

**Datasheet for #sbcw19797 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.

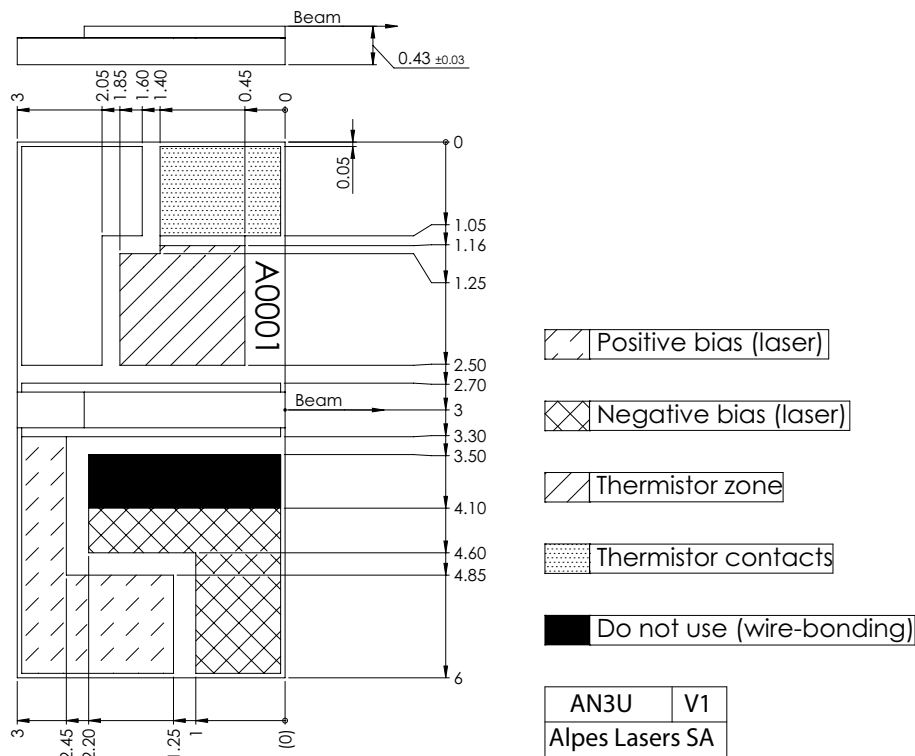


Figure 1: Mechanical and electrical interface for #sbcw19797 DN (please note that AlN submount numbering is A0PNY)

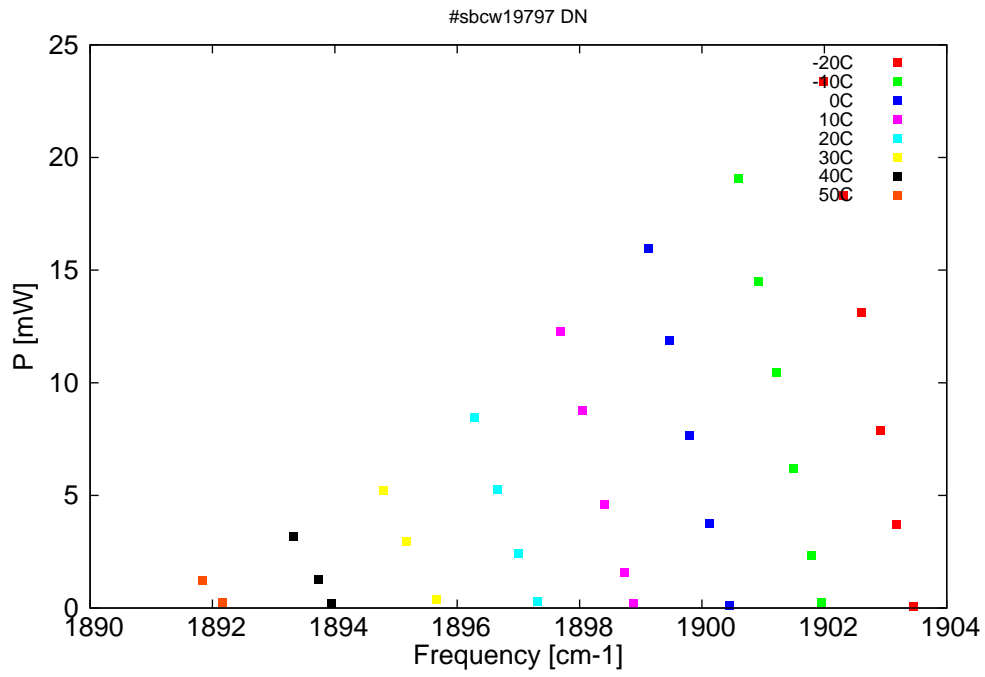


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

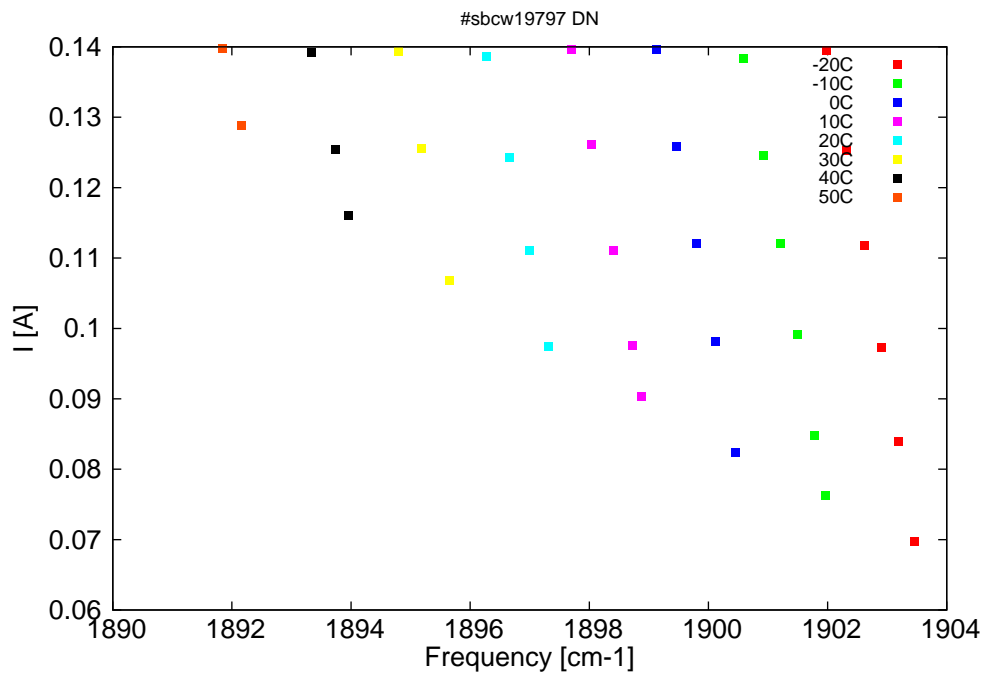


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5253.6	1903.5	0.1	-20	7.58	0.07
5254.4	1903.2	3.7	-20	7.77	0.084
5255.1	1902.9	7.9	-20	7.95	0.097
5255.9	1902.6	13.1	-20	8.15	0.112
5256.8	1902.3	18.3	-20	8.34	0.125
5257.7	1902	23.4	-20	8.55	0.139
5257.7	1902	0.2	-10	7.6	0.076
5258.2	1901.8	2.3	-10	7.71	0.085
5259	1901.5	6.2	-10	7.91	0.099
5259.8	1901.2	10.5	-10	8.08	0.112
5260.6	1900.9	14.5	-10	8.26	0.125
5261.5	1900.6	19.1	-10	8.46	0.138
5261.9	1900.5	0.1	0	7.63	0.082
5262.8	1900.1	3.7	0	7.84	0.098
5263.7	1899.8	7.6	0	8.03	0.112
5264.6	1899.5	11.9	0	8.22	0.126
5265.6	1899.1	15.9	0	8.42	0.14
5266.3	1898.9	0.2	10	7.68	0.09
5266.7	1898.7	1.6	10	7.77	0.098
5267.6	1898.4	4.6	10	7.96	0.111
5268.6	1898	8.8	10	8.17	0.126
5269.5	1897.7	12.3	10	8.36	0.14
5270.6	1897.3	0.3	20	7.72	0.097
5271.5	1897	2.4	20	7.9	0.111
5272.4	1896.7	5.3	20	8.08	0.124
5273.5	1896.3	8.4	20	8.28	0.139
5275.2	1895.7	0.4	30	7.79	0.107
5276.6	1895.2	3	30	8.04	0.126
5277.6	1894.8	5.2	30	8.24	0.139
5280	1894	0.2	40	7.88	0.116
5280.6	1893.7	1.3	40	7.99	0.125
5281.7	1893.3	3.2	40	8.18	0.139
5285	1892.2	0.2	50	7.98	0.129
5285.8	1891.8	1.2	50	8.13	0.14

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

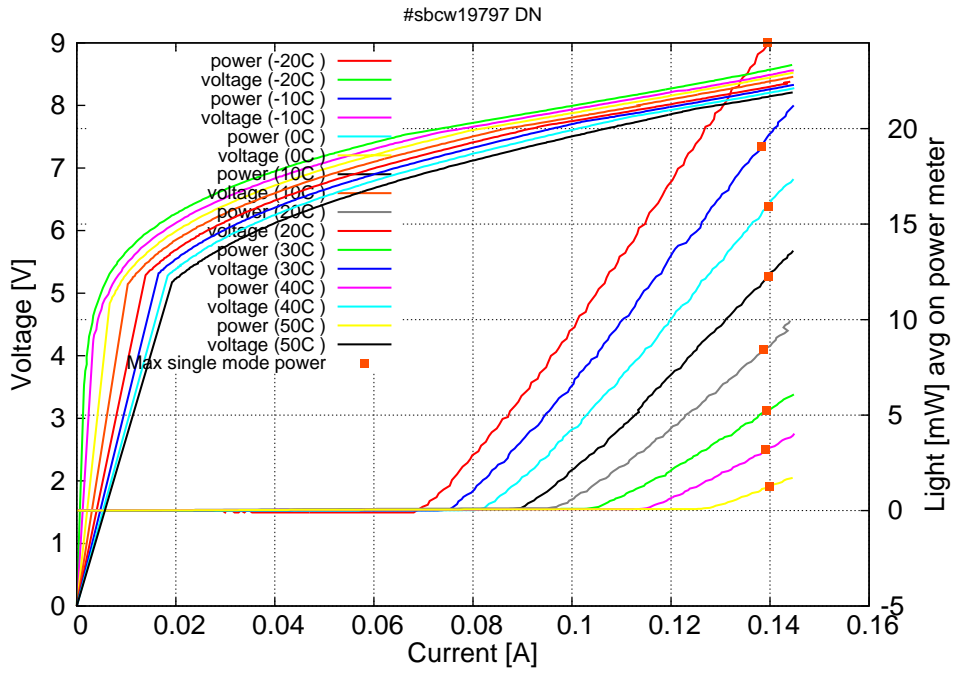


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=7.58V$  (2-wires measurements). Maximum operation current: 0.145A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

