

Datasheet for #sbcw20684 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 #sbcw20684 DN

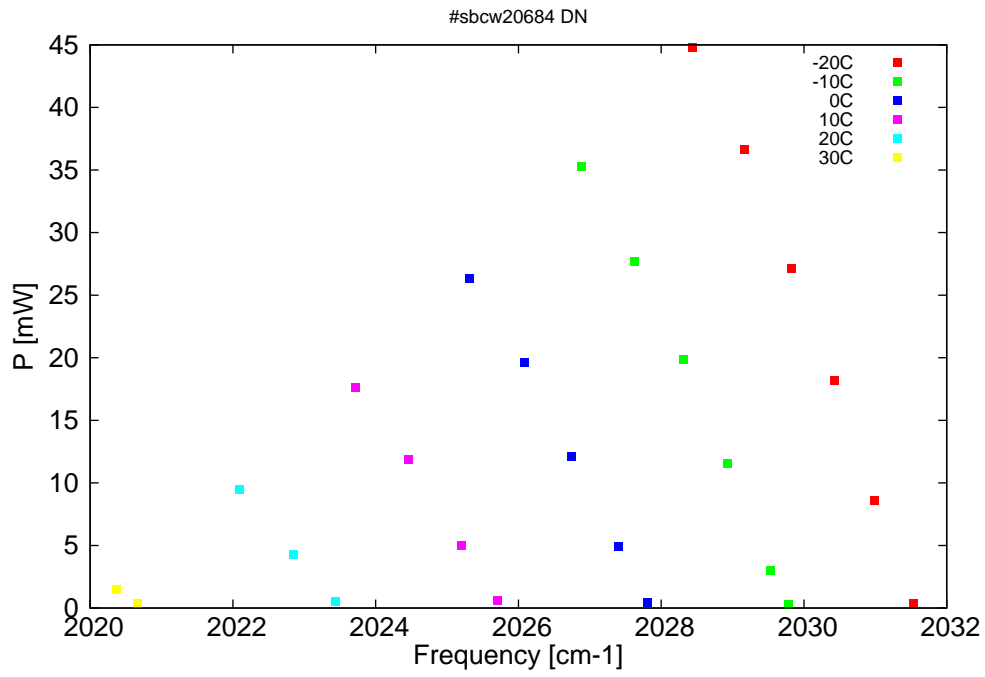


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

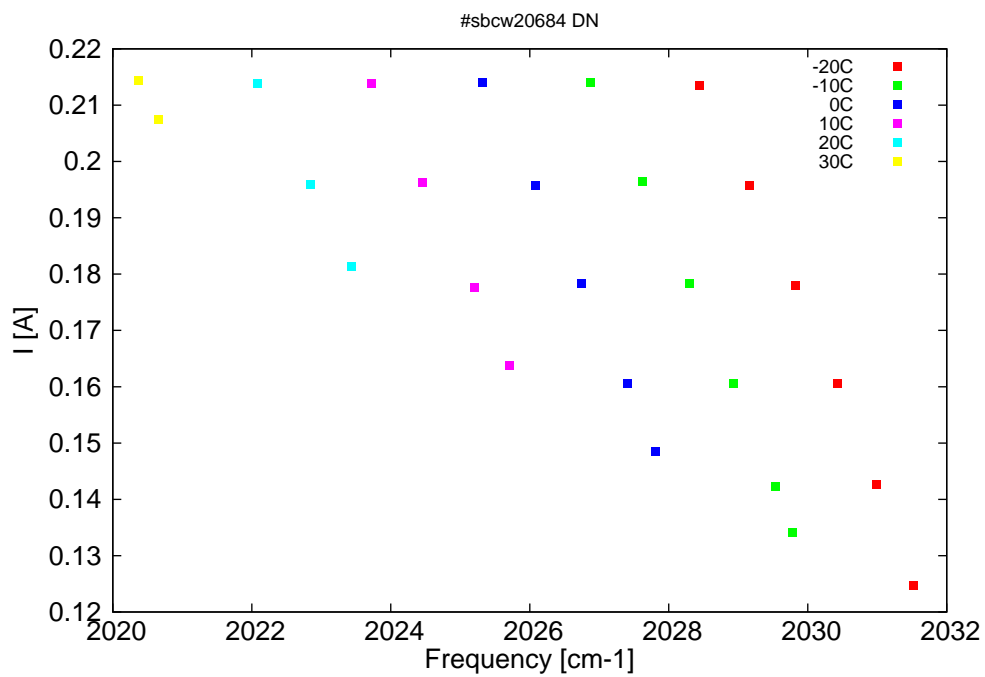


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4922.4	2031.5	0.4	-20	13.48	0.125
4923.7	2031	8.6	-20	13.75	0.143
4925.1	2030.4	18.2	-20	14.02	0.161
4926.5	2029.8	27.1	-20	14.28	0.178
4928.1	2029.2	36.6	-20	14.54	0.196
4929.9	2028.4	44.8	-20	14.8	0.214
4926.6	2029.8	0.3	-10	13.52	0.134
4927.2	2029.5	3	-10	13.64	0.142
4928.7	2028.9	11.6	-10	13.9	0.161
4930.2	2028.3	19.9	-10	14.16	0.178
4931.9	2027.6	27.7	-10	14.42	0.196
4933.7	2026.9	35.3	-10	14.68	0.214
4931.4	2027.8	0.5	0	13.63	0.148
4932.4	2027.4	4.9	0	13.8	0.161
4934	2026.7	12.2	0	14.05	0.178
4935.6	2026.1	19.6	0	14.29	0.196
4937.5	2025.3	26.3	0	14.55	0.214
4936.5	2025.7	0.6	10	13.75	0.164
4937.8	2025.2	5	10	13.93	0.178
4939.6	2024.5	11.9	10	14.19	0.196
4941.4	2023.7	17.7	10	14.42	0.214
4942.1	2023.4	0.6	20	13.89	0.181
4943.5	2022.8	4.2	20	14.08	0.196
4945.4	2022.1	9.5	20	14.31	0.214
4948.9	2020.7	0.3	30	14.14	0.207
4949.6	2020.4	1.5	30	14.22	0.214

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

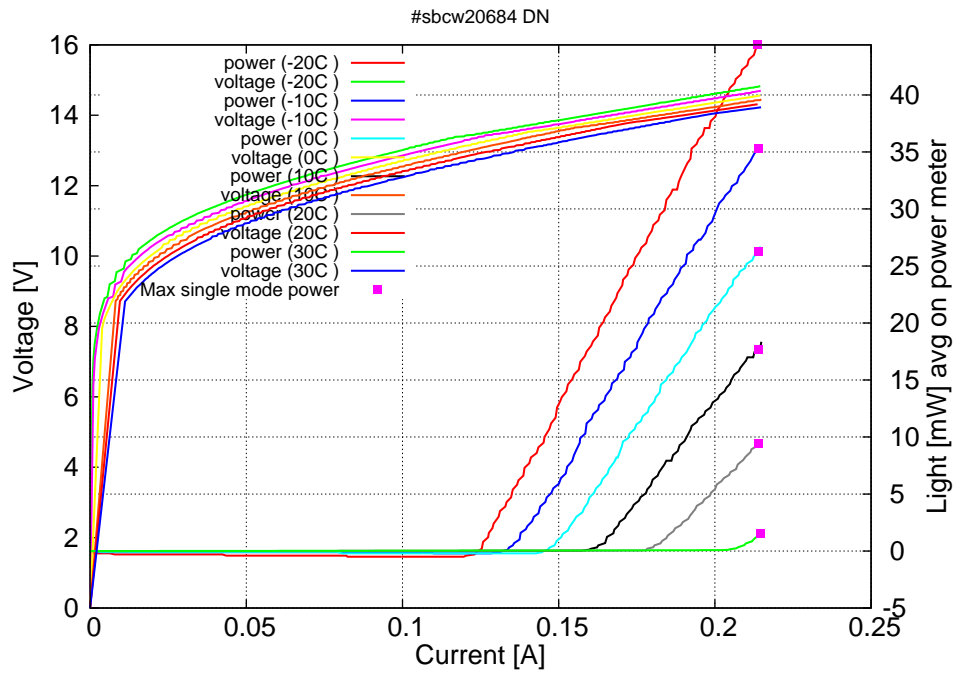


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=13.4V$ (2-wires measurements). Maximum operation current: 0.215A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

