

**Datasheet for #sbcw19742 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 #sbcw19742 DN (please note that AlN submount numbering is A0RMJ)

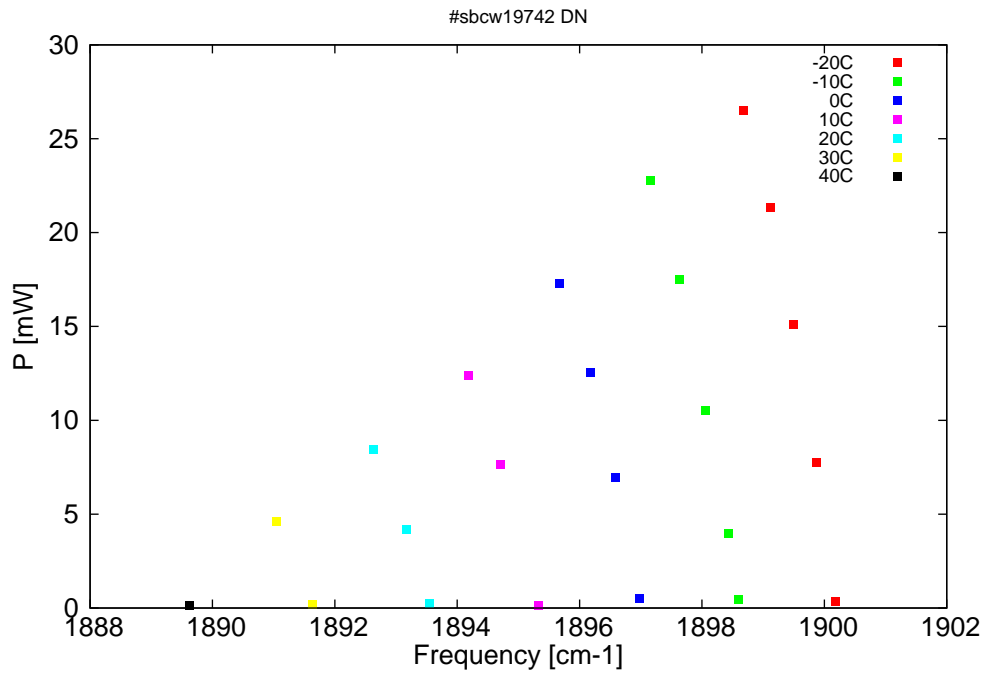


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

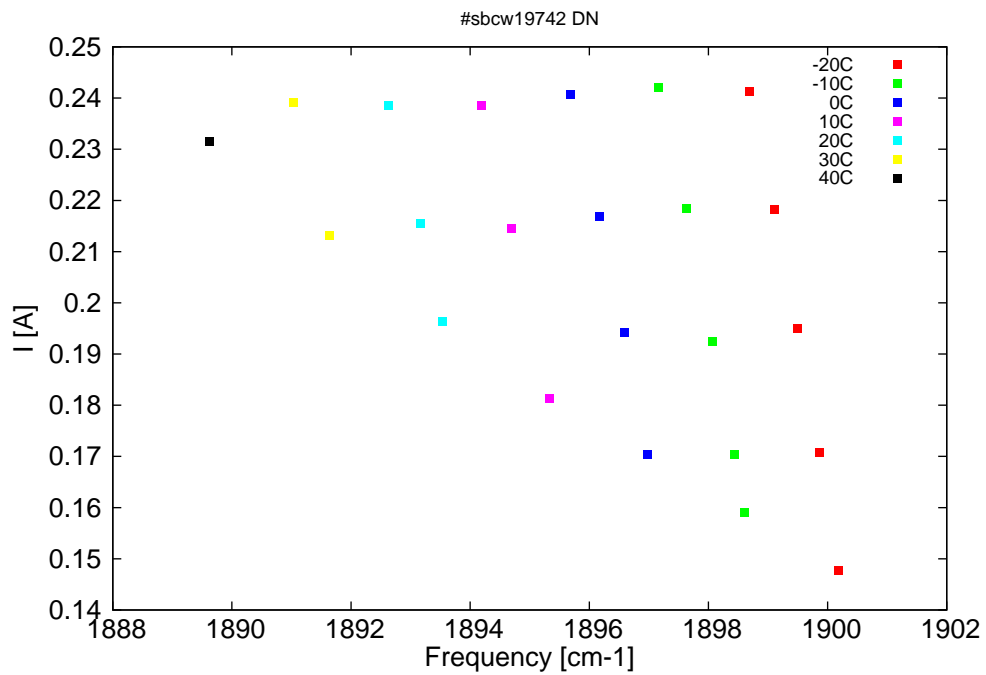


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5262.7	1900.2	0.4	-20	7.79	0.148
5263.5	1899.9	7.8	-20	7.99	0.171
5264.5	1899.5	15.1	-20	8.21	0.195
5265.6	1899.1	21.4	-20	8.42	0.218
5266.8	1898.7	26.5	-20	8.66	0.241
5267	1898.6	0.5	-10	7.85	0.159
5267.5	1898.4	4	-10	7.95	0.17
5268.5	1898.1	10.5	-10	8.17	0.192
5269.7	1897.6	17.5	-10	8.39	0.218
5271	1897.2	22.8	-10	8.64	0.242
5271.5	1897	0.5	0	7.91	0.17
5272.6	1896.6	6.9	0	8.13	0.194
5273.8	1896.2	12.5	0	8.35	0.217
5275.2	1895.7	17.3	0	8.6	0.241
5276.1	1895.3	0.1	10	7.99	0.181
5277.9	1894.7	7.6	10	8.31	0.215
5279.3	1894.2	12.4	10	8.55	0.238
5281.1	1893.5	0.3	20	8.11	0.196
5282.2	1893.2	4.2	20	8.3	0.215
5283.6	1892.6	8.4	20	8.54	0.238
5286.4	1891.6	0.2	30	8.26	0.213
5288.1	1891	4.6	30	8.53	0.239
5292.1	1889.6	0.1	40	8.45	0.232

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

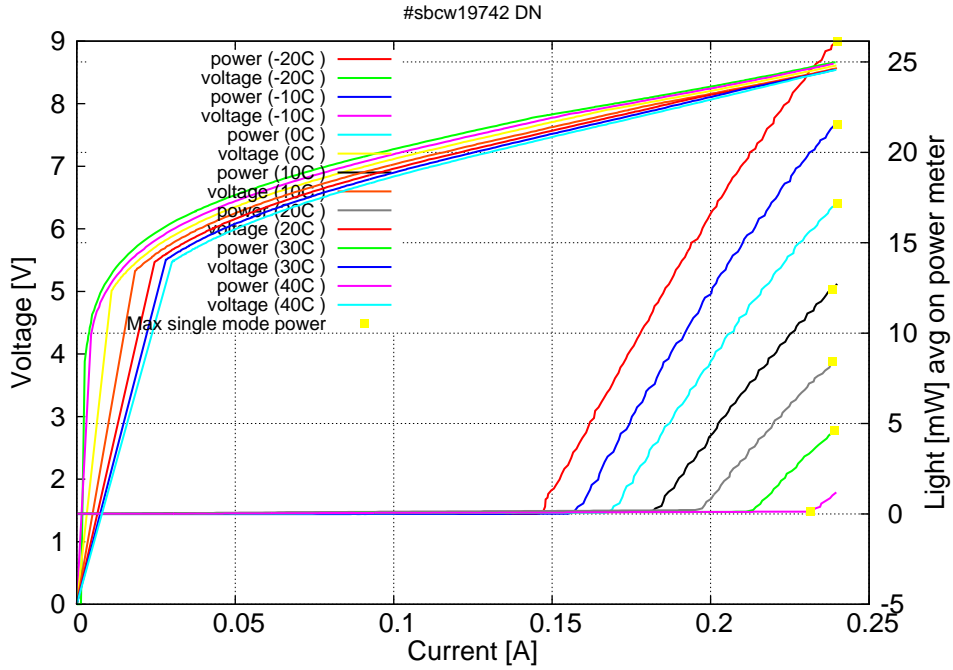


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.14A$  /  $V_{th}=7.8V$  (2-wires measurements). Maximum operation current: 0.24A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

