

**Datasheet for #sbcw22873 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 #sbcw22873 DN (please note that AlN submount numbering is A0YU8)

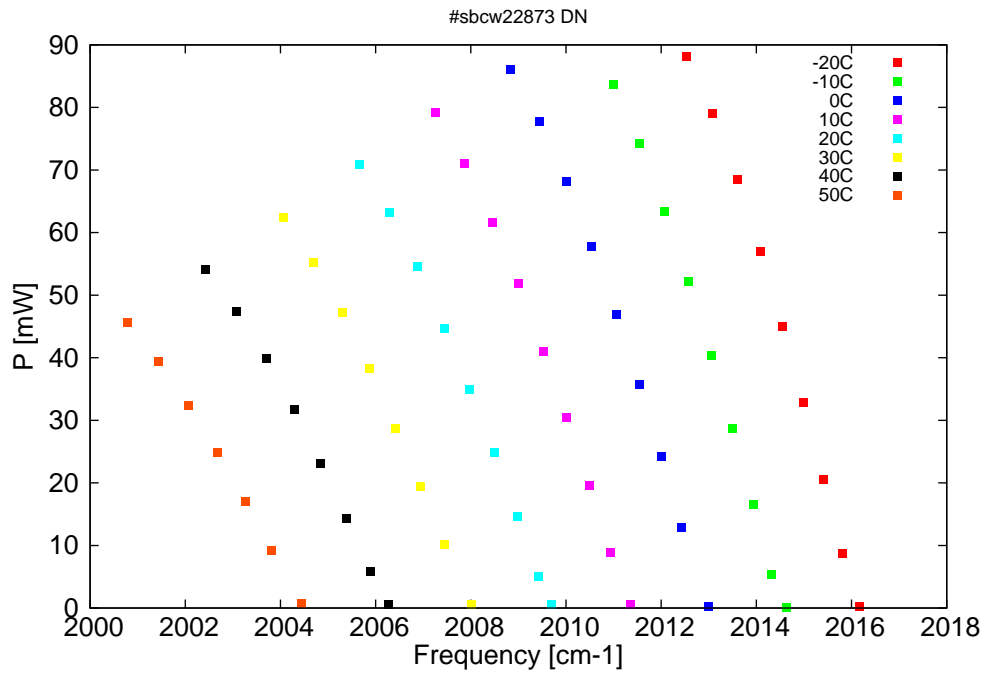


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

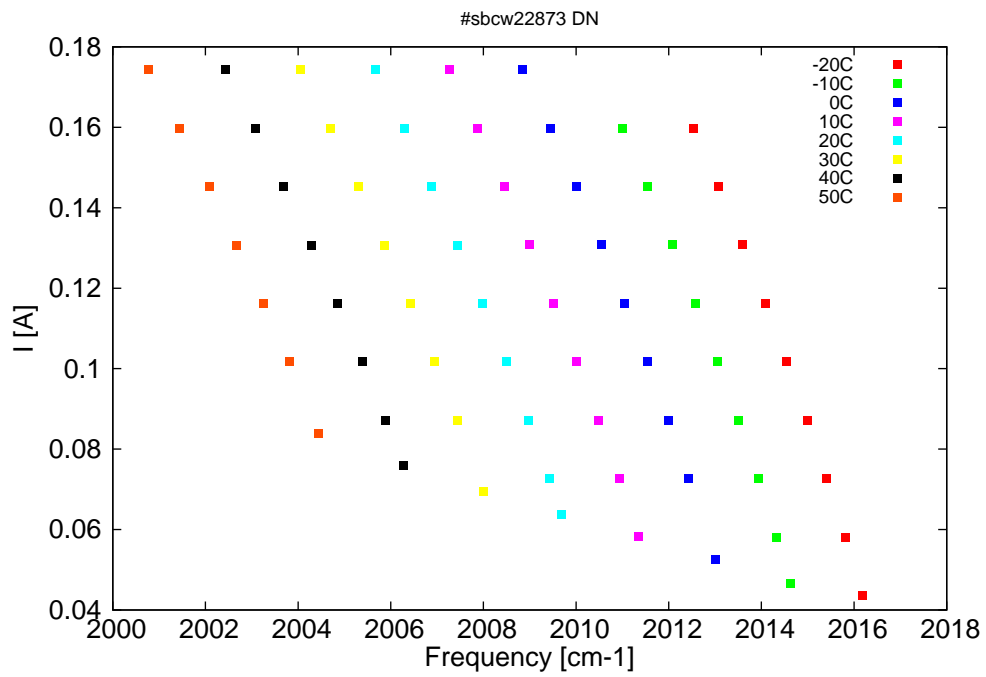


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4959.9	2016.2	0.2	-20	10.63	0.044
4960.8	2015.8	8.8	-20	11.01	0.058
4961.8	2015.4	20.6	-20	11.36	0.073
4962.8	2015	32.9	-20	11.68	0.087
4963.9	2014.5	45	-20	11.98	0.102
4965	2014.1	57	-20	12.26	0.116
4966.2	2013.6	68.5	-20	12.55	0.131
4967.5	2013.1	79.1	-20	12.85	0.145
4968.9	2012.5	88.1	-20	13.16	0.16
4963.7	2014.6	0.1	-10	10.57	0.047
4964.4	2014.3	5.4	-10	10.86	0.058
4965.4	2013.9	16.6	-10	11.2	0.073
4966.5	2013.5	28.7	-10	11.51	0.087
4967.6	2013	40.3	-10	11.8	0.102
4968.8	2012.6	52.3	-10	12.08	0.116
4970	2012.1	63.4	-10	12.35	0.131
4971.3	2011.5	74.2	-10	12.63	0.145
4972.7	2011	83.7	-10	12.91	0.16
4967.7	2013	0.2	0	10.59	0.053
4969.1	2012.4	12.9	0	11.05	0.073
4970.2	2012	24.2	0	11.36	0.087
4971.3	2011.5	35.8	0	11.65	0.102
4972.5	2011.1	47	0	11.92	0.116
4973.8	2010.5	57.8	0	12.19	0.131
4975.1	2010	68.2	0	12.46	0.145
4976.5	2009.4	77.8	0	12.73	0.16
4978	2008.8	86.1	0	13.01	0.174
4971.8	2011.4	0.5	10	10.61	0.058
4972.8	2010.9	8.9	10	10.93	0.073
4973.9	2010.5	19.5	10	11.24	0.087
4975.1	2010	30.4	10	11.52	0.102
4976.3	2009.5	41	10	11.79	0.116
4977.6	2009	51.9	10	12.05	0.131
4979	2008.4	61.6	10	12.31	0.145
4980.4	2007.9	71.1	10	12.58	0.16
4981.9	2007.3	79.2	10	12.84	0.174
4975.9	2009.7	0.6	20	10.63	0.064
4976.5	2009.4	5	20	10.82	0.073
4977.7	2009	14.7	20	11.12	0.087
4978.9	2008.5	24.9	20	11.41	0.102
4980.1	2008	34.9	20	11.67	0.116
4981.5	2007.4	44.7	20	11.93	0.131
4982.9	2006.9	54.6	20	12.19	0.145
4984.3	2006.3	63.2	20	12.44	0.16
4985.9	2005.7	70.9	20	12.7	0.174
4980.1	2008	0.6	30	10.66	0.07
4981.5	2007.4	10.1	30	11.01	0.087
4982.7	2006.9	19.4	30	11.29	0.102
4984	2006.4	28.8	30	11.56	0.116

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4985.4	2005.9	38.3	30	11.82	0.131
4986.8	2005.3	47.2	30	12.07	0.145
4988.3	2004.7	55.2	30	12.32	0.16
4989.9	2004.1	62.5	30	12.57	0.174
4984.4	2006.3	0.6	40	10.7	0.076
4985.3	2005.9	5.8	40	10.91	0.087
4986.6	2005.4	14.3	40	11.19	0.102
4987.9	2004.9	23.1	40	11.45	0.116
4989.3	2004.3	31.6	40	11.71	0.131
4990.8	2003.7	39.9	40	11.96	0.145
4992.3	2003.1	47.4	40	12.2	0.16
4993.9	2002.4	54.1	40	12.45	0.174
4988.9	2004.4	0.7	50	10.76	0.084
4990.5	2003.8	9.2	50	11.09	0.102
4991.9	2003.3	17.1	50	11.35	0.116
4993.3	2002.7	24.9	50	11.6	0.131
4994.8	2002.1	32.4	50	11.85	0.145
4996.4	2001.4	39.5	50	12.09	0.16
4998	2000.8	45.6	50	12.33	0.174

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

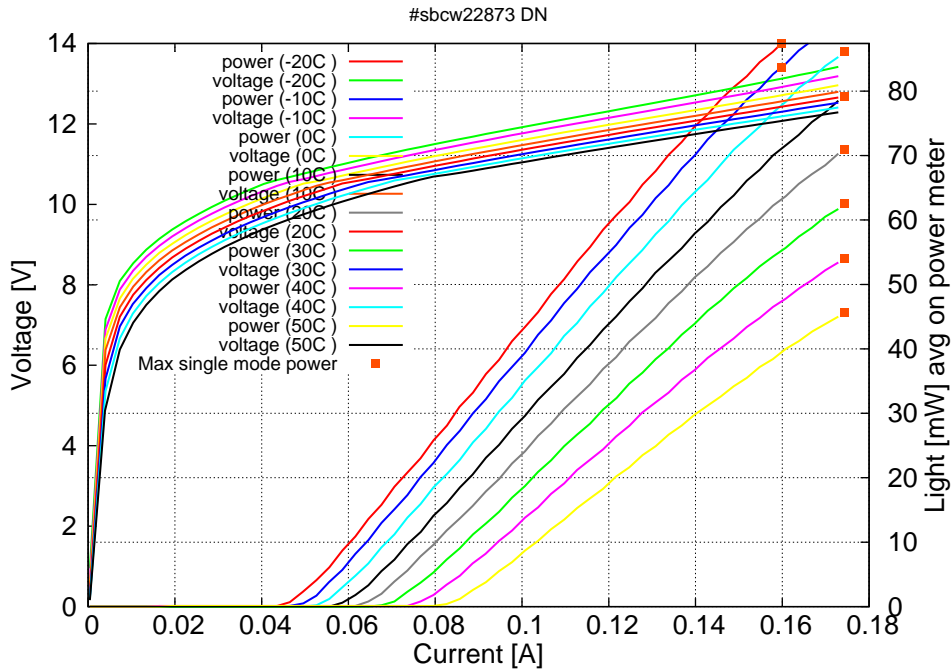


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.05A$  /  $V_{th}=10.7V$  (2-wires measurements). Maximum operation current: 0.16A between -20C and -10C, 0.175A between 0C and 50C.

