

Datasheet for #sbcw22838 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 #sbcw22838 DN (please note that AlN submount numbering is A0WYD)

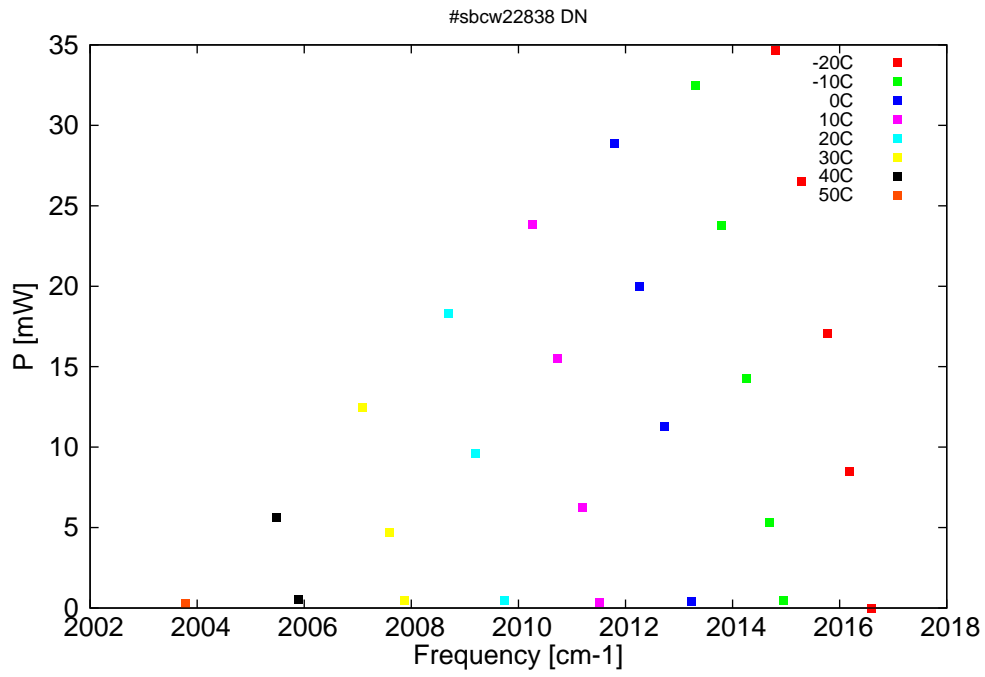


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

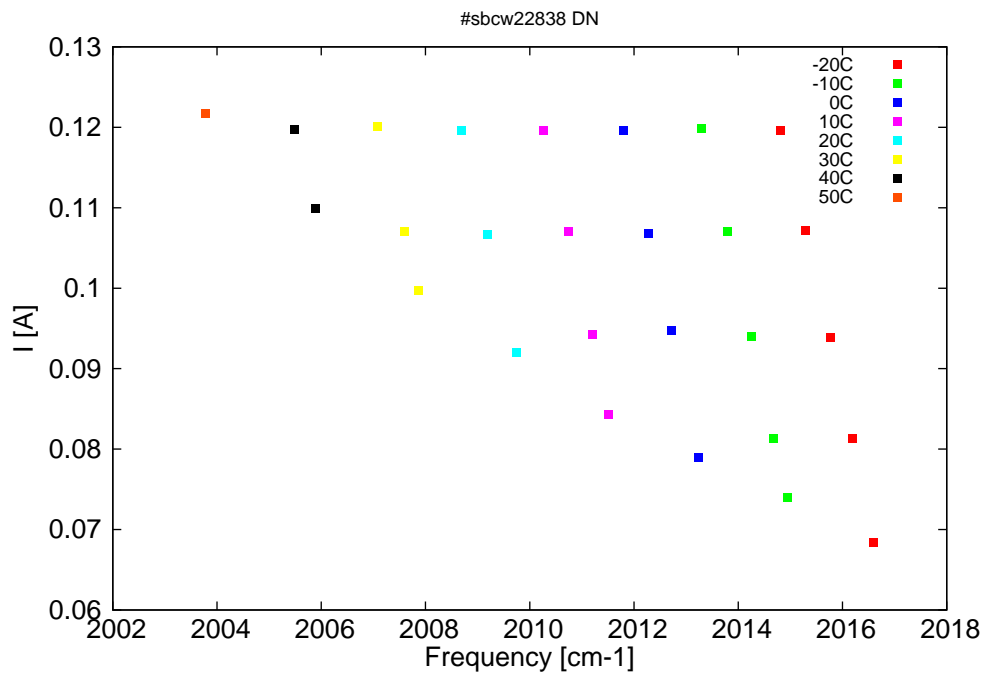


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4958.8	2016.6	0	-20	11.83	0.068
4959.9	2016.2	8.5	-20	12.17	0.081
4960.9	2015.8	17	-20	12.49	0.094
4962.1	2015.3	26.5	-20	12.84	0.107
4963.3	2014.8	34.7	-20	13.17	0.12
4962.9	2014.9	0.4	-10	11.76	0.074
4963.6	2014.7	5.3	-10	11.94	0.081
4964.6	2014.3	14.2	-10	12.25	0.094
4965.8	2013.8	23.8	-10	12.57	0.107
4967	2013.3	32.5	-10	12.89	0.12
4967.1	2013.2	0.4	0	11.7	0.079
4968.4	2012.7	11.3	0	12.06	0.095
4969.5	2012.3	20	0	12.35	0.107
4970.7	2011.8	28.9	0	12.65	0.12
4971.4	2011.5	0.3	10	11.68	0.084
4972.2	2011.2	6.2	10	11.88	0.094
4973.3	2010.7	15.5	10	12.17	0.107
4974.5	2010.3	23.8	10	12.44	0.12
4975.7	2009.7	0.5	20	11.7	0.092
4977.1	2009.2	9.6	20	12.01	0.107
4978.4	2008.7	18.3	20	12.29	0.12
4980.4	2007.9	0.5	30	11.74	0.1
4981.1	2007.6	4.7	30	11.88	0.107
4982.3	2007.1	12.5	30	12.15	0.12
4985.3	2005.9	0.5	40	11.83	0.11
4986.3	2005.5	5.6	40	12.01	0.12
4990.6	2003.8	0.3	50	11.94	0.122

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

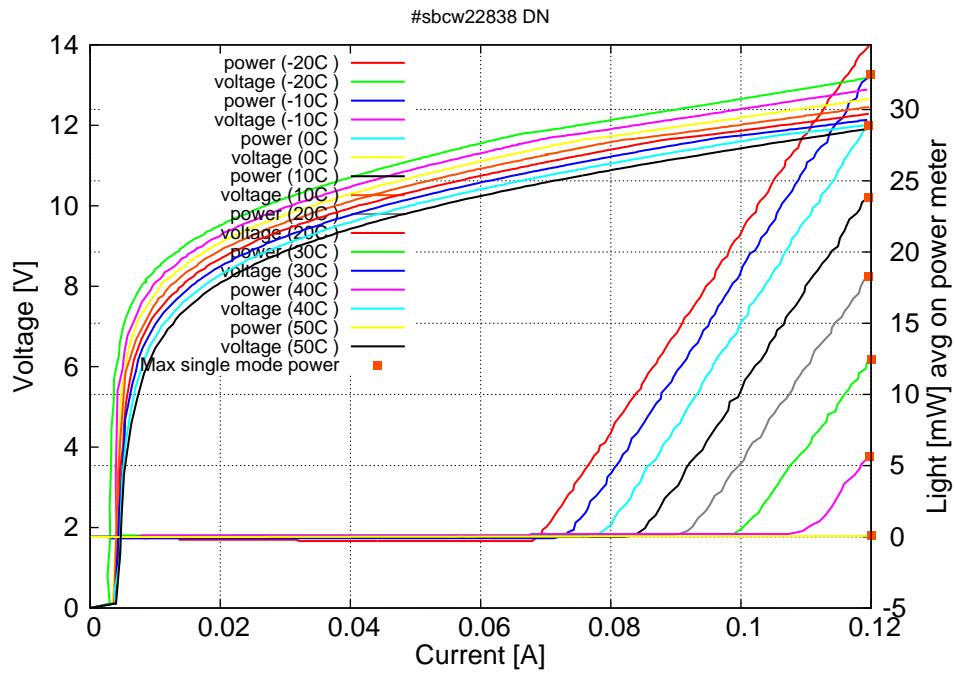


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=11.8V$ (2-wires measurements). Maximum operation current: 0.12A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

