

Datasheet for #sbcw24811 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw24811 DN

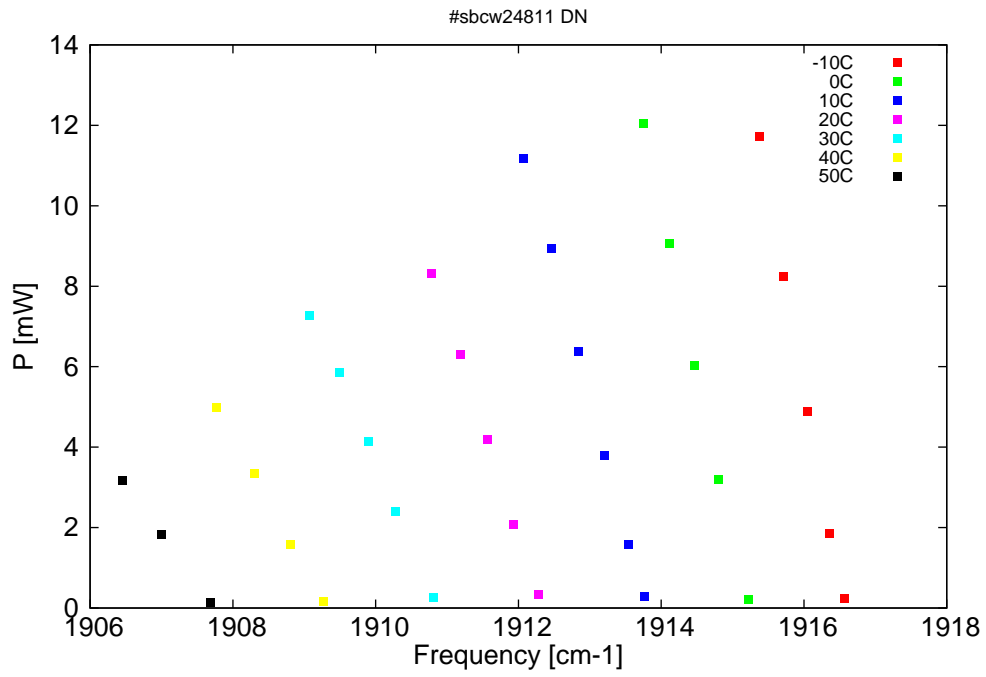


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

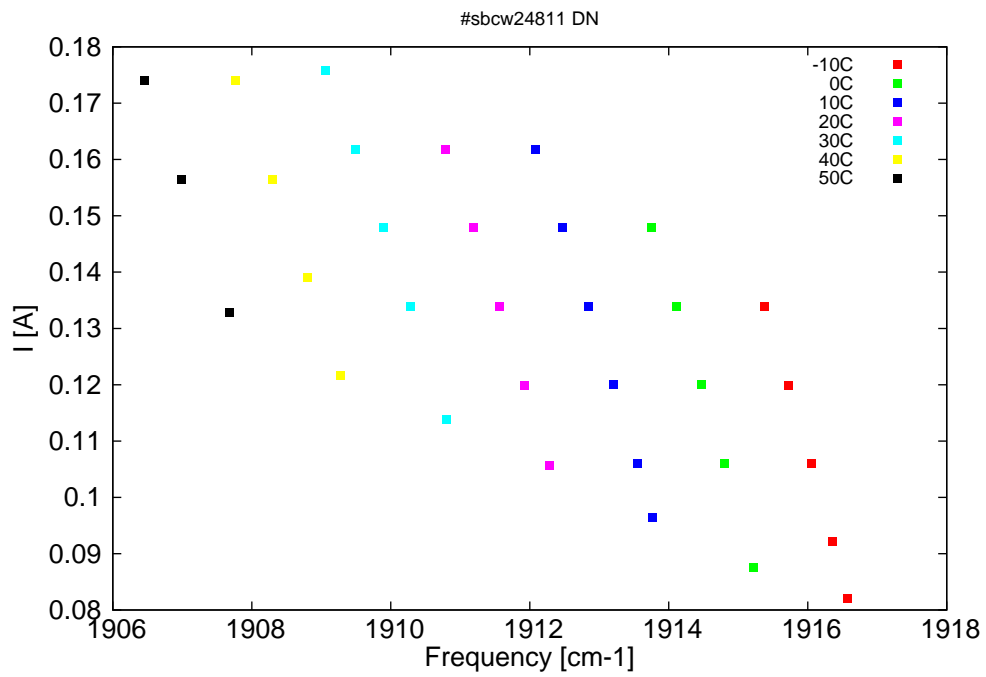


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5217.7	1916.6	0.2	-10	7.79	0.082
5218.2	1916.4	1.8	-10	7.95	0.092
5219.1	1916	4.9	-10	8.17	0.106
5220	1915.7	8.2	-10	8.39	0.12
5220.9	1915.4	11.7	-10	8.62	0.134
5221.3	1915.2	0.2	0	7.81	0.088
5222.5	1914.8	3.2	0	8.09	0.106
5223.4	1914.5	6	0	8.31	0.12
5224.3	1914.1	9.1	0	8.53	0.134
5225.3	1913.7	12.1	0	8.77	0.148
5225.3	1913.8	0.3	10	7.87	0.096
5225.9	1913.5	1.6	10	8.02	0.106
5226.8	1913.2	3.8	10	8.23	0.12
5227.8	1912.8	6.4	10	8.45	0.134
5228.8	1912.5	8.9	10	8.68	0.148
5229.9	1912.1	11.2	10	8.92	0.162
5229.3	1912.3	0.3	20	7.93	0.106
5230.3	1911.9	2.1	20	8.15	0.12
5231.3	1911.6	4.2	20	8.36	0.134
5232.4	1911.2	6.3	20	8.59	0.148
5233.4	1910.8	8.3	20	8.81	0.162
5233.4	1910.8	0.3	30	7.98	0.114
5234.8	1910.3	2.4	30	8.28	0.134
5235.9	1909.9	4.1	30	8.49	0.148
5237	1909.5	5.8	30	8.71	0.162
5238.2	1909.1	7.3	30	8.94	0.176
5237.6	1909.3	0.2	40	8.03	0.122
5238.9	1908.8	1.6	40	8.28	0.139
5240.3	1908.3	3.3	40	8.54	0.157
5241.7	1907.8	5	40	8.82	0.174
5242	1907.7	0.1	50	8.1	0.133
5243.9	1907	1.8	50	8.44	0.157
5245.3	1906.5	3.2	50	8.71	0.174

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

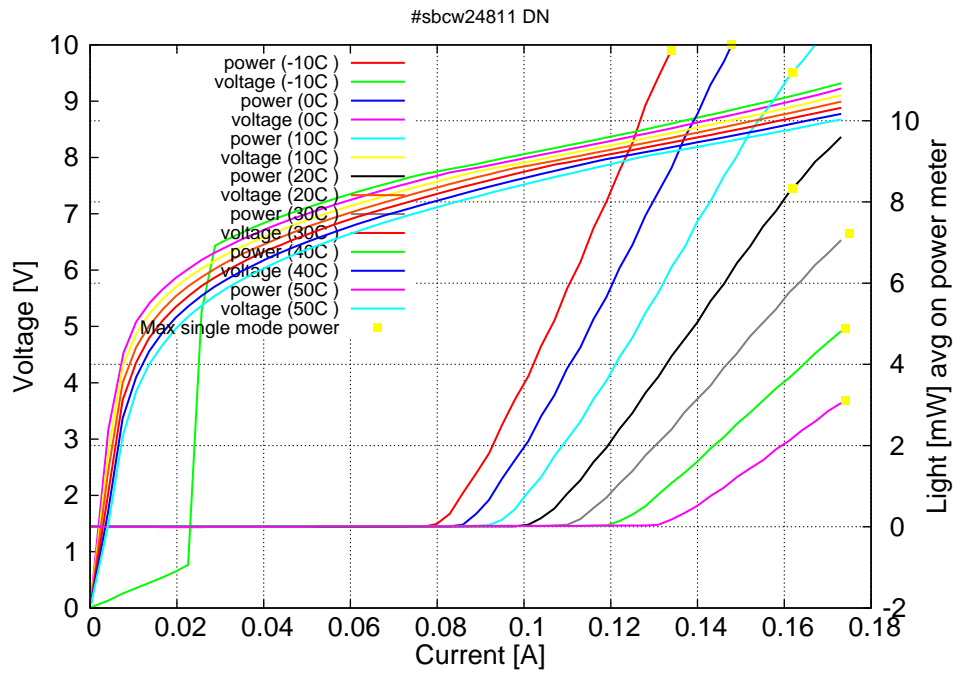


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.08A$ / $V_{th}=7.8V$ (2-wires measurements). Maximum operation current: 0.135A at -10C, 0.15A at 0C, 0.16A between 10C and 20C, 0.175A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

