

**Datasheet for #sbcw22847 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 #sbcw22847 DN (please note that AlN submount numbering is A0YRN)

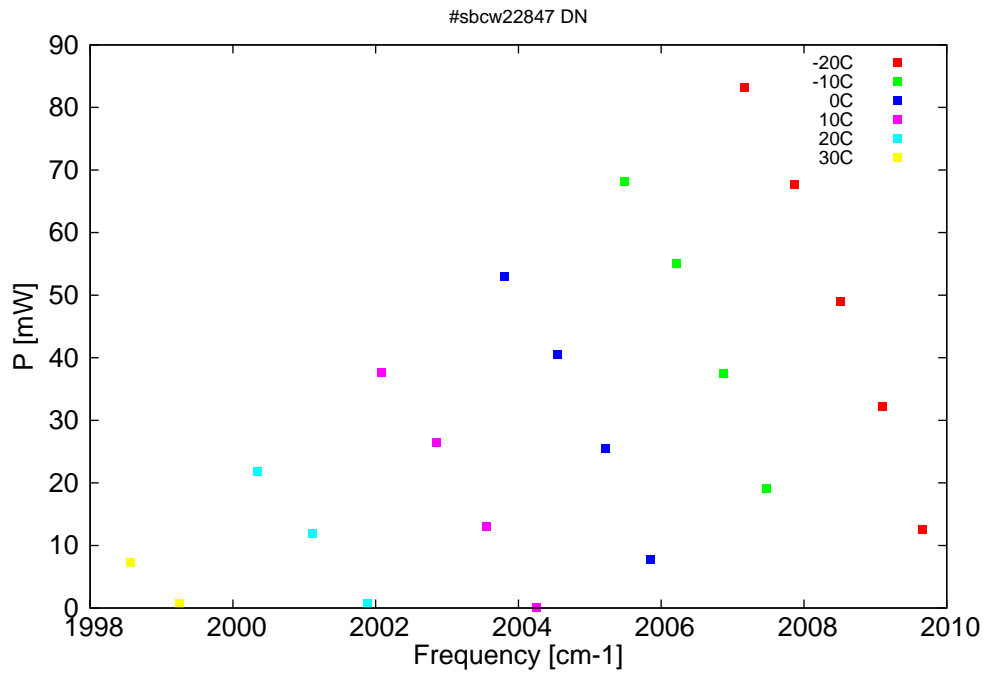


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

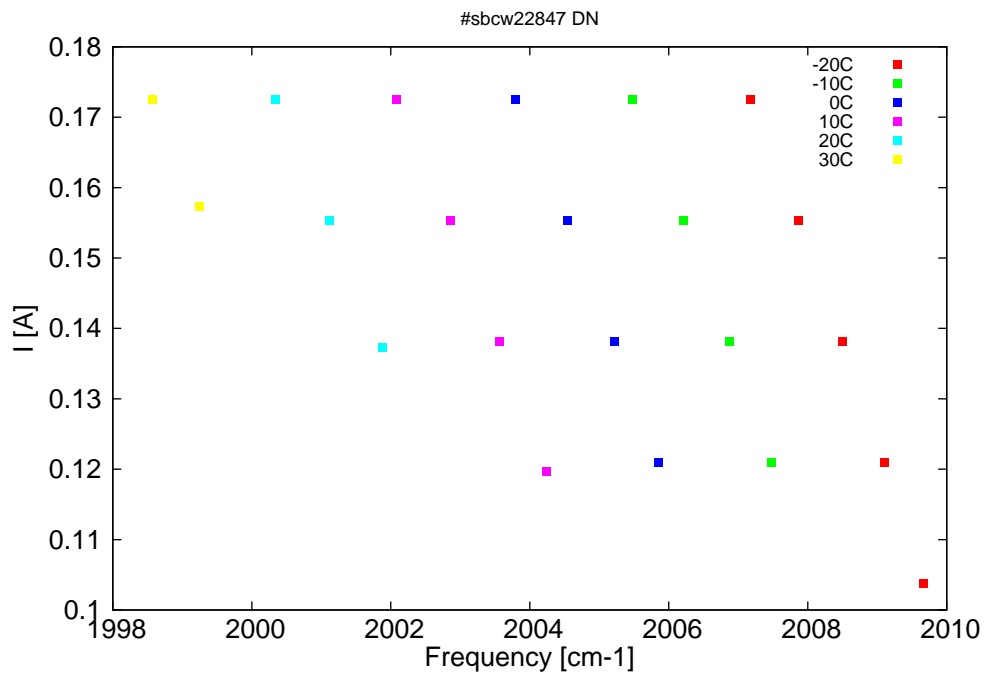


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4976	2009.7	12.5	-20	13.48	0.104
4977.4	2009.1	32.2	-20	13.79	0.121
4978.8	2008.5	49	-20	14.1	0.138
4980.4	2007.9	67.7	-20	14.41	0.155
4982.1	2007.2	83.2	-20	14.72	0.173
4981.4	2007.5	19.1	-10	13.65	0.121
4982.9	2006.9	37.5	-10	13.95	0.138
4984.5	2006.2	55.1	-10	14.25	0.155
4986.3	2005.5	68.2	-10	14.56	0.173
4985.4	2005.9	7.7	0	13.51	0.121
4987	2005.2	25.6	0	13.81	0.138
4988.7	2004.5	40.6	0	14.1	0.155
4990.5	2003.8	53.1	0	14.41	0.173
4989.4	2004.2	0.1	10	13.38	0.12
4991.1	2003.6	13	10	13.68	0.138
4992.9	2002.9	26.5	10	13.98	0.155
4994.8	2002.1	37.6	10	14.28	0.173
4995.3	2001.9	0.7	20	13.56	0.137
4997.2	2001.1	12	20	13.86	0.155
4999.1	2000.3	21.9	20	14.15	0.173
5001.9	1999.2	0.7	30	13.79	0.157
5003.6	1998.6	7.2	30	14.04	0.173

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

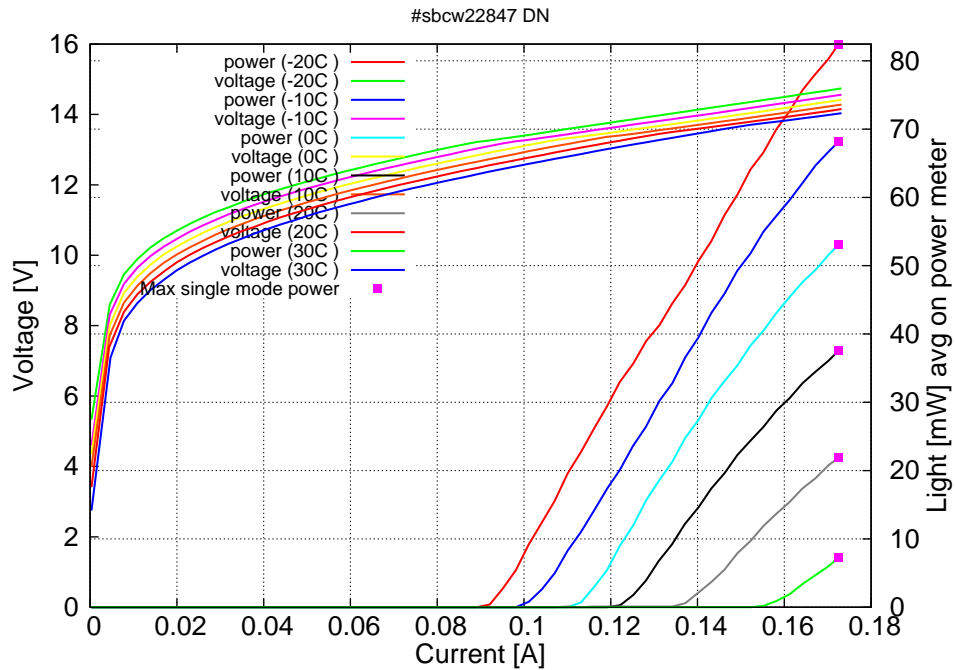


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.09A$  /  $V_{th}=13.3V$  (2-wires measurements). Maximum operation current: 0.175A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

