

Datasheet for #sbcw13850 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 #sbcw13850 DN (please note that AlN submount numbering is A0GJ6)

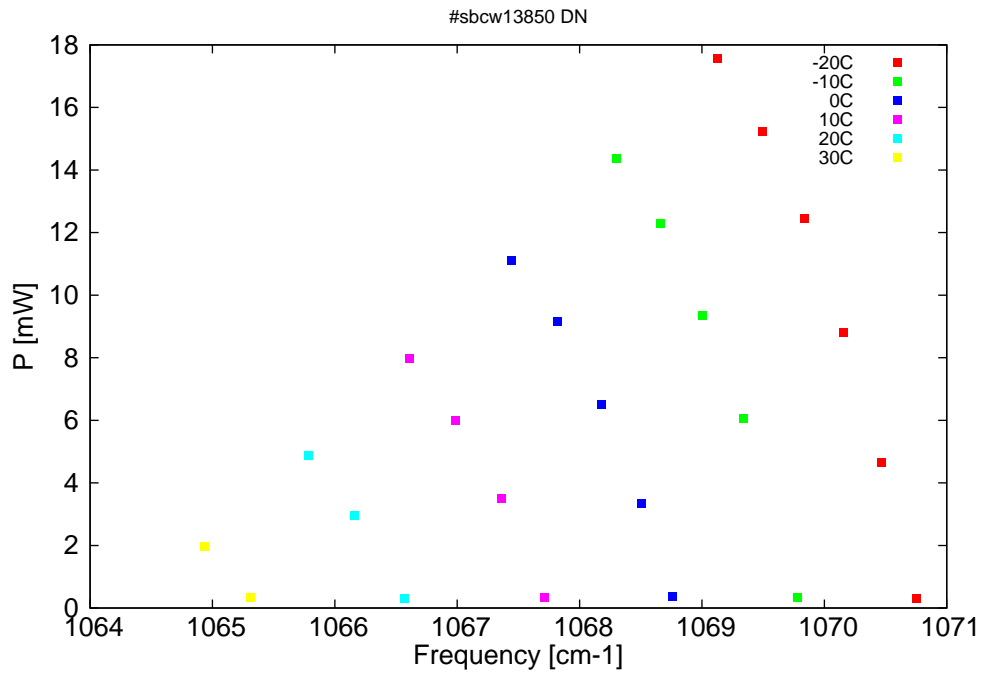


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

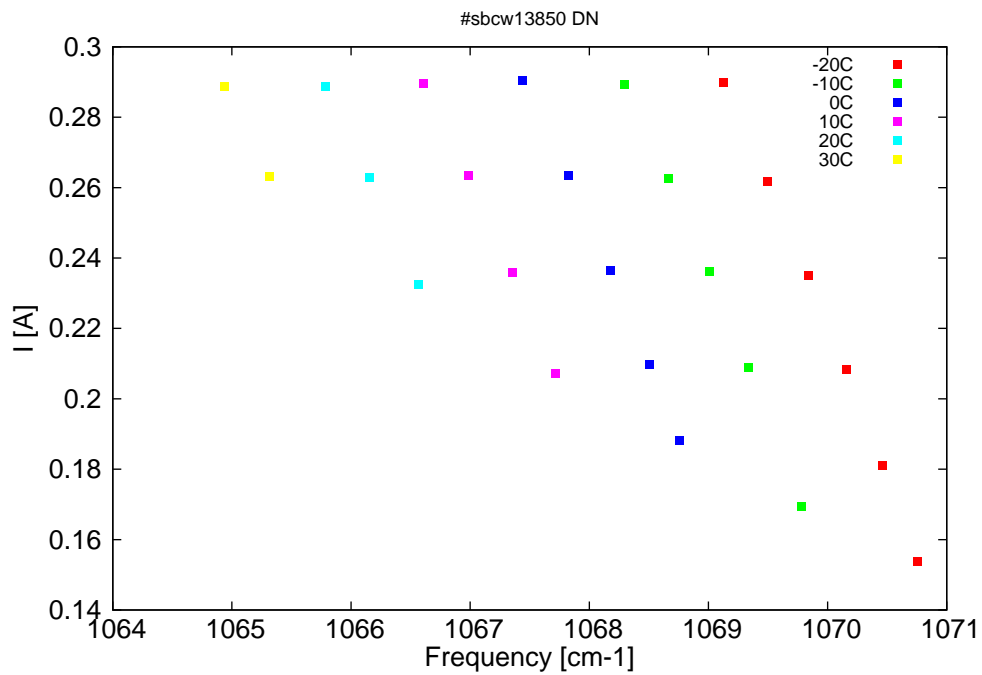


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9339.2	1070.8	0.3	-20	10.69	0.154
9341.7	1070.5	4.7	-20	11.13	0.181
9344.4	1070.2	8.8	-20	11.56	0.208
9347.2	1069.8	12.5	-20	11.95	0.235
9350.2	1069.5	15.2	-20	12.33	0.262
9353.5	1069.1	17.6	-20	12.71	0.29
9347.7	1069.8	0.3	-10	10.8	0.17
9351.6	1069.3	6	-10	11.41	0.209
9354.5	1069	9.4	-10	11.81	0.236
9357.5	1068.7	12.3	-10	12.18	0.263
9360.7	1068.3	14.4	-10	12.54	0.289
9356.6	1068.8	0.4	0	10.96	0.188
9358.9	1068.5	3.3	0	11.29	0.21
9361.8	1068.2	6.5	0	11.68	0.236
9364.9	1067.8	9.1	0	12.05	0.263
9368.2	1067.4	11.1	0	12.42	0.291
9365.8	1067.7	0.3	10	11.1	0.207
9368.9	1067.4	3.5	10	11.52	0.236
9372.2	1067	6	10	11.9	0.263
9375.5	1066.6	8	10	12.25	0.29
9375.9	1066.6	0.3	20	11.31	0.232
9379.5	1066.2	3	20	11.72	0.263
9382.8	1065.8	4.9	20	12.06	0.289
9386.9	1065.3	0.3	30	11.55	0.263
9390.2	1064.9	2	30	11.88	0.289

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

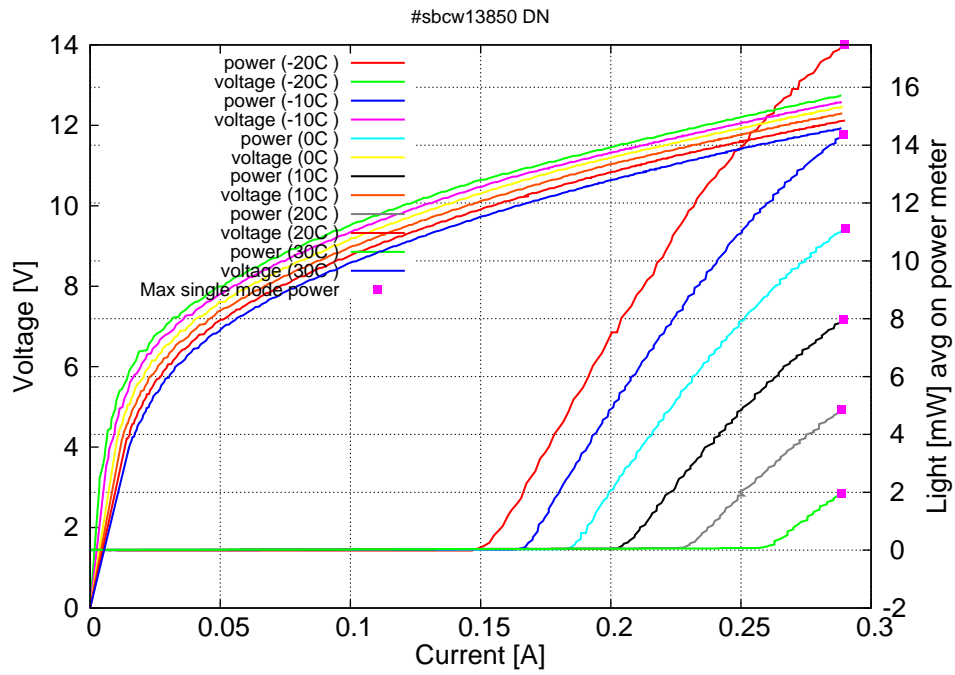


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=10.6V$ (2-wires measurements). Maximum operation current: 0.29A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

