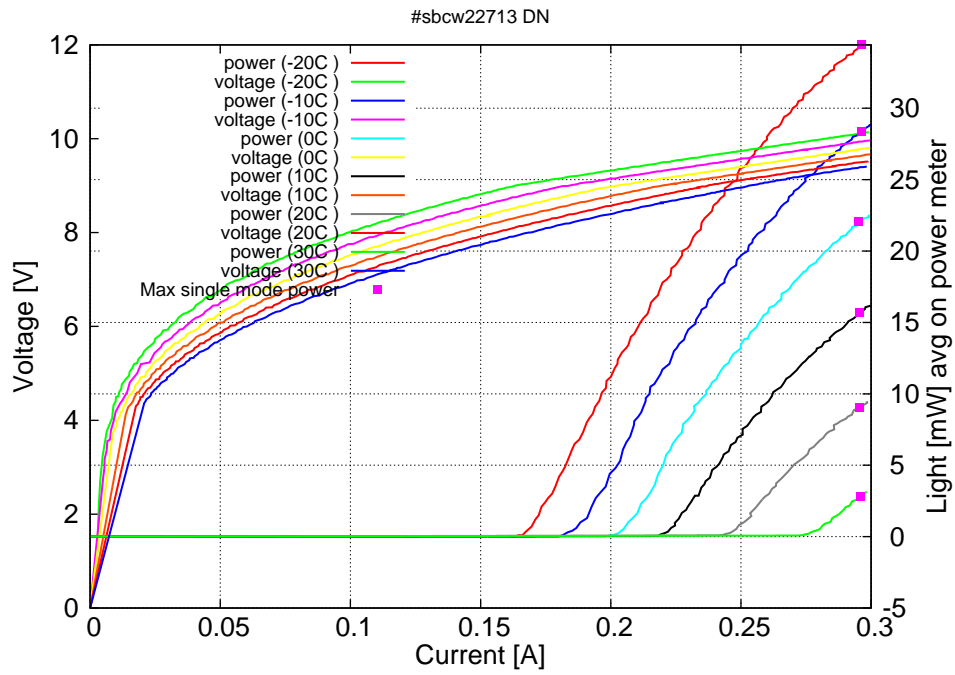


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.300A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

