

Datasheet for #sbcw22837 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 #sbcw22837 DN (please note that AlN submount numbering is A0WVV)

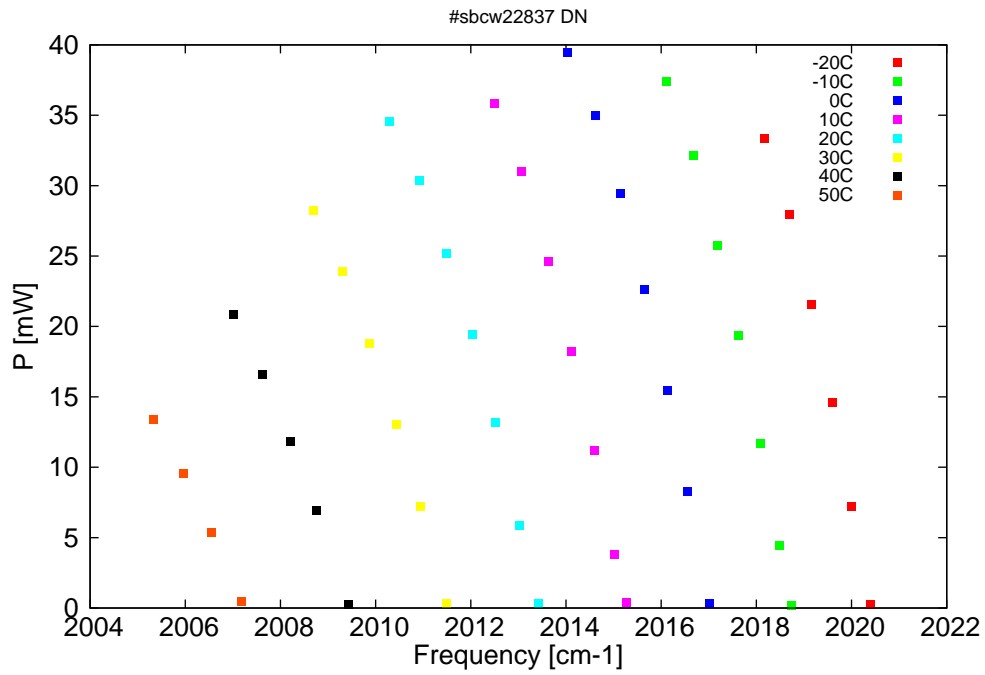


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

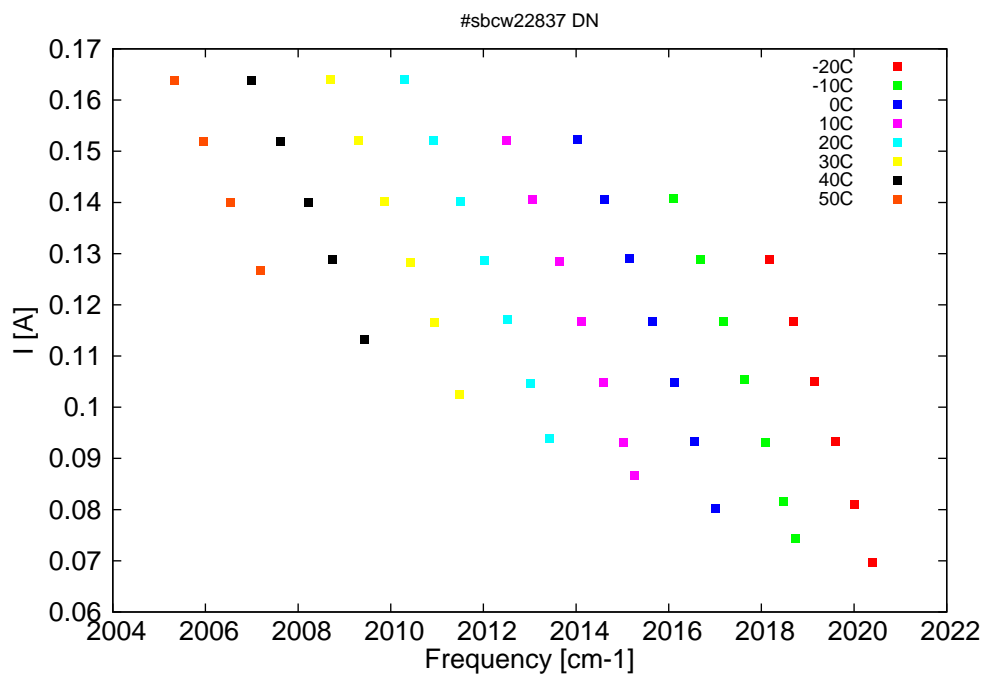


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4949.5	2020.4	0.3	-20	11.91	0.07
4950.5	2020	7.2	-20	12.23	0.081
4951.5	2019.6	14.6	-20	12.57	0.093
4952.6	2019.1	21.6	-20	12.91	0.105
4953.7	2018.7	27.9	-20	13.24	0.117
4955	2018.2	33.4	-20	13.61	0.129
4953.6	2018.7	0.2	-10	11.83	0.074
4954.2	2018.5	4.5	-10	12.01	0.082
4955.2	2018.1	11.7	-10	12.32	0.093
4956.3	2017.6	19.3	-10	12.65	0.105
4957.4	2017.2	25.7	-10	12.96	0.117
4958.7	2016.7	32.2	-10	13.29	0.129
4960	2016.1	37.4	-10	13.64	0.141
4957.8	2017	0.3	0	11.8	0.08
4959	2016.6	8.3	0	12.13	0.093
4960	2016.1	15.5	0	12.42	0.105
4961.2	2015.7	22.6	0	12.72	0.117
4962.4	2015.2	29.5	0	13.03	0.129
4963.7	2014.6	35	0	13.34	0.141
4965.2	2014	39.5	0	13.66	0.152
4962.1	2015.3	0.4	10	11.8	0.087
4962.7	2015	3.8	10	11.95	0.093
4963.8	2014.6	11.2	10	12.23	0.105
4965	2014.1	18.2	10	12.51	0.117
4966.1	2013.6	24.6	10	12.79	0.128
4967.6	2013.1	31	10	13.09	0.14
4969	2012.5	35.9	10	13.38	0.152
4966.7	2013.4	0.3	20	11.84	0.094
4967.7	2013	5.9	20	12.07	0.105
4968.9	2012.5	13.2	20	12.35	0.117
4970.1	2012	19.4	20	12.61	0.129
4971.4	2011.5	25.2	20	12.88	0.14
4972.8	2010.9	30.3	20	13.15	0.152
4974.4	2010.3	34.6	20	13.44	0.164
4971.4	2011.5	0.3	30	11.9	0.102
4972.8	2010.9	7.2	30	12.18	0.117
4974	2010.4	13.1	30	12.44	0.128
4975.4	2009.9	18.8	30	12.7	0.14
4976.9	2009.3	23.9	30	12.96	0.152
4978.4	2008.7	28.2	30	13.22	0.164
4976.5	2009.4	0.3	40	11.99	0.113
4978.2	2008.7	6.9	40	12.3	0.129
4979.5	2008.2	11.8	40	12.53	0.14
4981	2007.6	16.6	40	12.77	0.152
4982.5	2007	20.8	40	13.02	0.164
4982.1	2007.2	0.4	50	12.14	0.127
4983.7	2006.5	5.4	50	12.39	0.14
4985.2	2006	9.5	50	12.61	0.152
4986.7	2005.3	13.4	50	12.85	0.164

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

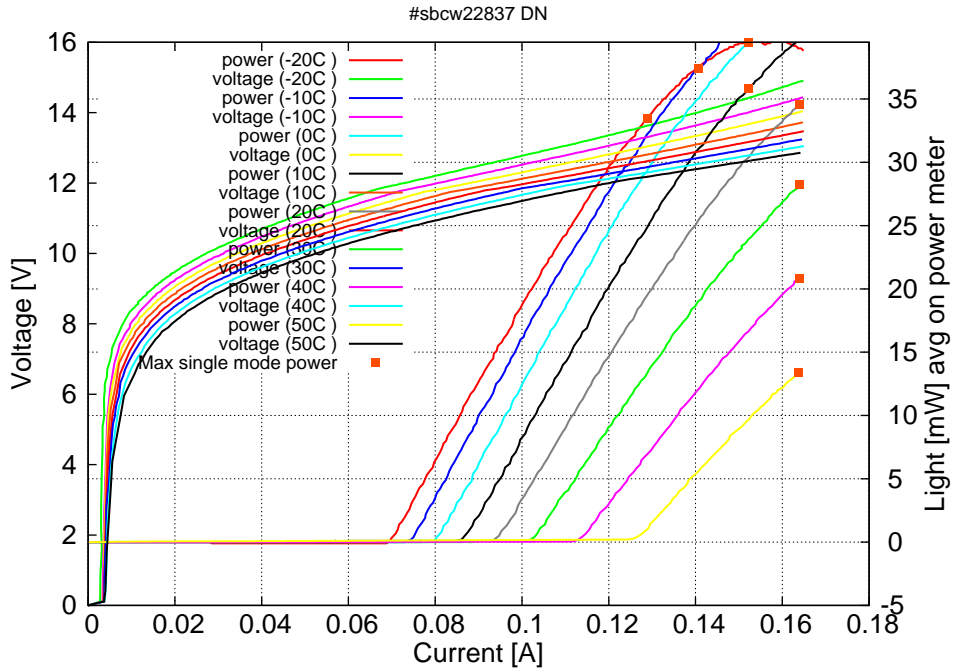


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07\text{A}$ / $V_{th}=11.9\text{V}$ (2-wires measurements). Maximum operation current: 0.13A at -20C, 0.14A at -10C, 0.15A between 0C and 10C, 0.165A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

