

Datasheet for #sbcw19837 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 #sbcw19837 DN (please note that AlN submount numbering is A0RJP)

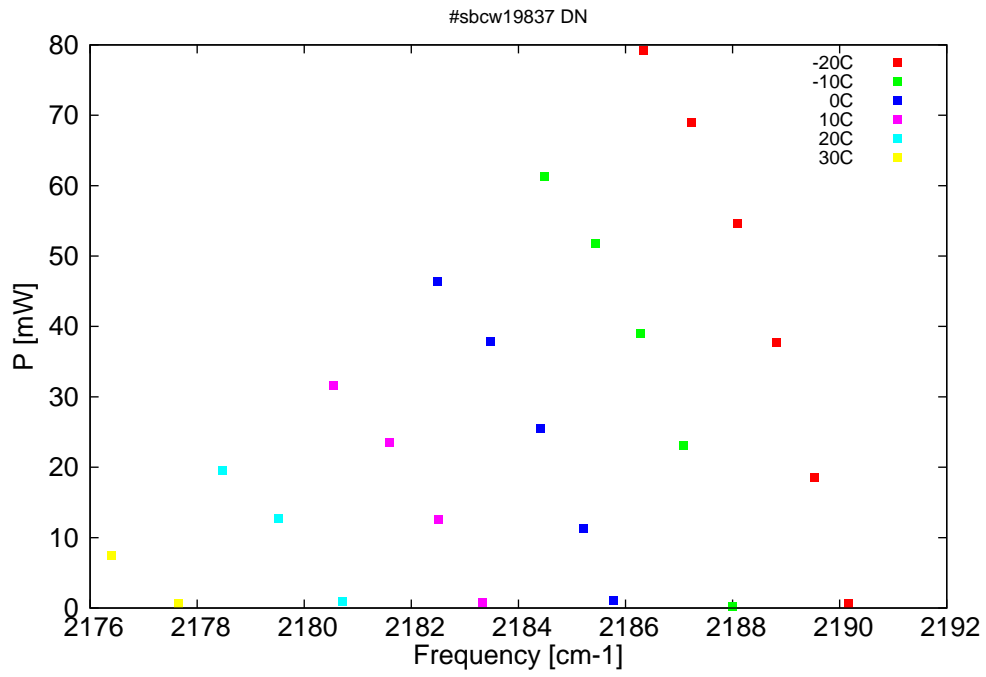


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

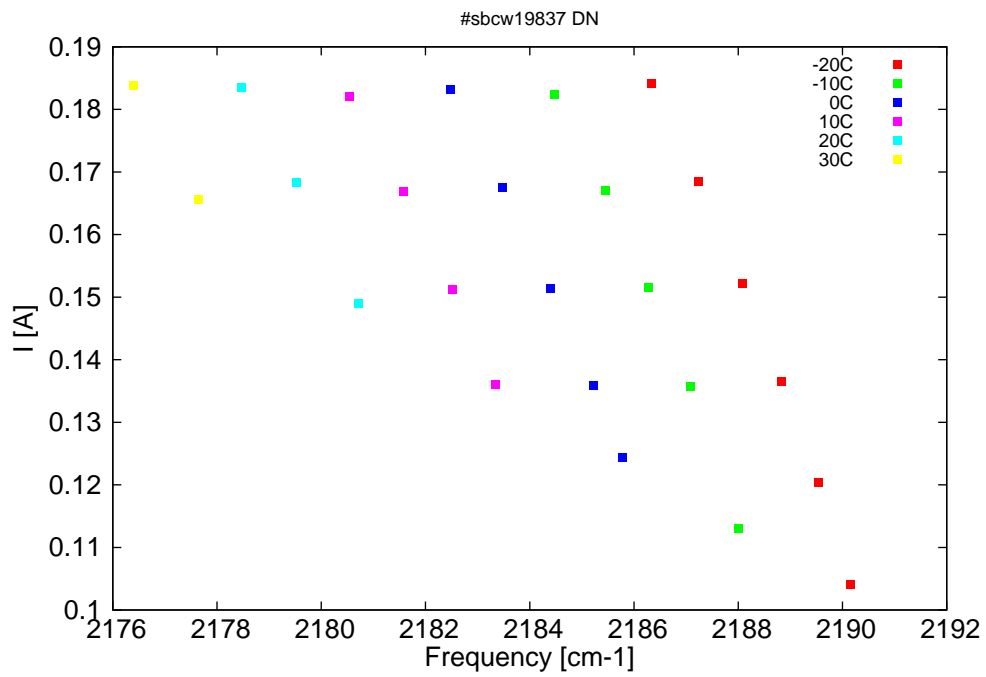


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4565.9	2190.2	0.6	-20	8.81	0.104
4567.2	2189.5	18.5	-20	9.01	0.12
4568.7	2188.8	37.7	-20	9.22	0.136
4570.2	2188.1	54.6	-20	9.42	0.152
4572	2187.2	68.9	-20	9.64	0.169
4573.9	2186.3	79.3	-20	9.85	0.184
4570.4	2188	0.2	-10	8.91	0.113
4572.3	2187.1	23.1	-10	9.18	0.136
4574	2186.3	39.1	-10	9.39	0.152
4575.7	2185.4	51.8	-10	9.6	0.167
4577.7	2184.5	61.4	-10	9.82	0.182
4575	2185.8	1.1	0	8.98	0.124
4576.2	2185.2	11.3	0	9.12	0.136
4577.9	2184.4	25.5	0	9.32	0.151
4579.9	2183.5	37.9	0	9.54	0.168
4581.9	2182.5	46.5	0	9.75	0.183
4580.1	2183.3	0.8	10	9.09	0.136
4581.9	2182.5	12.6	10	9.29	0.151
4583.8	2181.6	23.6	10	9.5	0.167
4586	2180.6	31.6	10	9.71	0.182
4585.7	2180.7	1	20	9.24	0.149
4588.2	2179.5	12.7	20	9.49	0.168
4590.4	2178.5	19.5	20	9.71	0.183
4592.1	2177.6	0.7	30	9.47	0.166
4594.8	2176.4	7.5	30	9.72	0.184

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

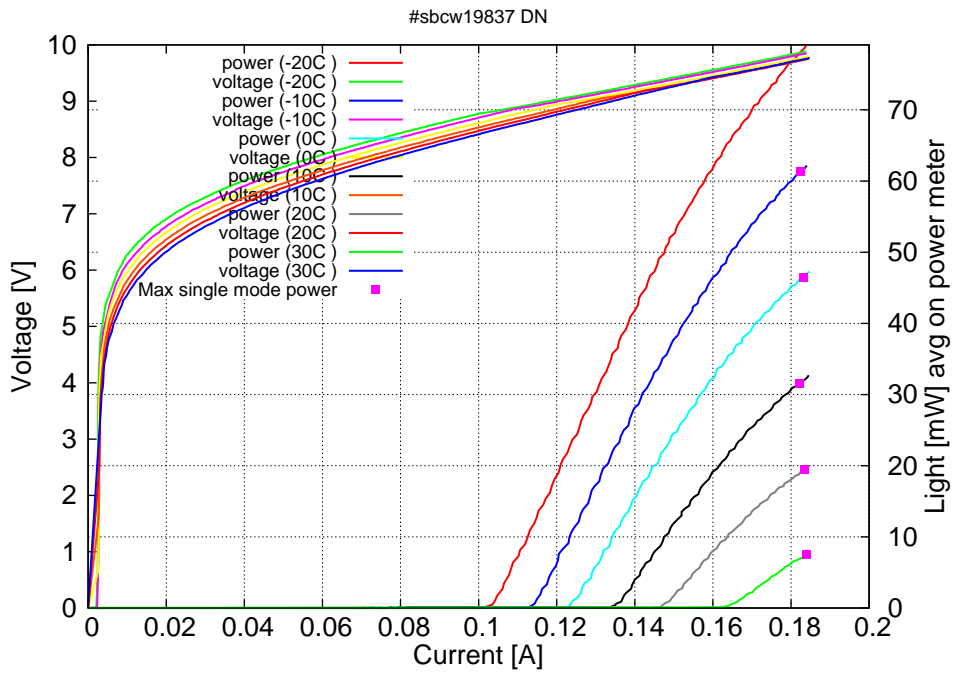


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.185A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

