

Datasheet for #sbcw13851 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 #sbcw13851 DN (please note that AlN submount numbering is A0GK5)

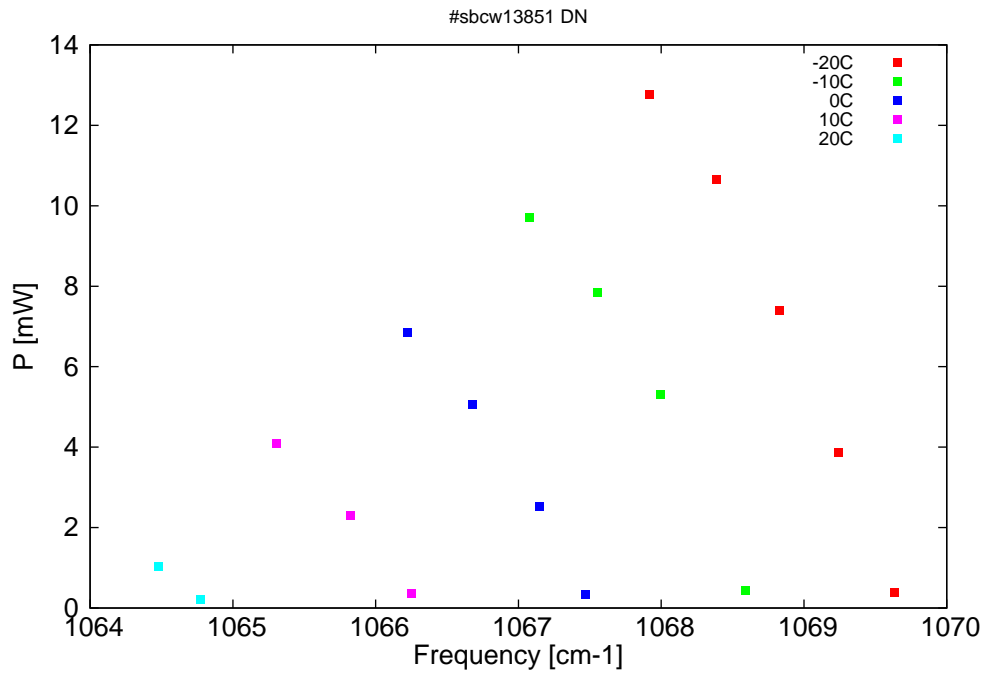


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

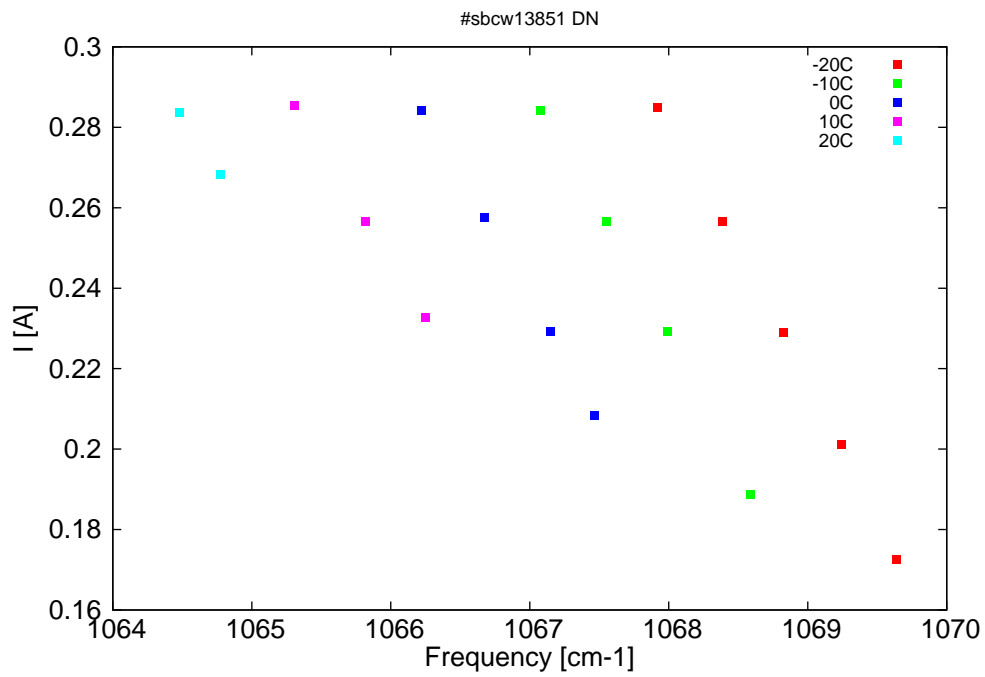


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9349	1069.6	0.4	-20	11.22	0.173
9352.4	1069.2	3.9	-20	11.68	0.201
9356.1	1068.8	7.4	-20	12.09	0.229
9359.9	1068.4	10.7	-20	12.49	0.257
9364	1067.9	12.8	-20	12.87	0.285
9358.2	1068.6	0.4	-10	11.33	0.189
9363.4	1068	5.3	-10	11.94	0.229
9367.2	1067.6	7.8	-10	12.33	0.257
9371.4	1067.1	9.7	-10	12.71	0.284
9368	1067.5	0.3	0	11.49	0.208
9370.8	1067.1	2.5	0	11.8	0.229
9374.9	1066.7	5.1	0	12.2	0.258
9378.9	1066.2	6.8	0	12.56	0.284
9378.7	1066.3	0.4	10	11.78	0.233
9382.4	1065.8	2.3	10	12.14	0.256
9387	1065.3	4.1	10	12.52	0.285
9391.7	1064.8	0.2	20	12.07	0.268
9394.3	1064.5	1	20	12.28	0.284

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

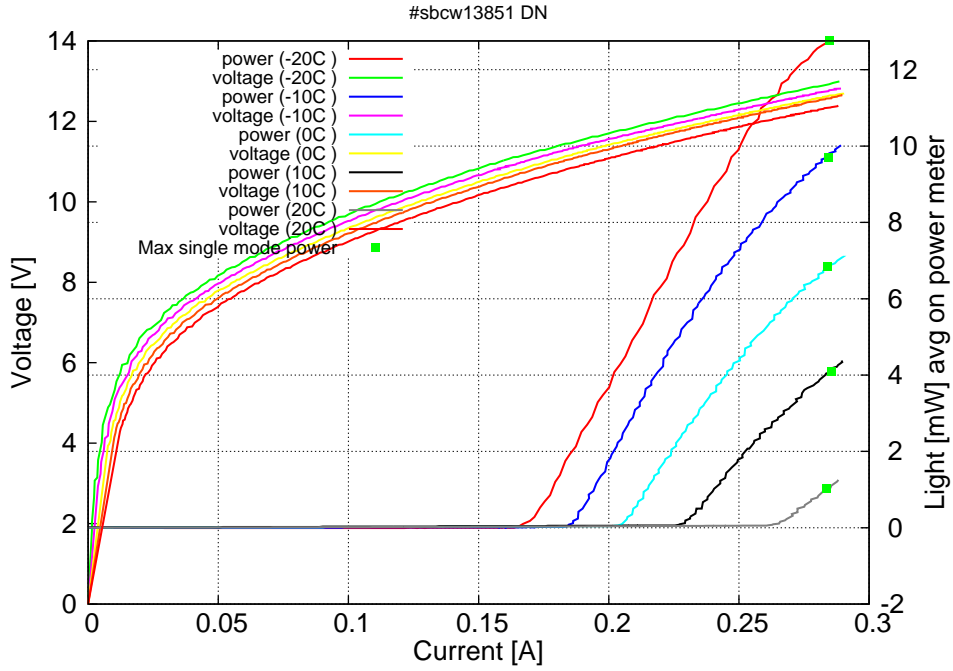


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.17A$ / $V_{th}=11.2V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

