

Datasheet for #sbcw20209 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 #sbcw20209 DN (please note that AlN submount numbering is A0N90)

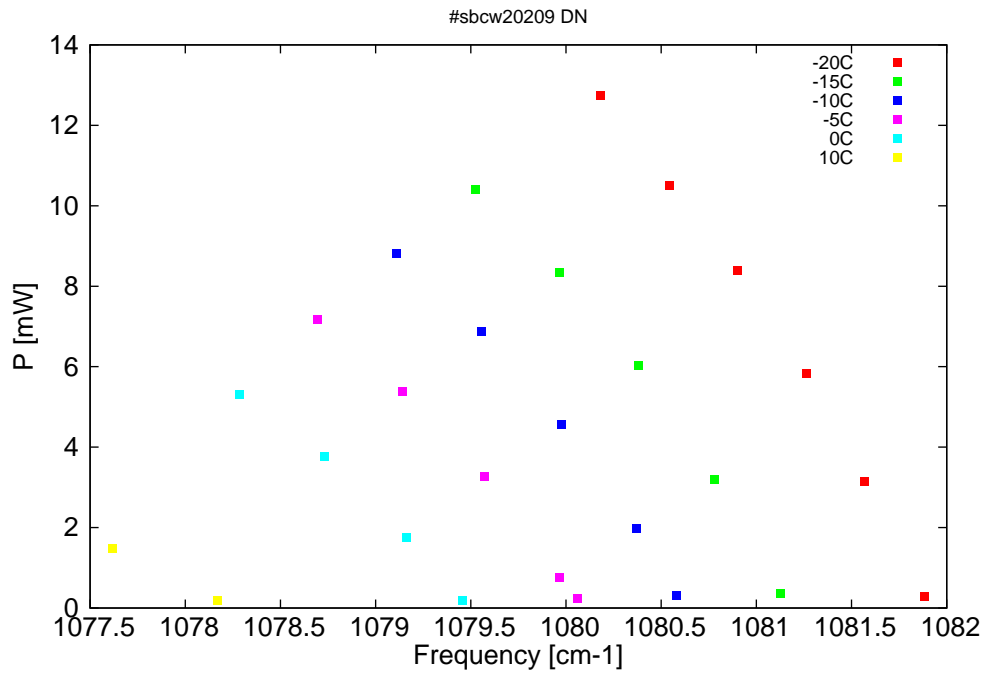


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

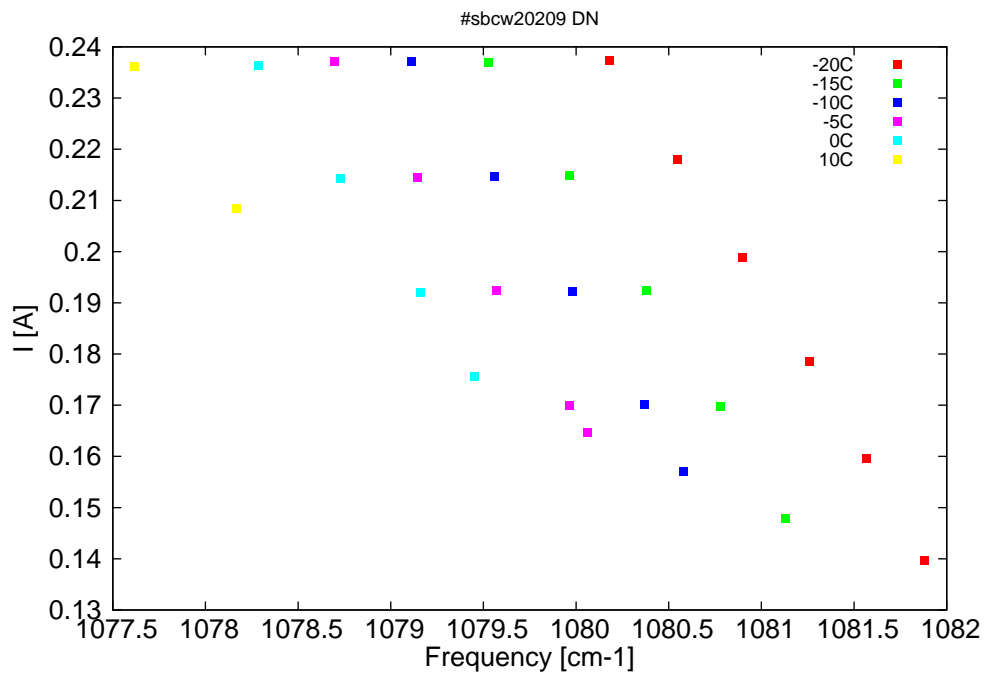


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9243.2	1081.9	0.3	-20	11.1	0.14
9245.8	1081.6	3.2	-20	11.53	0.16
9248.5	1081.3	5.8	-20	11.95	0.179
9251.6	1080.9	8.4	-20	12.38	0.199
9254.6	1080.5	10.5	-20	12.78	0.218
9257.7	1080.2	12.8	-20	13.17	0.237
9249.6	1081.1	0.4	-15	11.16	0.148
9252.6	1080.8	3.2	-15	11.64	0.17
9256	1080.4	6	-15	12.11	0.192
9259.6	1080	8.4	-15	12.55	0.215
9263.3	1079.5	10.4	-15	12.99	0.237
9254.3	1080.6	0.3	-10	11.29	0.157
9256.1	1080.4	2	-10	11.57	0.17
9259.4	1080	4.6	-10	12.03	0.192
9263.1	1079.6	6.9	-10	12.47	0.215
9266.9	1079.1	8.8	-10	12.9	0.237
9258.8	1080.1	0.2	-5	11.39	0.165
9259.6	1080	0.8	-5	11.5	0.17
9262.9	1079.6	3.3	-5	11.95	0.192
9266.6	1079.1	5.4	-5	12.39	0.215
9270.4	1078.7	7.2	-5	12.81	0.237
9263.9	1079.5	0.2	0	11.54	0.176
9266.5	1079.2	1.7	0	11.87	0.192
9270.1	1078.7	3.8	0	12.3	0.214
9274	1078.3	5.3	0	12.71	0.236
9275	1078.2	0.2	10	12.1	0.208
9279.7	1077.6	1.5	10	12.64	0.236

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

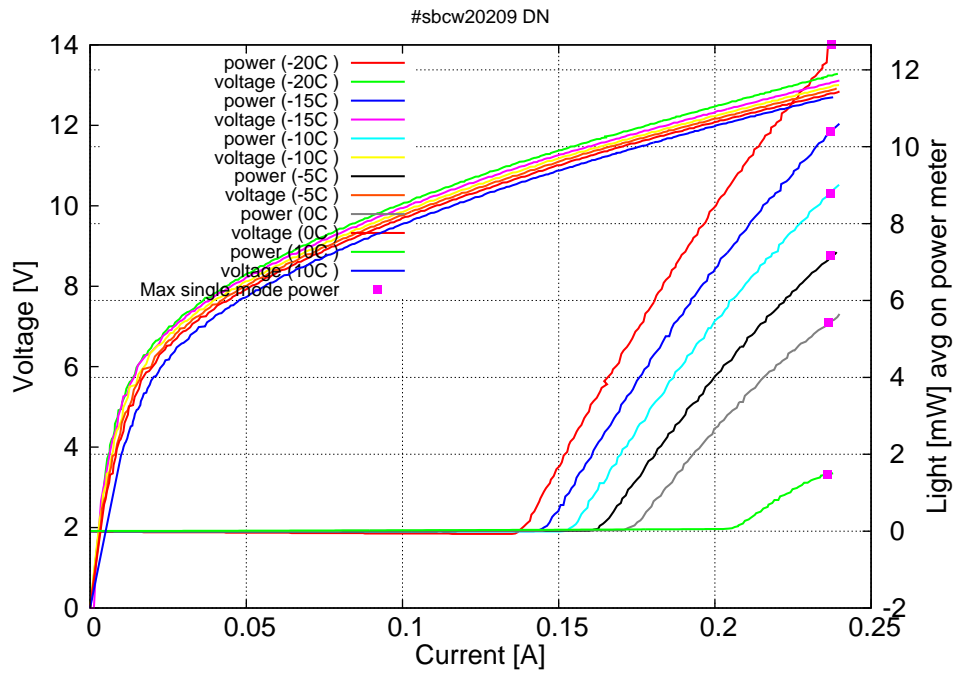


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=11.0V$ (2-wires measurements). Maximum operation current: 0.240A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

