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Datasheet for #sbcw20698 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.

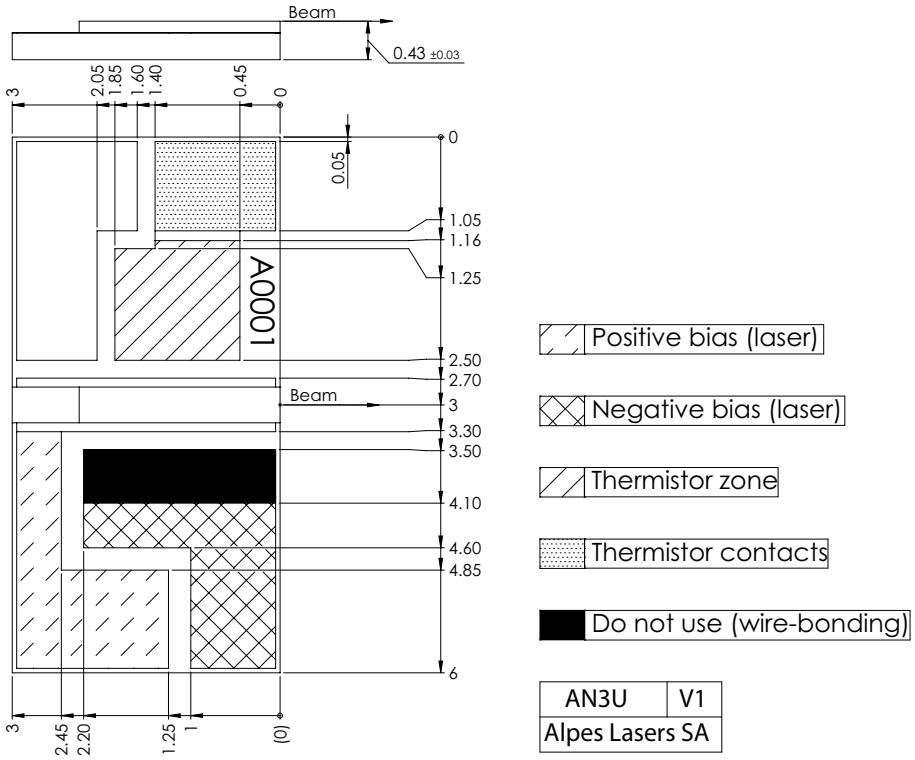

Figure 1: Mechanical and electrical interface for #sbcw20698 DN (please note that AlN submount numbering is A0NDJ)

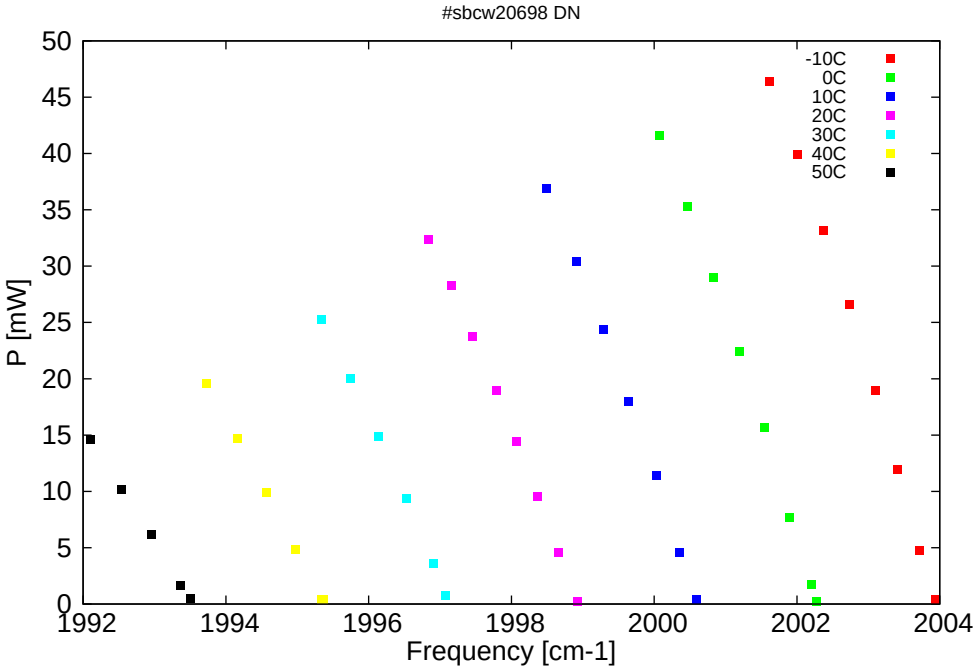

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

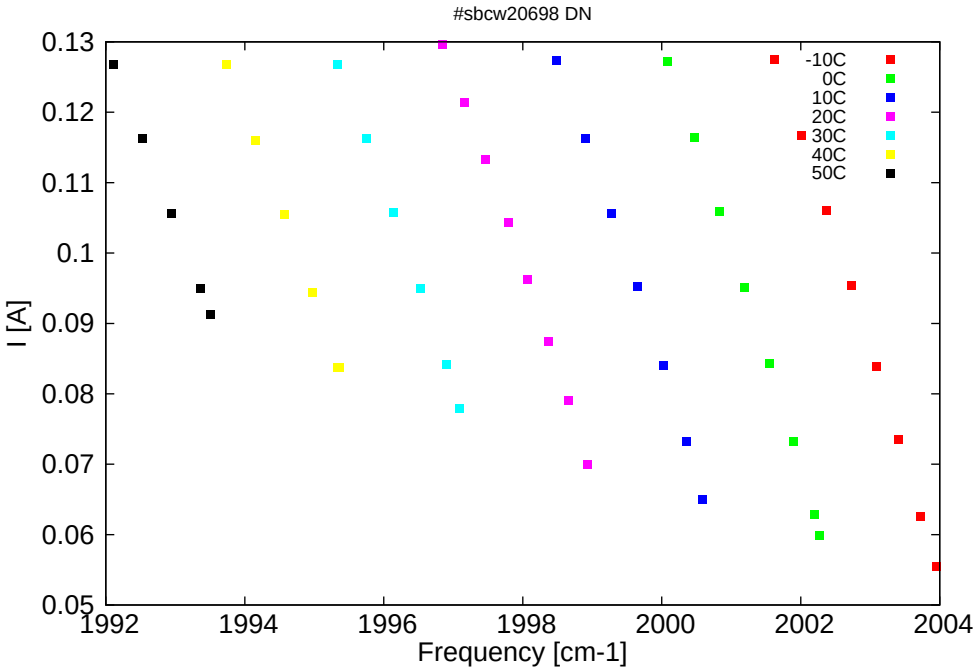

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
4990.2	2003.9	0.4	-10	10.67	0.055
4990.7	2003.7	4.8	-10	10.83	0.062
4991.5	2003.4	11.9	-10	11.08	0.073
4992.3	2003.1	18.9	-10	11.3	0.084
4993.2	2002.7	26.6	-10	11.52	0.095
4994.1	2002.4	33.2	-10	11.72	0.106
4995	2002	39.9	-10	11.92	0.117
4996	2001.6	46.4	-10	12.11	0.127
4994.3	2002.3	0.2	0	10.63	0.06
4994.5	2002.2	1.7	0	10.69	0.063
4995.2	2001.9	7.7	0	10.92	0.073
4996.1	2001.5	15.7	0	11.15	0.084
4997	2001.2	22.4	0	11.36	0.095
4997.9	2000.8	29	0	11.56	0.106
4998.8	2000.5	35.3	0	11.75	0.116
4999.8	2000.1	41.6	0	11.94	0.127
4998.5	2000.6	0.4	10	10.62	0.065
4999.1	2000.4	4.6	10	10.79	0.073
4999.9	2000	11.4	10	11.01	0.084
5000.9	1999.6	18	10	11.23	0.095
5001.8	1999.3	24.4	10	11.42	0.106
5002.7	1998.9	30.4	10	11.61	0.116
5003.8	1998.5	36.9	10	11.8	0.127
5002.7	1998.9	0.2	20	10.61	0.07
5003.4	1998.7	4.6	20	10.78	0.079
5004.1	1998.4	9.6	20	10.95	0.087
5004.8	1998.1	14.5	20	11.12	0.096
5005.5	1997.8	18.9	20	11.27	0.104
5006.4	1997.5	23.7	20	11.42	0.113
5007.1	1997.2	28.3	20	11.56	0.121
5007.9	1996.8	32.3	20	11.71	0.13
5007.3	1997.1	0.7	30	10.66	0.078
5007.8	1996.9	3.6	30	10.78	0.084
5008.7	1996.5	9.3	30	10.98	0.095
5009.7	1996.1	14.9	30	11.17	0.106
5010.6	1995.7	20	30	11.36	0.116
5011.7	1995.3	25.3	30	11.54	0.127
5011.6	1995.4	0.4	40	10.68	0.084
5011.7	1995.3	0.4	40	10.68	0.084
5012.6	1995	4.9	40	10.87	0.094
5013.6	1994.6	9.9	40	11.06	0.105
5014.6	1994.2	14.7	40	11.25	0.116
5015.7	1993.7	19.6	40	11.43	0.127
5016.3	1993.5	0.5	50	10.73	0.091
5016.7	1993.4	1.6	50	10.79	0.095
5017.7	1993	6.1	50	10.97	0.106
5018.7	1992.5	10.2	50	11.15	0.116
5019.8	1992.1	14.6	50	11.33	0.127

continued on next page

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]

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

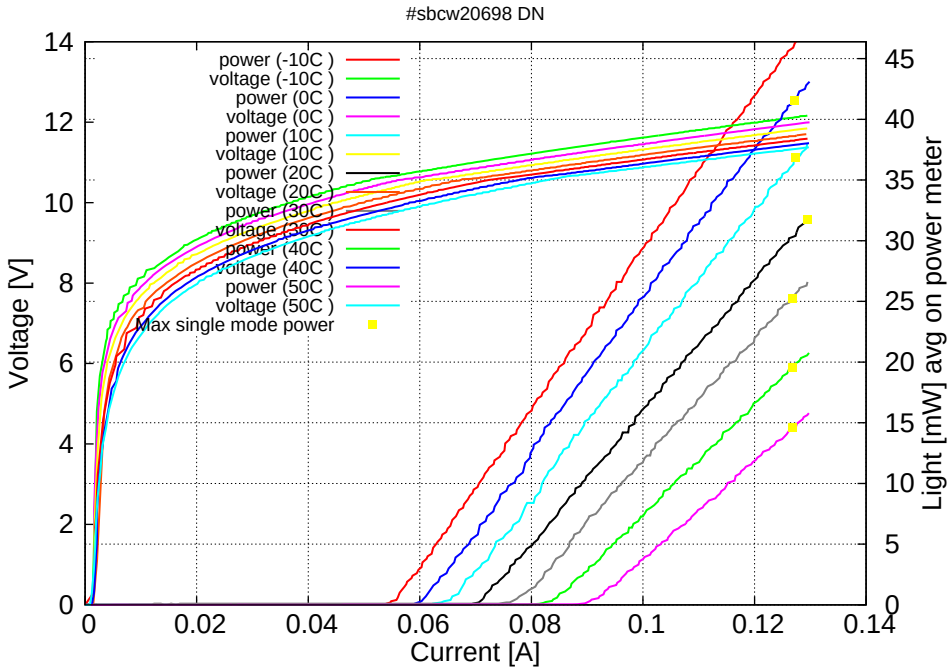

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: Ith=0.05A / Vth=10.6V (2-wires measurements). Maximum operation current: 0.13A for all temperatures.

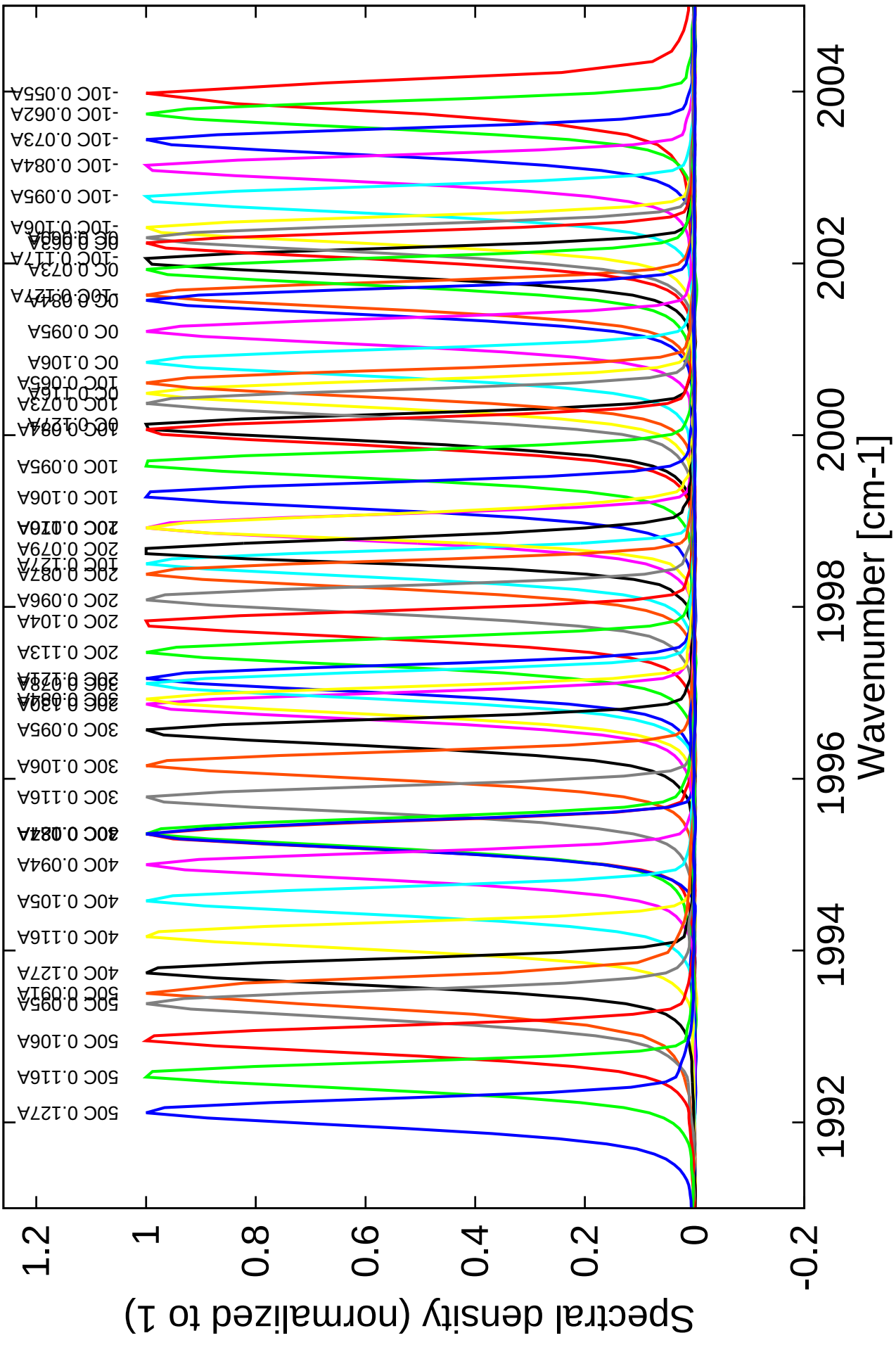

Figure 3: spectra at different temperatures for various DC currents