

**Datasheet for #sbcw19822 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 #sbcw19822 DN (please note that AlN submount numbering is A0MMF)

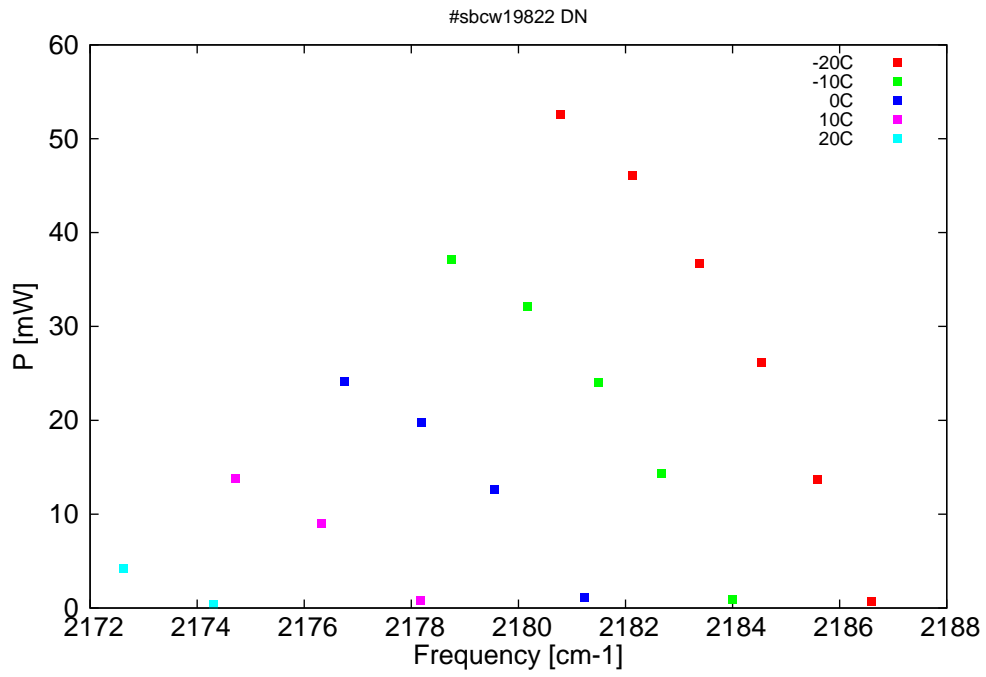


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

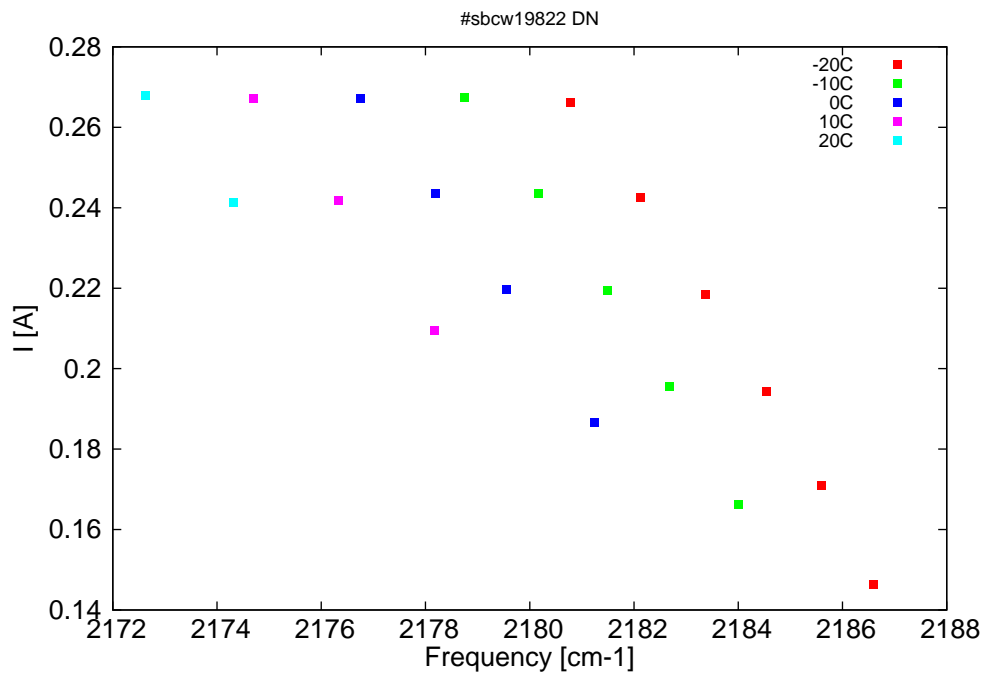


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4573.3	2186.6	0.7	-20	8.47	0.146
4575.4	2185.6	13.7	-20	8.67	0.171
4577.6	2184.5	26.2	-20	8.85	0.194
4580.1	2183.4	36.7	-20	9.04	0.218
4582.7	2182.1	46.1	-20	9.23	0.243
4585.5	2180.8	52.6	-20	9.42	0.266
4578.7	2184	0.9	-10	8.58	0.166
4581.5	2182.7	14.4	-10	8.82	0.196
4584	2181.5	24.1	-10	9.01	0.219
4586.8	2180.2	32.1	-10	9.2	0.243
4589.8	2178.7	37.1	-10	9.4	0.267
4584.5	2181.2	1.1	0	8.71	0.187
4588.1	2179.6	12.7	0	8.98	0.22
4591	2178.2	19.8	0	9.18	0.244
4594	2176.8	24.2	0	9.38	0.267
4591	2178.2	0.8	10	8.87	0.21
4594.9	2176.3	9	10	9.14	0.242
4598.3	2174.7	13.8	10	9.37	0.267
4599.2	2174.3	0.3	20	9.12	0.241
4602.7	2172.6	4.2	20	9.34	0.268

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

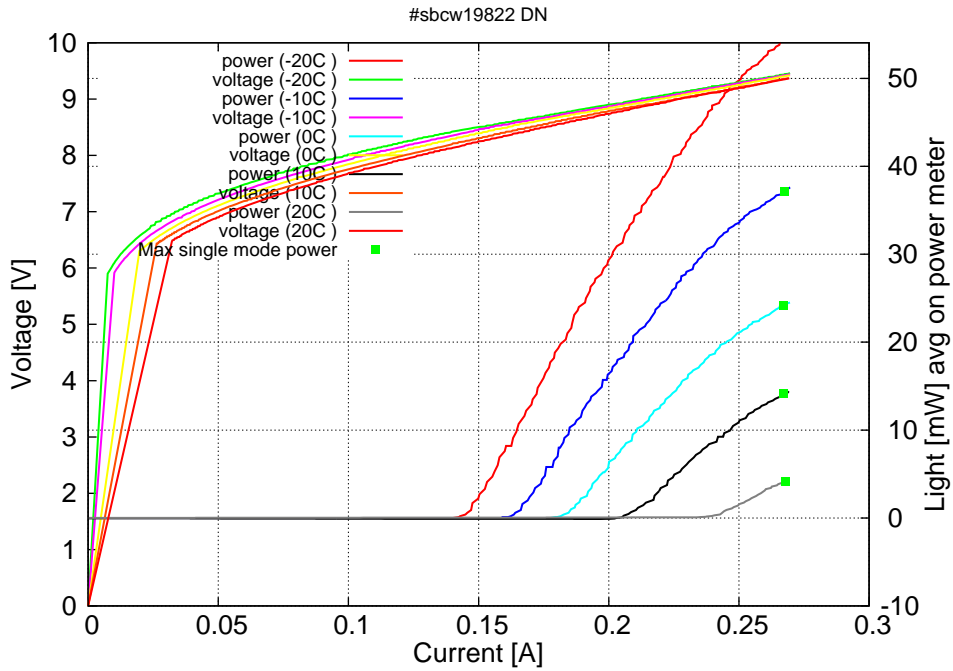


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.14A$  /  $V_{th}=8.5V$  (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

