

Datasheet for #sbcw22870 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 #sbcw22870 DN (please note that AlN submount numbering is A0WZH)

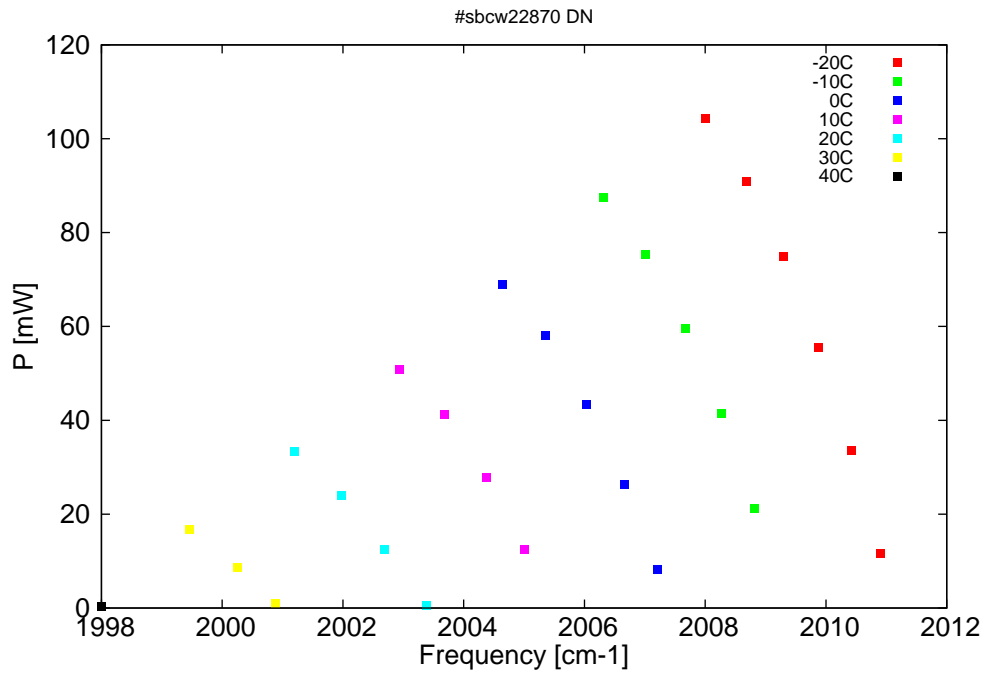


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

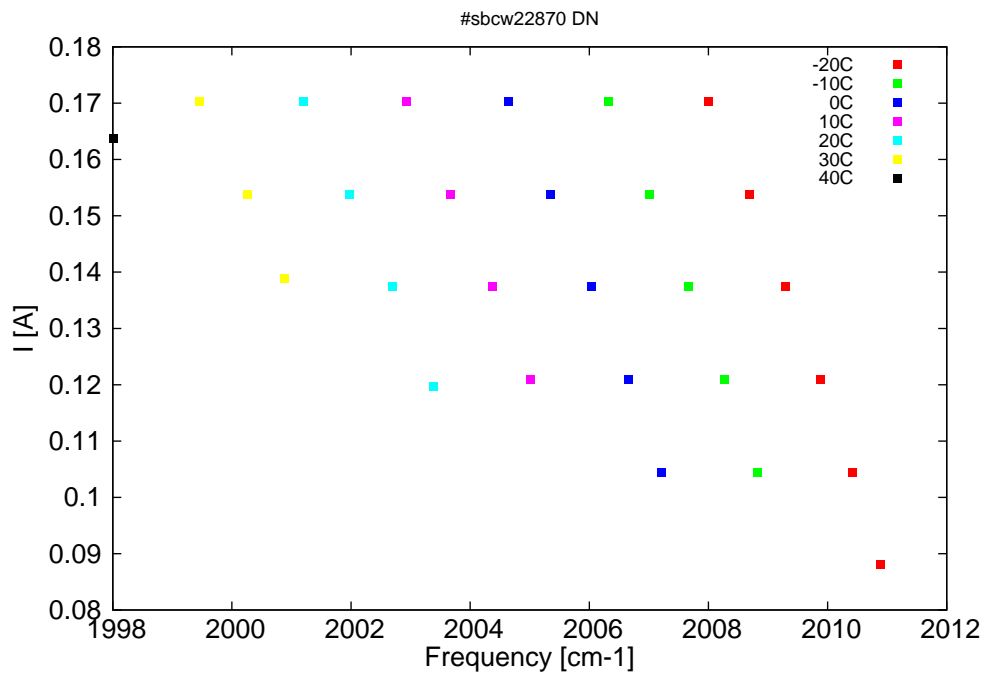


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4972.9	2010.9	11.7	-20	13.05	0.088
4974.1	2010.4	33.5	-20	13.37	0.105
4975.4	2009.9	55.4	-20	13.69	0.121
4976.9	2009.3	74.8	-20	14.01	0.137
4978.4	2008.7	91	-20	14.35	0.154
4980.1	2008	104.4	-20	14.69	0.17
4978	2008.8	21.3	-10	13.26	0.105
4979.4	2008.3	41.4	-10	13.59	0.121
4980.9	2007.7	59.5	-10	13.9	0.137
4982.5	2007	75.2	-10	14.24	0.154
4984.2	2006.3	87.5	-10	14.57	0.17
4982	2007.2	8.2	0	13.16	0.105
4983.4	2006.7	26.3	0	13.47	0.121
4985	2006	43.5	0	13.79	0.137
4986.7	2005.4	58	0	14.12	0.154
4988.4	2004.6	69	0	14.44	0.17
4987.5	2005	12.5	10	13.37	0.121
4989.1	2004.4	27.8	10	13.68	0.137
4990.8	2003.7	41.2	10	14	0.154
4992.7	2002.9	50.9	10	14.32	0.17
4991.6	2003.4	0.6	20	13.27	0.12
4993.3	2002.7	12.5	20	13.59	0.137
4995.1	2002	23.9	20	13.9	0.154
4997	2001.2	33.3	20	14.21	0.17
4997.8	2000.9	0.9	30	13.56	0.139
4999.3	2000.3	8.6	30	13.82	0.154
5001.3	1999.5	16.6	30	14.13	0.17
5005	1998	0.3	40	13.94	0.164

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

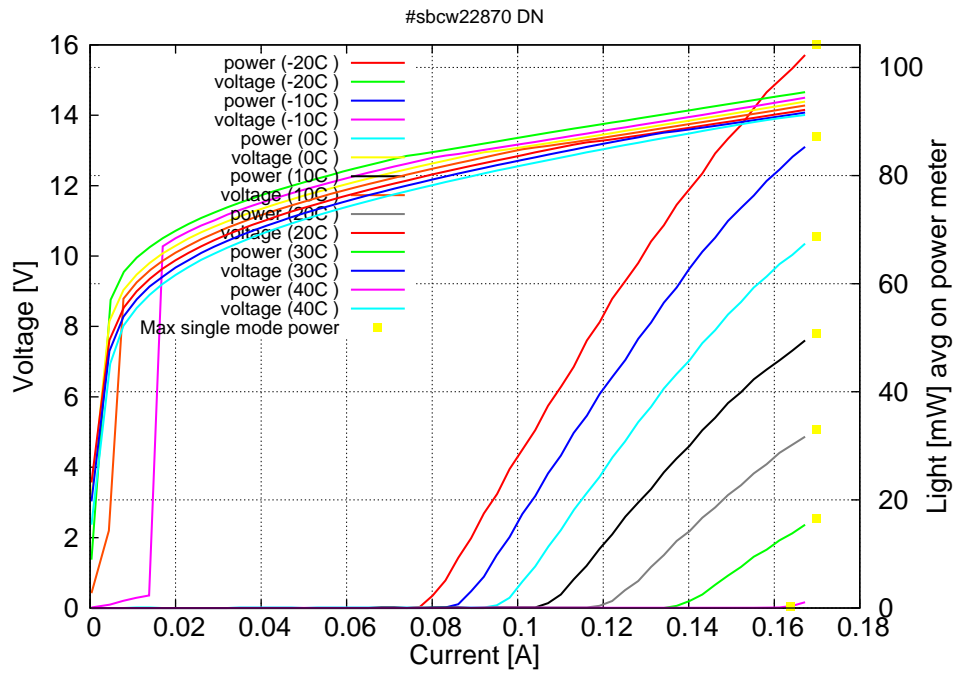


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=12.9V$ (2-wires measurements). Maximum operation current: 0.17A for all temperatures.

