

Datasheet for #sbcw13853 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 #sbcw13853 DN (please note that AlN submount numbering is A0H13)

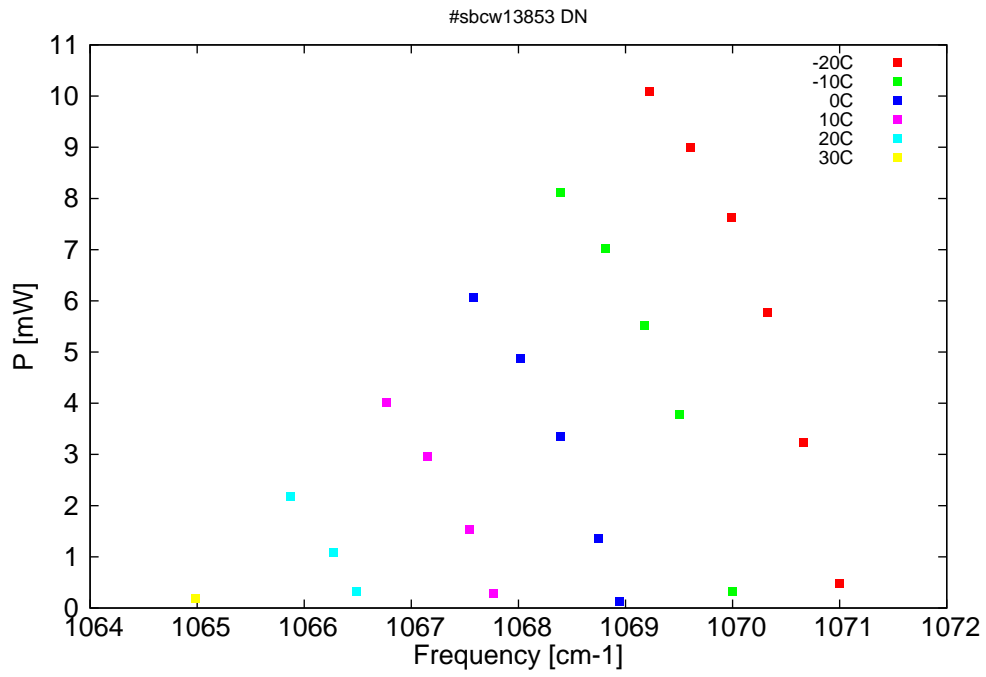


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

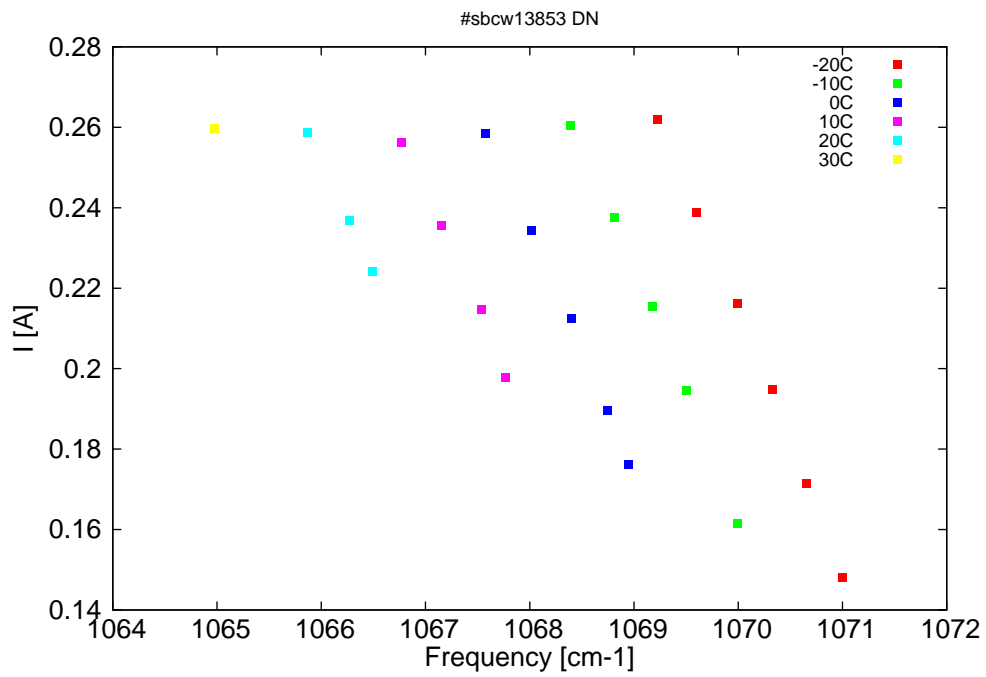


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9337.1	1071	0.5	-20	11.48	0.148
9340	1070.7	3.2	-20	11.94	0.171
9343	1070.3	5.8	-20	12.37	0.195
9345.9	1070	7.6	-20	12.77	0.216
9349.3	1069.6	9	-20	13.17	0.239
9352.6	1069.2	10.1	-20	13.54	0.262
9345.8	1070	0.3	-10	11.5	0.161
9350.1	1069.5	3.8	-10	12.14	0.195
9353	1069.2	5.5	-10	12.51	0.215
9356.2	1068.8	7	-10	12.89	0.238
9359.8	1068.4	8.1	-10	13.28	0.26
9355	1068.9	0.1	0	11.58	0.176
9356.8	1068.7	1.3	0	11.84	0.19
9359.8	1068.4	3.3	0	12.23	0.212
9363.2	1068	4.9	0	12.62	0.234
9367	1067.6	6.1	0	13.02	0.258
9365.3	1067.8	0.3	10	11.77	0.198
9367.3	1067.5	1.5	10	12.05	0.215
9370.7	1067.2	3	10	12.42	0.235
9374.1	1066.8	4	10	12.76	0.256
9376.6	1066.5	0.3	20	12.02	0.224
9378.5	1066.3	1.1	20	12.23	0.237
9382	1065.9	2.2	20	12.57	0.259
9389.9	1065	0.2	30	12.41	0.26

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

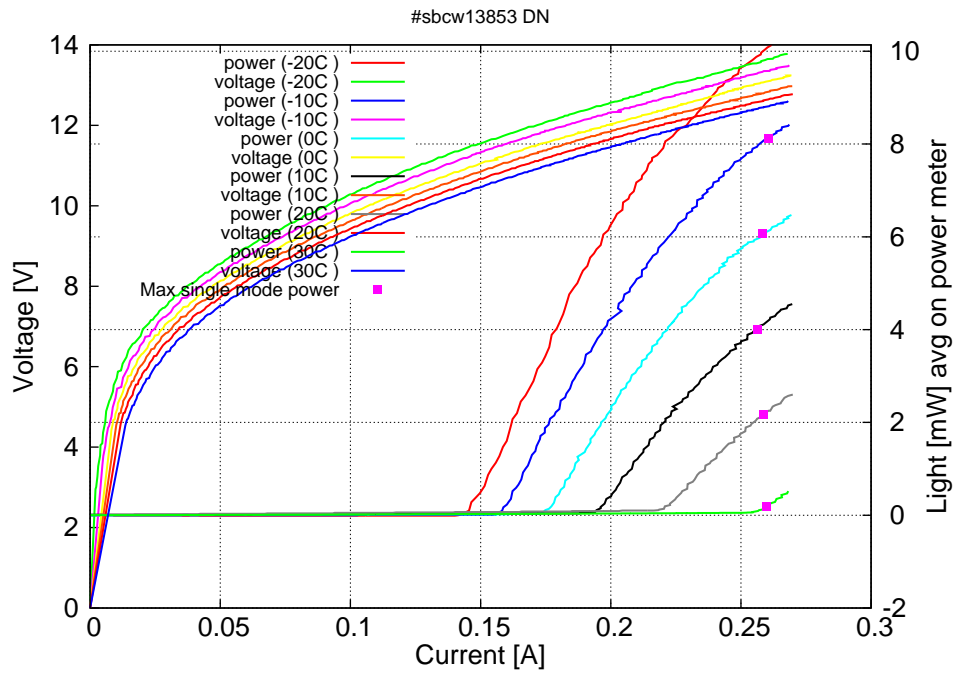


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=11.3V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

