

Datasheet for #sbcw23280 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 #sbcw23280 DN

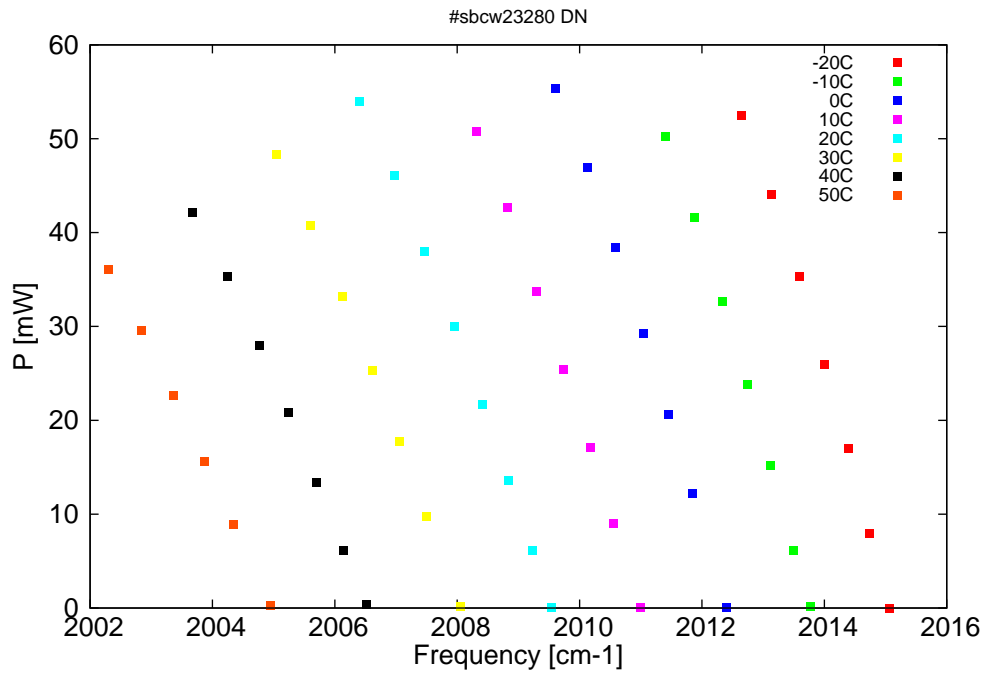


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

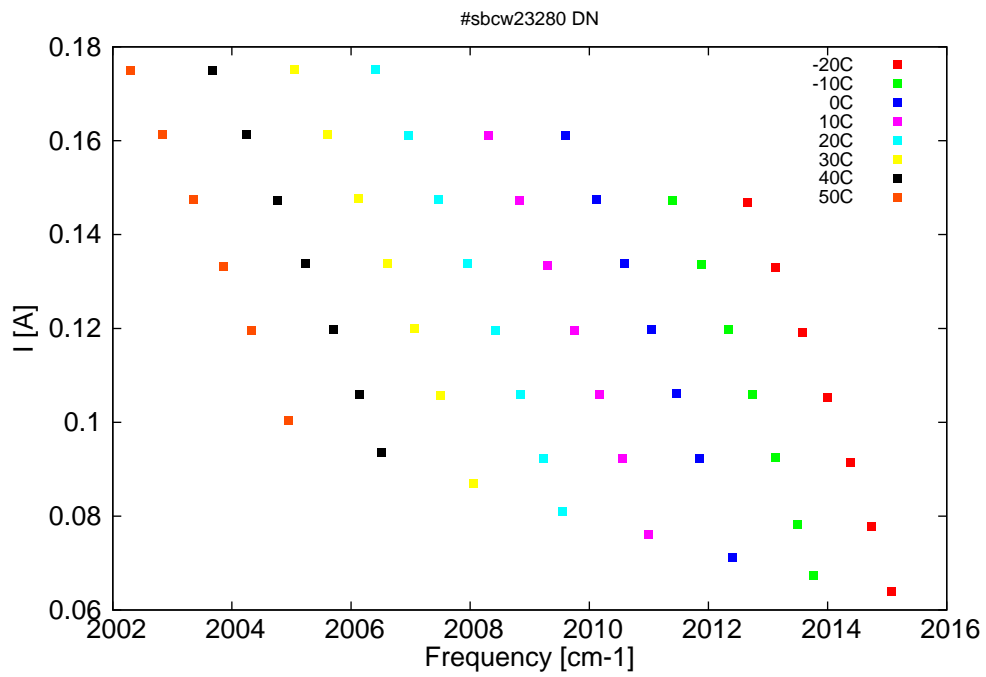


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4962.6	2015.1	0	-20	11.45	0.064
4963.4	2014.7	7.9	-20	11.8	0.078
4964.3	2014.4	17	-20	12.13	0.092
4965.3	2014	26	-20	12.45	0.105
4966.3	2013.6	35.4	-20	12.77	0.119
4967.4	2013.1	44.1	-20	13.1	0.133
4968.6	2012.7	52.5	-20	13.45	0.147
4965.8	2013.8	0.2	-10	11.4	0.067
4966.5	2013.5	6.1	-10	11.64	0.078
4967.4	2013.1	15.2	-10	11.98	0.092
4968.3	2012.7	23.8	-10	12.28	0.106
4969.4	2012.3	32.6	-10	12.59	0.12
4970.5	2011.9	41.6	-10	12.89	0.134
4971.7	2011.4	50.3	-10	13.22	0.147
4969.2	2012.4	0.1	0	11.36	0.071
4970.5	2011.9	12.2	0	11.83	0.092
4971.5	2011.5	20.6	0	12.13	0.106
4972.5	2011	29.3	0	12.42	0.12
4973.7	2010.6	38.4	0	12.72	0.134
4974.8	2010.1	47	0	13.02	0.147
4976.1	2009.6	55.3	0	13.34	0.161
4972.7	2011	0.1	10	11.35	0.076
4973.7	2010.6	9	10	11.7	0.092
4974.7	2010.2	17.1	10	11.99	0.106
4975.8	2009.7	25.4	10	12.27	0.119
4976.9	2009.3	33.8	10	12.55	0.133
4978	2008.8	42.7	10	12.84	0.147
4979.3	2008.3	50.8	10	13.14	0.161
4976.3	2009.5	0.1	20	11.36	0.081
4977	2009.2	6.1	20	11.58	0.092
4978	2008.8	13.6	20	11.87	0.106
4979	2008.4	21.7	20	12.14	0.12
4980.2	2008	30	20	12.42	0.134
4981.4	2007.5	38	20	12.7	0.148
4982.6	2007	46.1	20	12.98	0.161
4984	2006.4	54	20	13.29	0.175
4979.9	2008.1	0.2	30	11.38	0.087
4981.3	2007.5	9.8	30	11.75	0.106
4982.4	2007.1	17.8	30	12.03	0.12
4983.5	2006.6	25.3	30	12.3	0.134
4984.8	2006.1	33.2	30	12.56	0.148
4986	2005.6	40.8	30	12.84	0.161
4987.4	2005.1	48.3	30	13.12	0.175
4983.8	2006.5	0.4	40	11.42	0.094
4984.7	2006.1	6.2	40	11.65	0.106
4985.8	2005.7	13.4	40	11.92	0.12
4986.9	2005.2	20.9	40	12.18	0.134
4988.1	2004.8	27.9	40	12.44	0.147
4989.4	2004.2	35.3	40	12.7	0.161

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4990.8	2003.7	42.2	40	12.97	0.175
4987.7	2004.9	0.2	50	11.46	0.1
4989.2	2004.3	8.9	50	11.81	0.12
4990.4	2003.9	15.6	50	12.07	0.133
4991.6	2003.4	22.7	50	12.33	0.148
4992.9	2002.8	29.6	50	12.58	0.161
4994.3	2002.3	36	50	12.83	0.175

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

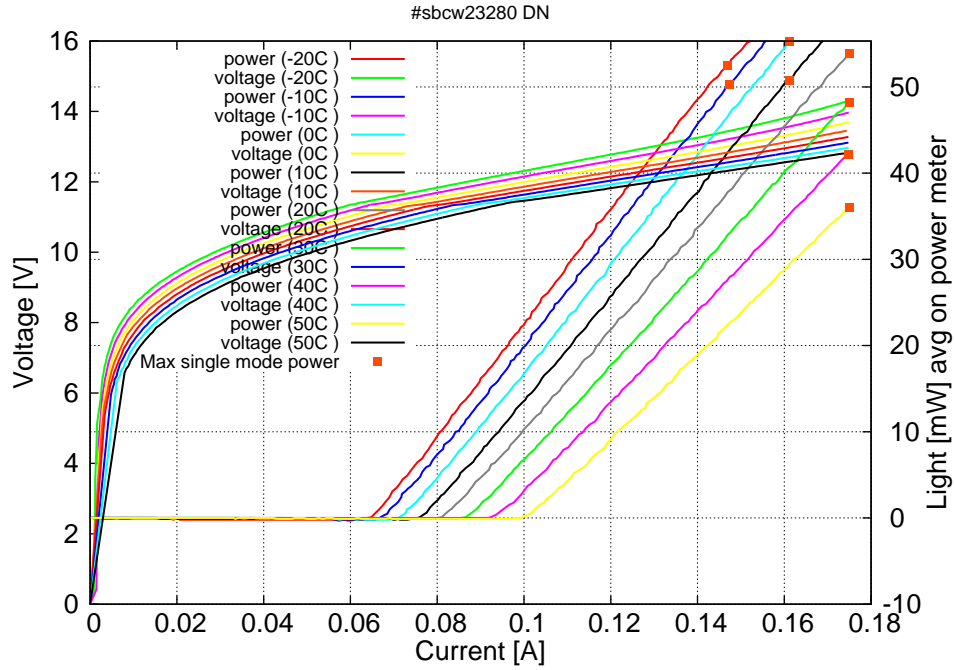


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=11.4V$ (2-wires measurements). Maximum operation current: 0.15A between -20C and -10C, 0.16A between 0C and 10C, 0.175A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

