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Datasheet for #sbcw19747 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.

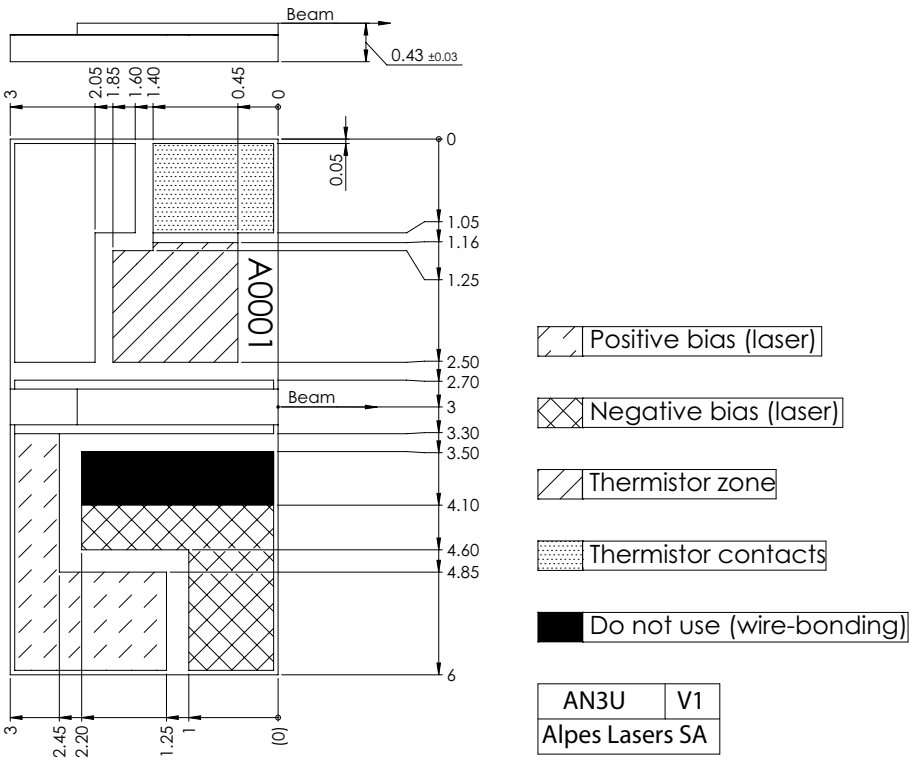

Figure 1: Mechanical and electrical interface for #sbcw19747 DN (please note that AlN submount numbering is A0TMZ)

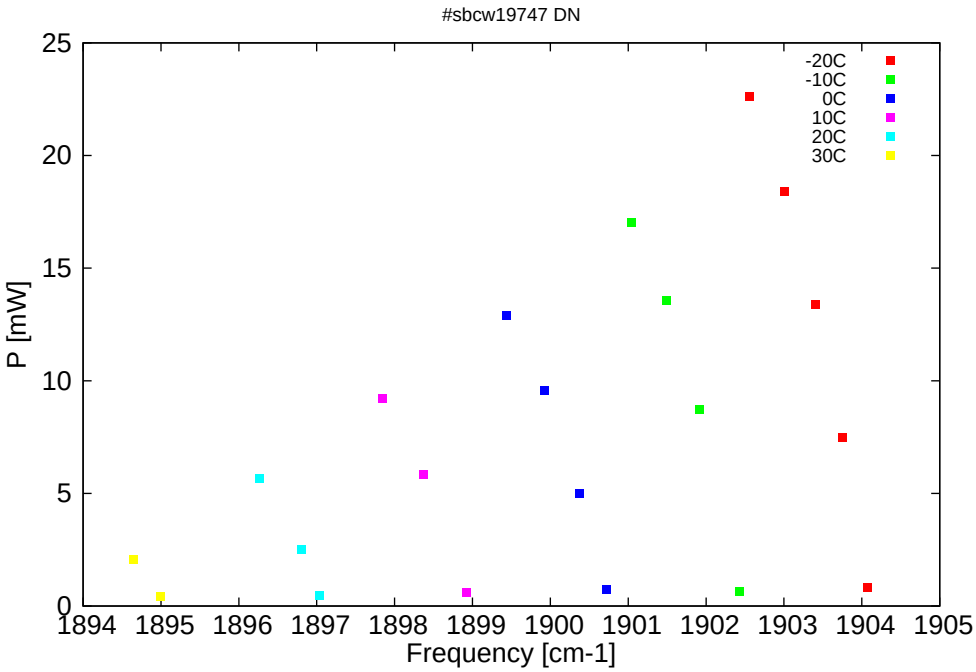

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

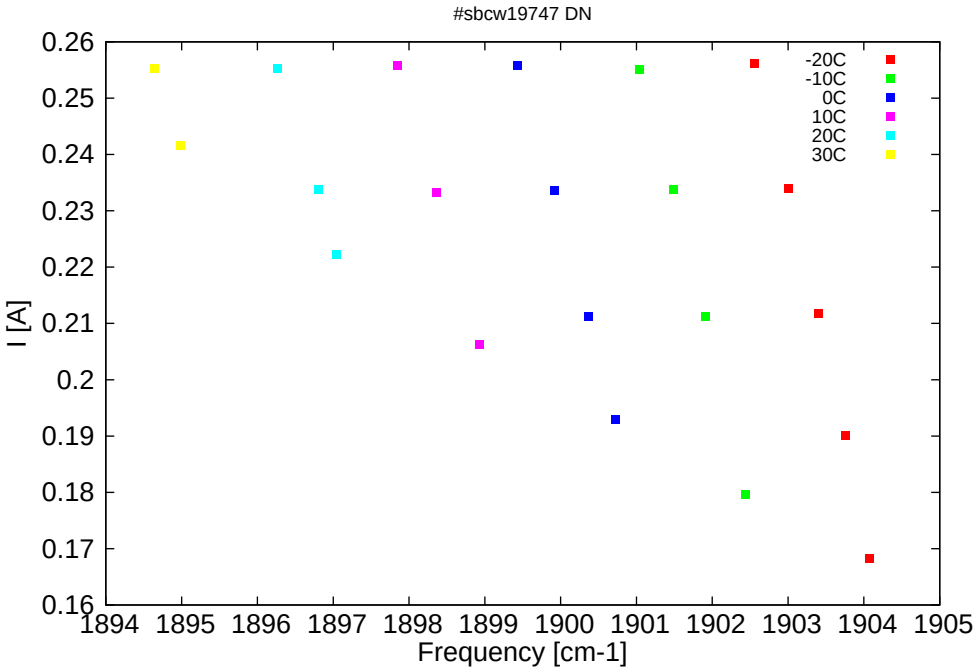

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
5251.9	1904.1	0.8	-20	7.91	0.168
5252.8	1903.8	7.5	-20	8.1	0.19
5253.7	1903.4	13.4	-20	8.28	0.212
5254.8	1903	18.4	-20	8.48	0.234
5256.1	1902.6	22.6	-20	8.71	0.256
5256.4	1902.4	0.7	-10	7.97	0.18
5257.9	1901.9	8.7	-10	8.25	0.211
5259	1901.5	13.6	-10	8.46	0.234
5260.3	1901	17	-10	8.68	0.255
5261.2	1900.7	0.7	0	8.05	0.193
5262.1	1900.4	5	0	8.23	0.211
5263.4	1899.9	9.6	0	8.44	0.234
5264.7	1899.4	12.9	0	8.67	0.256
5266.1	1898.9	0.6	10	8.16	0.206
5267.7	1898.4	5.8	10	8.42	0.233
5269.1	1897.8	9.2	10	8.66	0.256
5271.4	1897	0.5	20	8.29	0.222
5272	1896.8	2.5	20	8.41	0.234
5273.5	1896.3	5.7	20	8.64	0.255
5277.1	1895	0.4	30	8.5	0.242
5278	1894.6	2.1	30	8.66	0.255

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

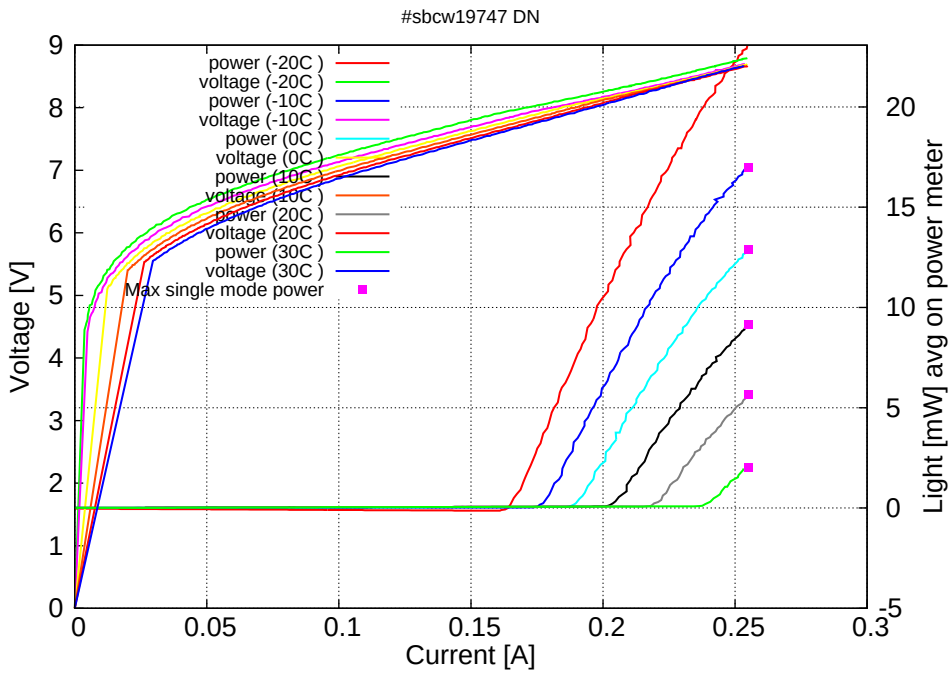

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.16A / Vth=7.9V (2-wires measurements). Maximum operation

current: 0.255A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents