

Datasheet for #sbcw27078 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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 #sbcw27078 DN (please note that AlN submount numbering is A0X4L)

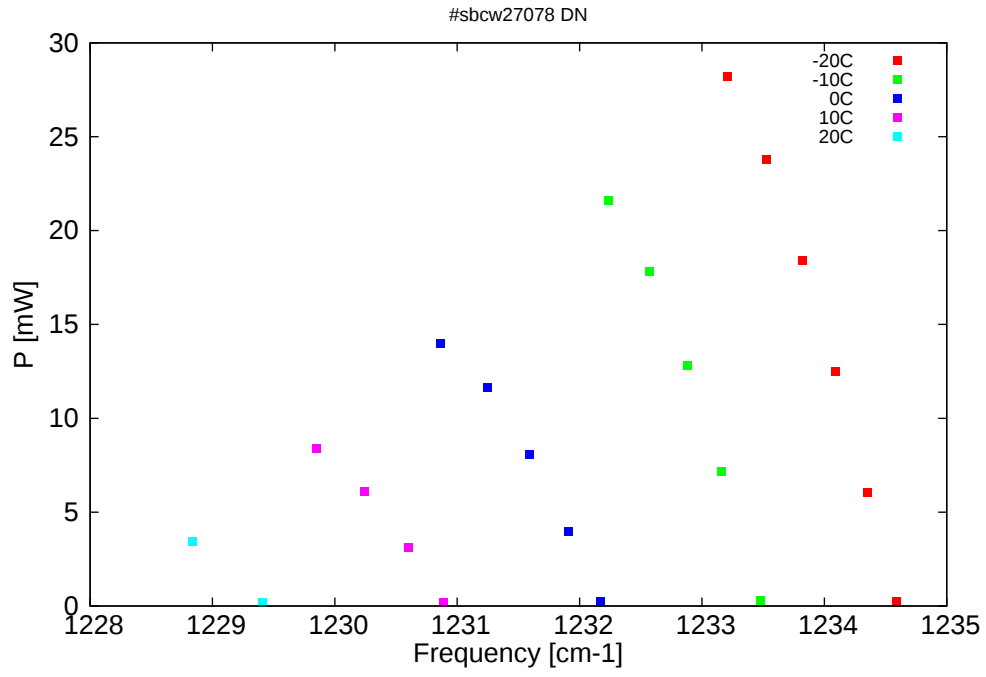


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

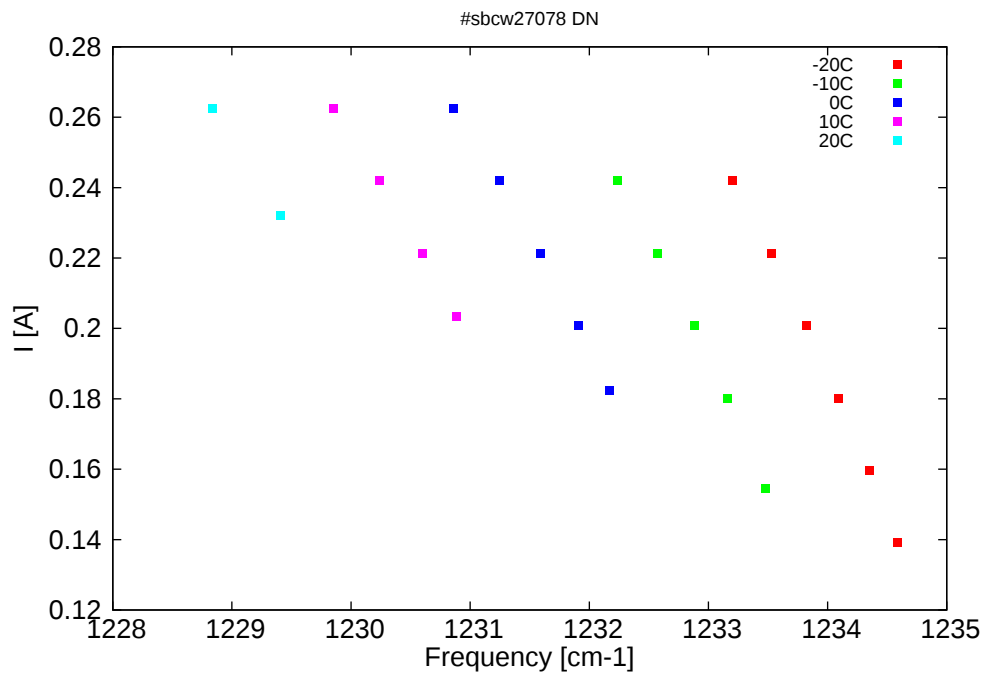


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8099.9	1234.6	0.3	-20	6.94	0.139
8101.4	1234.4	6	-20	7.21	0.16
8103.1	1234.1	12.5	-20	7.49	0.18
8104.9	1233.8	18.4	-20	7.77	0.201
8106.8	1233.5	23.8	-20	8.07	0.221
8108.9	1233.2	28.2	-20	8.35	0.242
8107.2	1233.5	0.3	-10	7.08	0.154
8109.2	1233.2	7.1	-10	7.41	0.18
8111.1	1232.9	12.8	-10	7.69	0.201
8113.1	1232.6	17.8	-10	7.98	0.221
8115.3	1232.2	21.6	-10	8.29	0.242
8115.8	1232.2	0.2	0	7.42	0.183
8117.5	1231.9	4	0	7.67	0.201
8119.6	1231.6	8.1	0	7.97	0.221
8121.9	1231.2	11.6	0	8.28	0.242
8124.4	1230.9	14	0	8.61	0.262
8124.2	1230.9	0.2	10	7.7	0.204
8126.1	1230.6	3.1	10	7.96	0.221
8128.5	1230.2	6.1	10	8.27	0.242
8131.1	1229.9	8.4	10	8.6	0.262
8134	1229.4	0.2	20	8.11	0.232
8137.8	1228.8	3.5	20	8.58	0.262

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

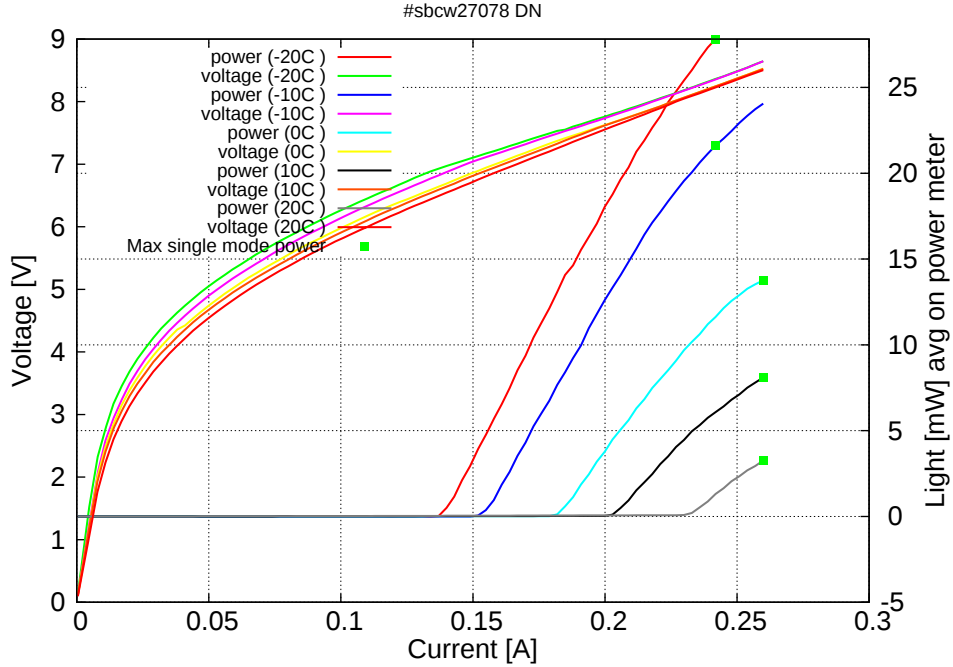


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=6.9V$ (2-wires measurements). Maximum operation current: 0.24A between -20C and -10C, 0.26A between 0C and 20C.

Figure 3: spectra at different temperatures for various DC currents

