

Datasheet for #sbcw19524 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.

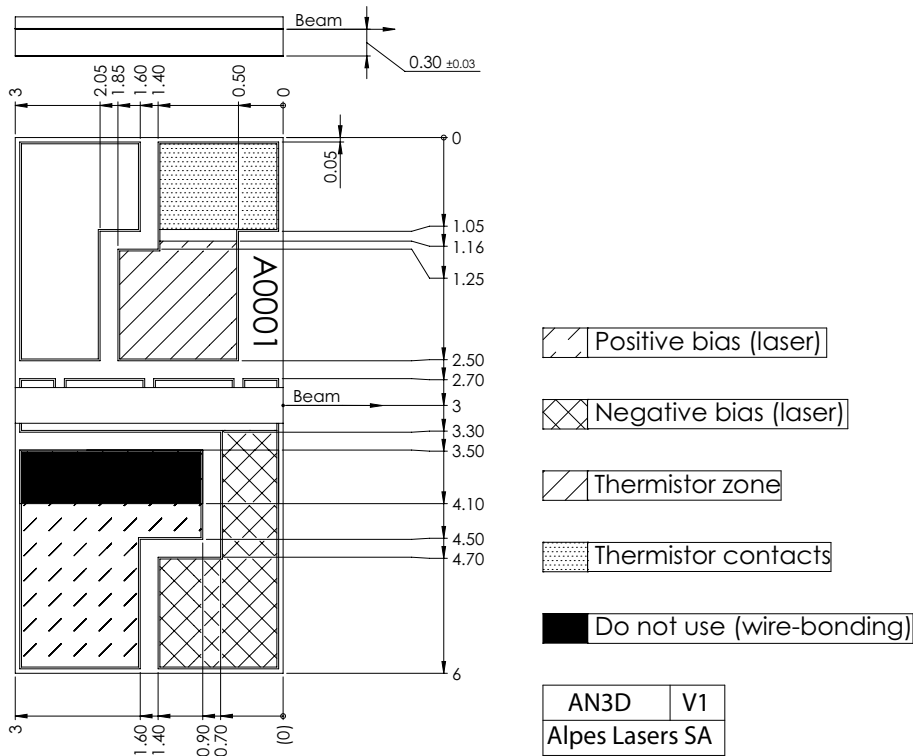


Figure 1: Mechanical and electrical interface for #sbcw19524 DN (please note that AlN submount numbering is P1139)

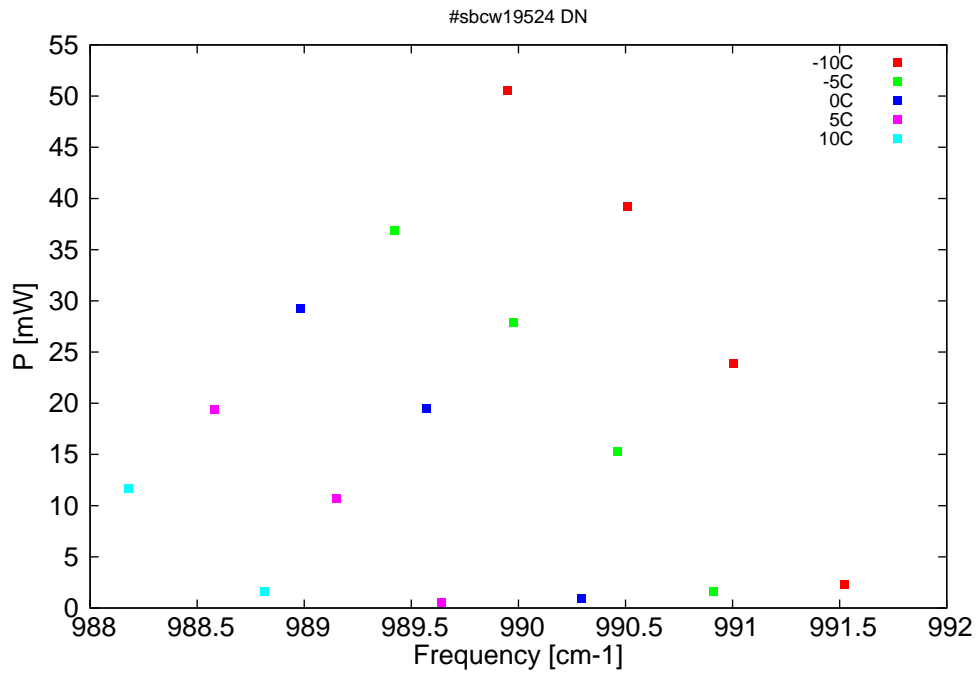


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

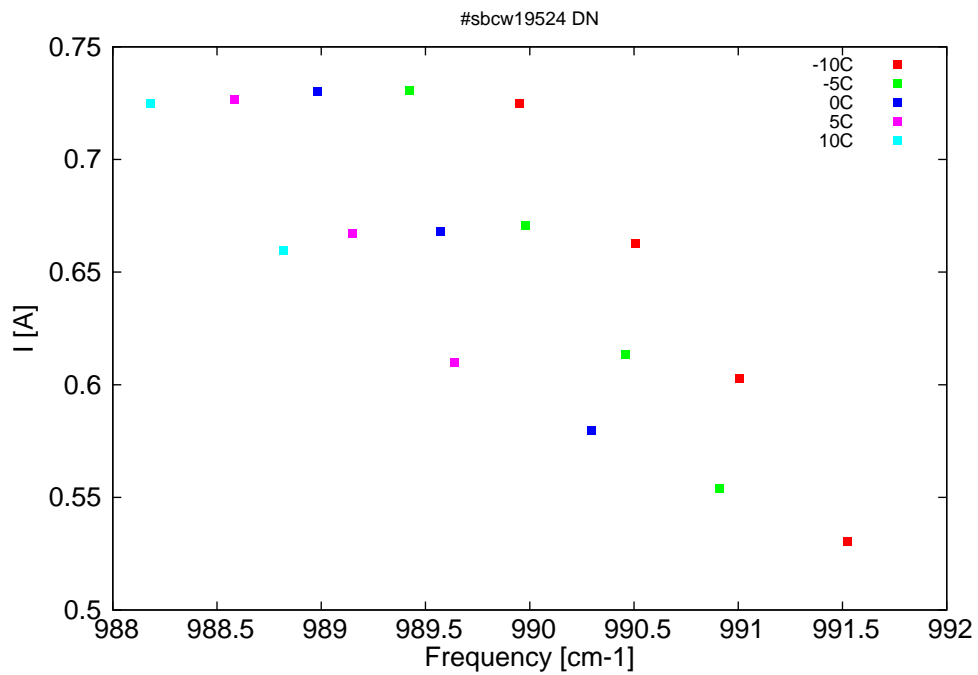


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10085.5	991.5	2.3	-10	8.34	0.53
10090.8	991	23.9	-10	8.66	0.603
10095.8	990.5	39.3	-10	8.96	0.663
10101.5	989.9	50.5	-10	9.29	0.725
10091.7	990.9	1.6	-5	8.55	0.554
10096.3	990.5	15.3	-5	8.83	0.613
10101.2	990	27.9	-5	9.13	0.671
10106.9	989.4	36.9	-5	9.44	0.73
10098	990.3	0.9	0	8.63	0.58
10105.4	989.6	19.5	0	9.08	0.668
10111.4	989	29.3	0	9.42	0.73
10104.7	989.6	0.5	5	8.76	0.61
10109.7	989.1	10.7	5	9.06	0.667
10115.5	988.6	19.4	5	9.38	0.727
10113.1	988.8	1.7	10	8.91	0.659
10119.6	988.2	11.7	10	9.26	0.725

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

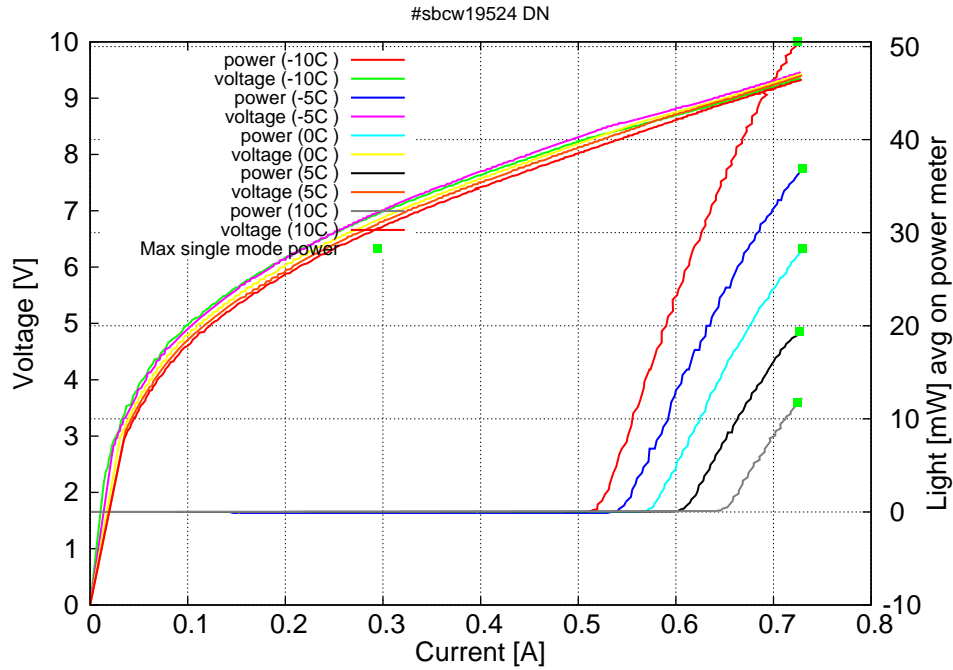


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.51A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.73A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

