

Datasheet for #sbcw20688 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw20688 DN

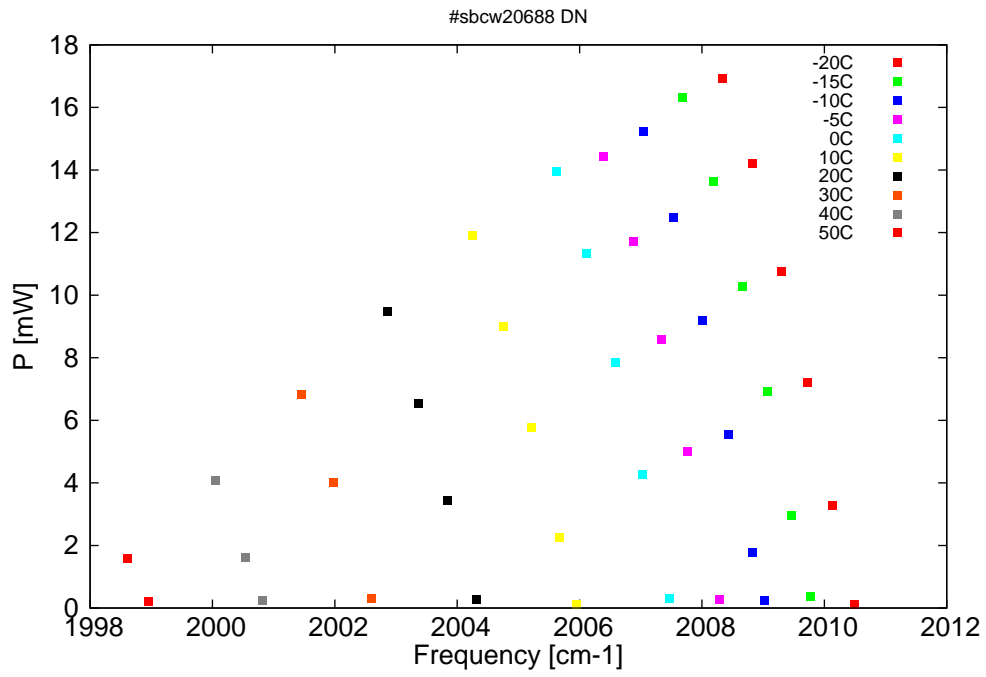


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

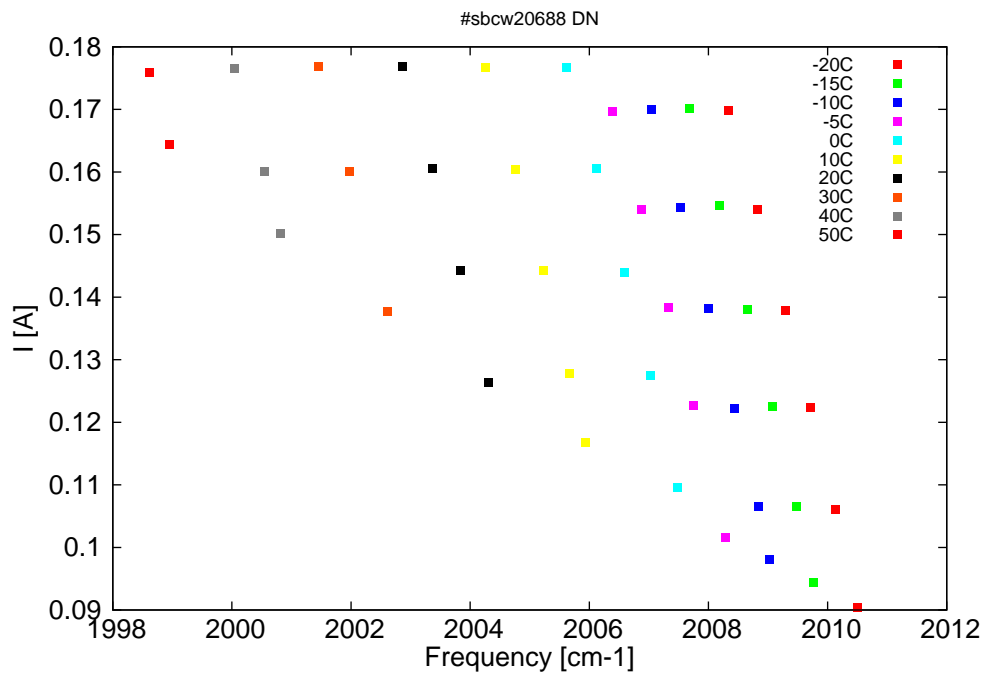


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4973.9	2010.5	0.1	-20	11.46	0.09
4974.8	2010.1	3.3	-20	11.82	0.106
4975.8	2009.7	7.2	-20	12.2	0.122
4976.9	2009.3	10.8	-20	12.56	0.138
4978	2008.8	14.2	-20	12.94	0.154
4979.2	2008.3	16.9	-20	13.34	0.17
4975.7	2009.8	0.4	-15	11.47	0.094
4976.4	2009.5	3	-15	11.75	0.107
4977.4	2009.1	6.9	-15	12.11	0.123
4978.5	2008.7	10.3	-15	12.46	0.138
4979.6	2008.2	13.6	-15	12.84	0.155
4980.9	2007.7	16.3	-15	13.21	0.17
4977.5	2009	0.2	-10	11.47	0.098
4978	2008.8	1.8	-10	11.66	0.106
4979	2008.4	5.5	-10	12.01	0.122
4980.1	2008	9.2	-10	12.37	0.138
4981.2	2007.5	12.5	-10	12.73	0.154
4982.5	2007	15.2	-10	13.09	0.17
4979.4	2008.3	0.3	-5	11.47	0.102
4980.7	2007.8	5	-5	11.93	0.123
4981.7	2007.3	8.6	-5	12.28	0.138
4982.9	2006.9	11.7	-5	12.62	0.154
4984.1	2006.4	14.4	-5	12.97	0.17
4981.4	2007.5	0.3	0	11.49	0.11
4982.5	2007	4.3	0	11.86	0.128
4983.6	2006.6	7.9	0	12.21	0.144
4984.8	2006.1	11.3	0	12.55	0.16
4986	2005.6	14	0	12.89	0.177
4985.2	2005.9	0.1	10	11.5	0.117
4985.9	2005.7	2.2	10	11.71	0.128
4987	2005.2	5.8	10	12.04	0.144
4988.1	2004.8	9	10	12.36	0.16
4989.4	2004.3	11.9	10	12.69	0.177
4989.2	2004.3	0.3	20	11.55	0.126
4990.4	2003.8	3.5	20	11.88	0.144
4991.6	2003.4	6.6	20	12.2	0.161
4992.8	2002.9	9.5	20	12.51	0.177
4993.5	2002.6	0.3	30	11.63	0.138
4995.1	2002	4	30	12.03	0.16
4996.4	2001.5	6.8	30	12.34	0.177
4997.9	2000.8	0.3	40	11.72	0.15
4998.6	2000.5	1.6	40	11.89	0.16
4999.9	2000	4.1	40	12.18	0.176
5002.6	1999	0.2	50	11.85	0.164
5003.5	1998.6	1.6	50	12.04	0.176

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

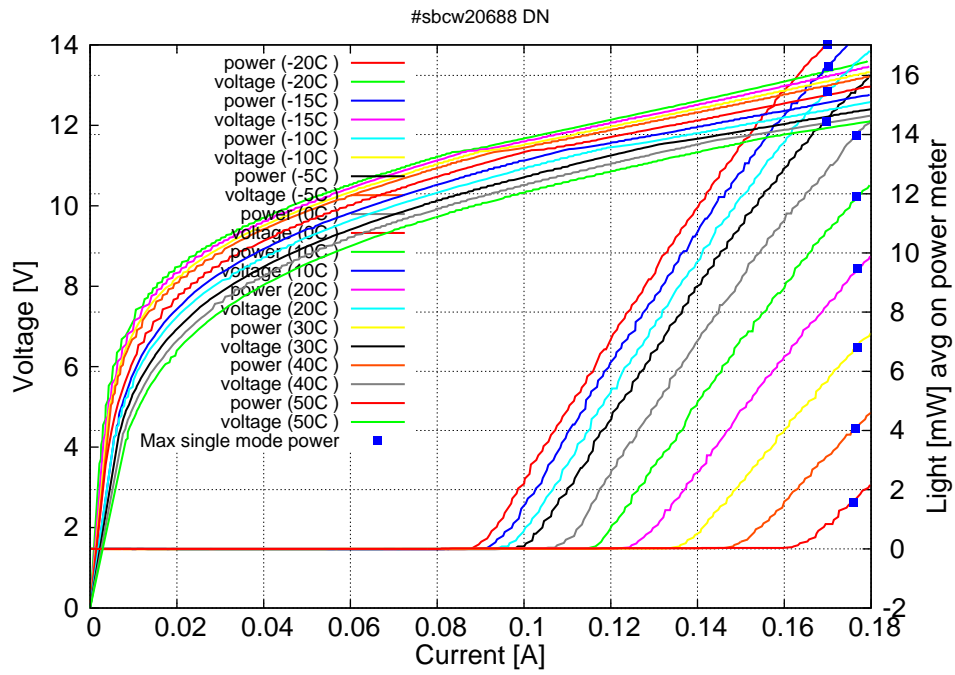


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=11.4V$ (2-wires measurements). Maximum operation current: 0.17A between -20C and -5C, 0.18A between 0C and 50C.

Figure 3: spectra at different temperatures for various DC currents

