

Datasheet for #sbcw13823 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 #sbcw13823 DN (please note that AlN submount numbering is A0GUR)

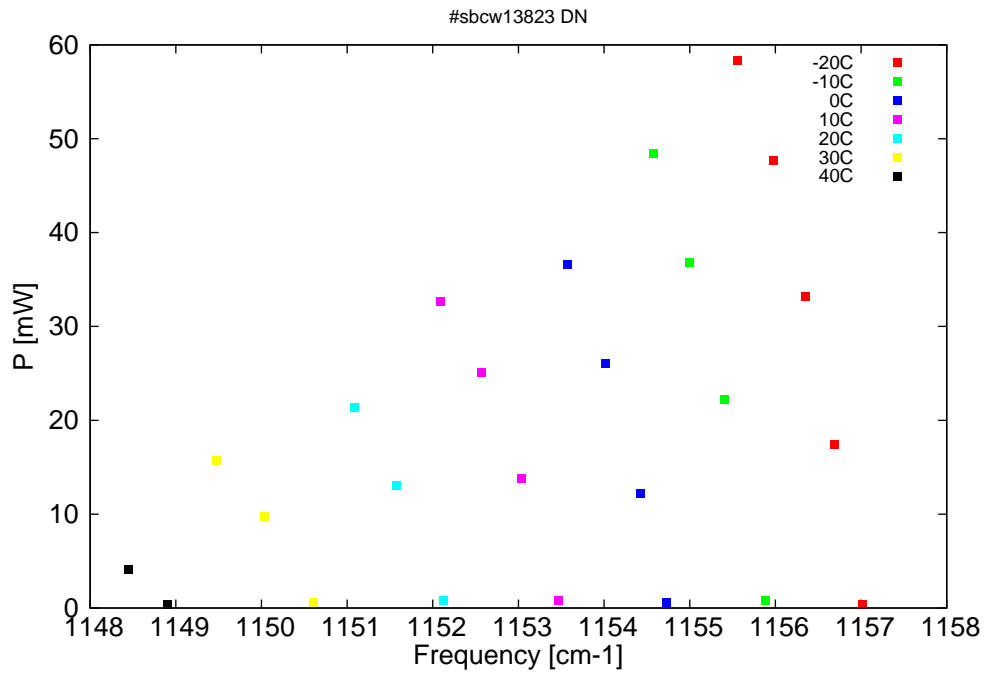


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

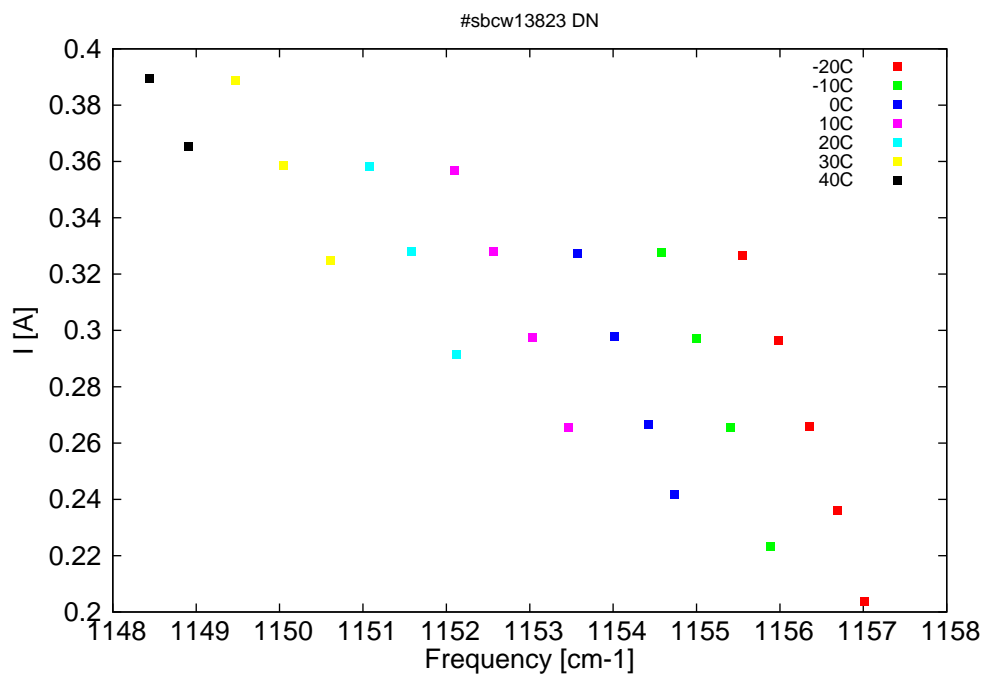


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8642.9	1157	0.3	-20	8.3	0.2
8645.4	1156.7	17.4	-20	8.6	0.24
8647.9	1156.4	33.2	-20	8.9	0.27
8650.7	1156	47.7	-20	9.2	0.3
8653.8	1155.6	58.4	-20	9.5	0.33
8651.4	1155.9	0.8	-10	8.4	0.22
8655	1155.4	22.2	-10	8.8	0.27
8658	1155	36.9	-10	9.1	0.3
8661.2	1154.6	48.4	-10	9.4	0.33
8660	1154.7	0.6	0	8.5	0.24
8662.4	1154.4	12.2	0	8.7	0.27
8665.4	1154	26	0	9	0.3
8668.7	1153.6	36.6	0	9.3	0.33
8669.5	1153.5	0.9	10	8.6	0.27
8672.8	1153	13.8	10	8.9	0.3
8676.3	1152.6	25.1	10	9.2	0.33
8679.8	1152.1	32.7	10	9.4	0.36
8679.6	1152.1	0.8	20	8.7	0.29
8683.7	1151.6	13.1	20	9	0.33
8687.5	1151.1	21.3	20	9.3	0.36
8691	1150.6	0.6	30	8.9	0.32
8695.3	1150	9.8	30	9.2	0.36
8699.7	1149.5	15.7	30	9.5	0.39
8703.9	1148.9	0.4	40	9.2	0.37
8707.4	1148.4	4.1	40	9.4	0.39

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

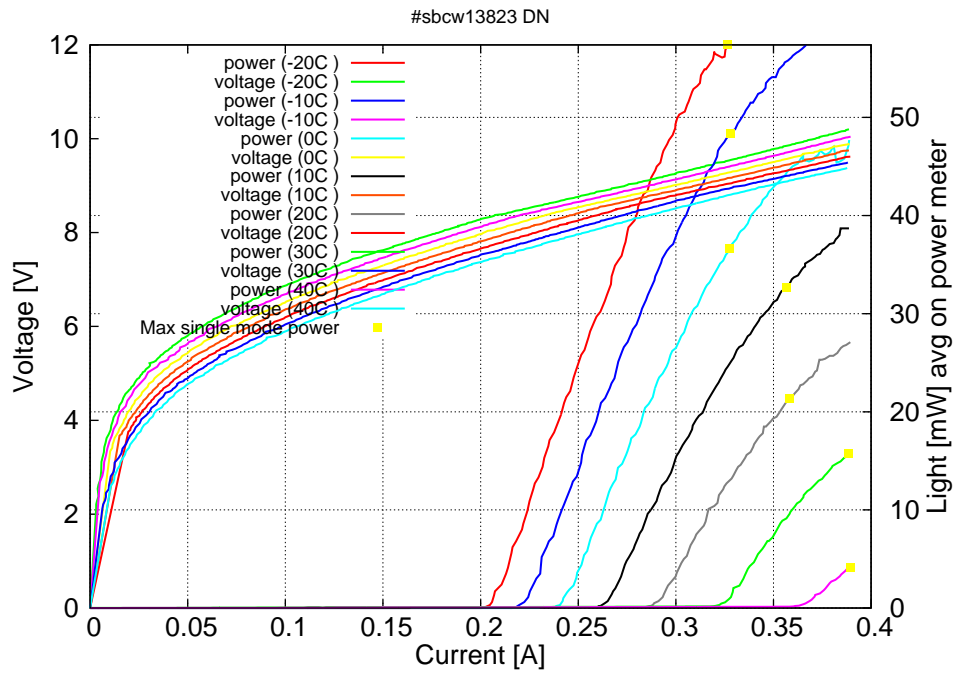


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.204A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.328A between -20C and 0C, 0.359A at 10C and 20C, 0.390A for all other temperatures.

Figure 3: spectra at different temperatures for various DC currents

