

Datasheet for #sbcw19836 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 #sbcw19836 DN (please note that AlN submount numbering is A0MNY)

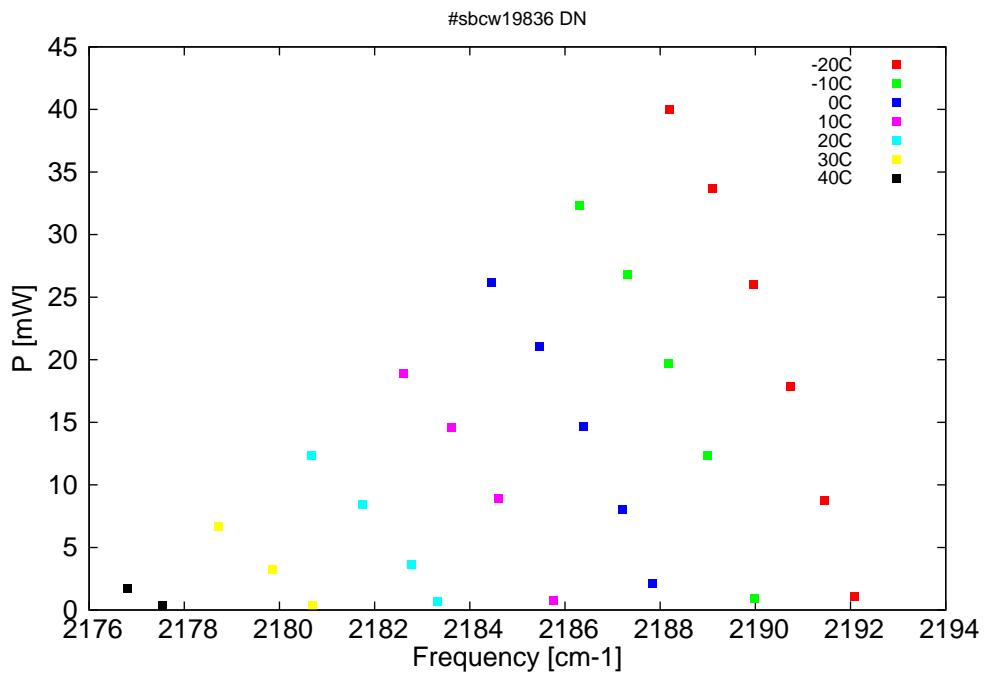


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

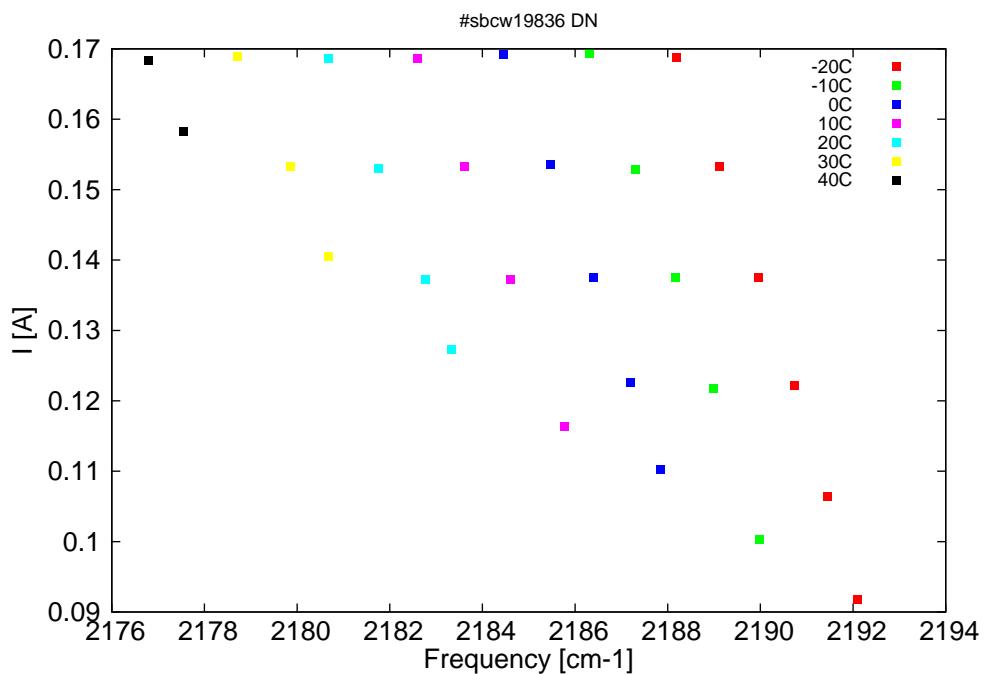


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4561.9	2192.1	1.1	-20	8.58	0.092
4563.2	2191.5	8.8	-20	8.77	0.106
4564.7	2190.7	17.8	-20	8.96	0.122
4566.3	2190	26	-20	9.16	0.137
4568.1	2189.1	33.7	-20	9.36	0.153
4570	2188.2	40	-20	9.56	0.169
4566.2	2190	0.9	-10	8.65	0.1
4568.3	2189	12.3	-10	8.92	0.122
4570	2188.2	19.7	-10	9.13	0.138
4571.8	2187.3	26.8	-10	9.32	0.153
4573.9	2186.3	32.3	-10	9.53	0.169
4570.7	2187.8	2.1	0	8.72	0.11
4572.1	2187.2	8.1	0	8.89	0.123
4573.7	2186.4	14.7	0	9.08	0.138
4575.7	2185.5	21	0	9.29	0.154
4577.8	2184.5	26.2	0	9.49	0.169
4575.1	2185.8	0.8	10	8.77	0.116
4577.5	2184.6	8.9	10	9.04	0.137
4579.6	2183.6	14.6	10	9.25	0.153
4581.7	2182.6	18.9	10	9.46	0.169
4580.2	2183.3	0.7	20	8.89	0.127
4581.3	2182.8	3.7	20	9.02	0.137
4583.5	2181.8	8.5	20	9.23	0.153
4585.7	2180.7	12.4	20	9.44	0.169
4585.7	2180.7	0.4	30	9.04	0.14
4587.4	2179.9	3.3	30	9.21	0.153
4589.9	2178.7	6.6	30	9.43	0.169
4592.3	2177.5	0.3	40	9.27	0.158
4593.9	2176.8	1.7	40	9.41	0.168

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

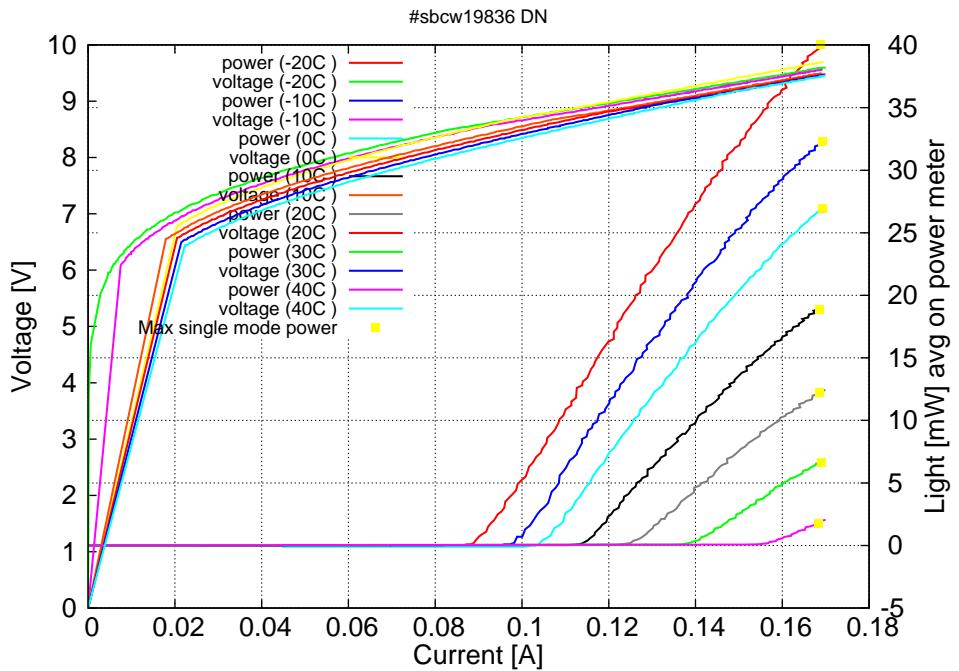


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

