

Datasheet for #sbcw24812 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.

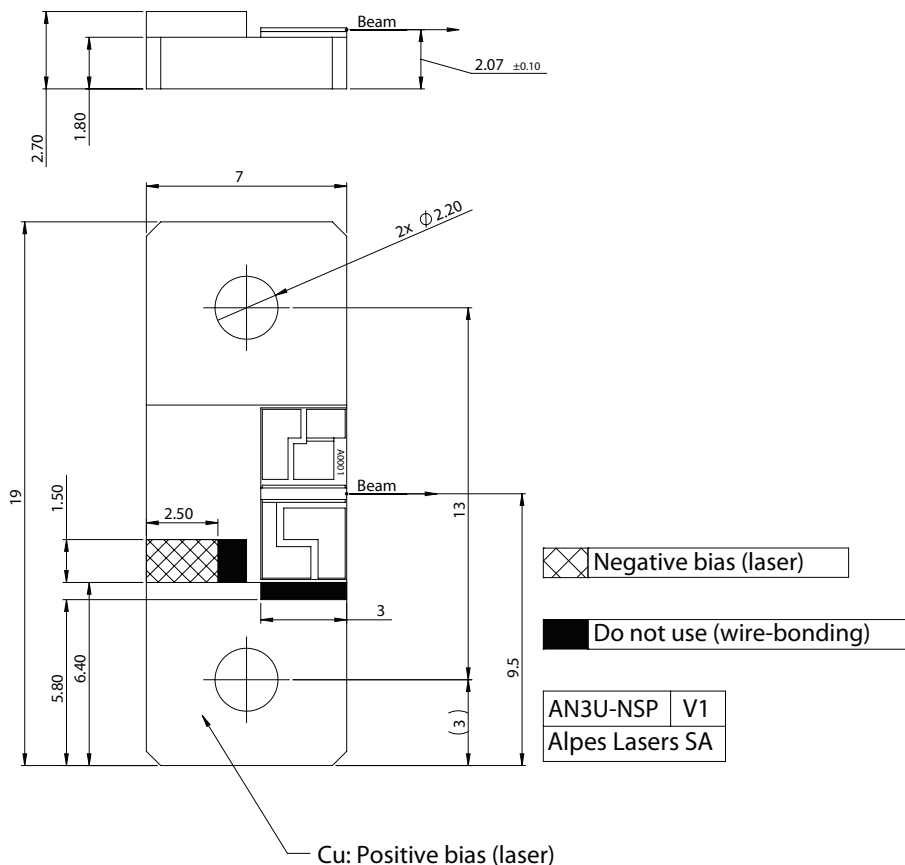


Figure 1: Mechanical and electrical interface for #sbcw24812 DN

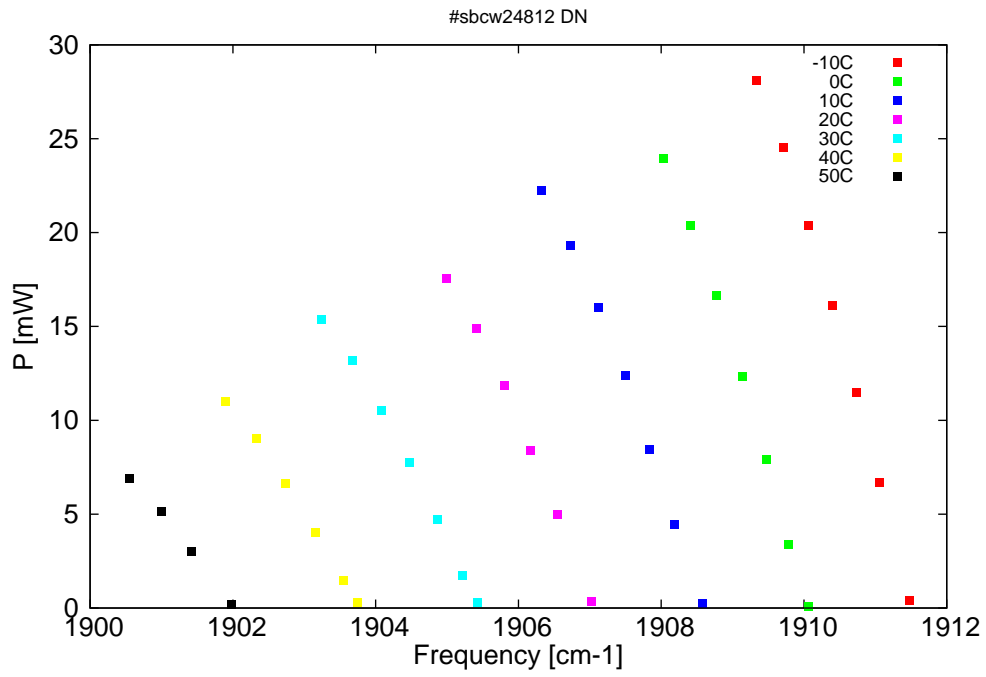


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

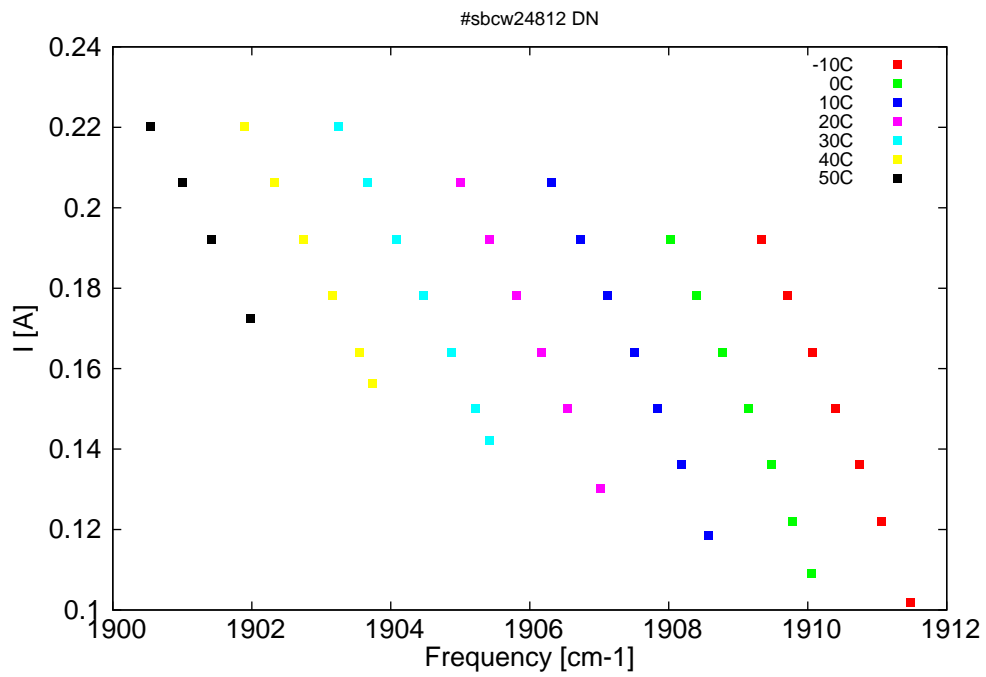


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5231.6	1911.5	0.4	-10	7.67	0.102
5232.7	1911.1	6.7	-10	7.89	0.122
5233.6	1910.7	11.5	-10	8.05	0.136
5234.5	1910.4	16.1	-10	8.19	0.15
5235.4	1910.1	20.4	-10	8.34	0.164
5236.4	1909.7	24.5	-10	8.5	0.178
5237.4	1909.3	28.1	-10	8.66	0.192
5235.4	1910.1	0.1	0	7.7	0.109
5236.2	1909.8	3.4	0	7.83	0.122
5237	1909.5	7.9	0	7.99	0.136
5238	1909.1	12.3	0	8.14	0.15
5239	1908.8	16.6	0	8.29	0.164
5240	1908.4	20.4	0	8.44	0.178
5241	1908	24	0	8.6	0.192
5239.5	1908.6	0.3	10	7.74	0.119
5240.6	1908.2	4.5	10	7.92	0.136
5241.5	1907.8	8.4	10	8.08	0.15
5242.5	1907.5	12.4	10	8.23	0.164
5243.5	1907.1	16	10	8.38	0.178
5244.6	1906.7	19.3	10	8.54	0.192
5245.7	1906.3	22.2	10	8.7	0.206
5243.8	1907	0.4	20	7.8	0.13
5245.1	1906.5	5	20	8.02	0.15
5246.1	1906.2	8.4	20	8.17	0.164
5247.1	1905.8	11.8	20	8.32	0.178
5248.2	1905.4	14.9	20	8.47	0.192
5249.3	1905	17.6	20	8.63	0.206
5248.2	1905.4	0.3	30	7.87	0.142
5248.7	1905.2	1.7	30	7.95	0.15
5249.7	1904.9	4.7	30	8.1	0.164
5250.8	1904.5	7.8	30	8.25	0.178
5251.9	1904.1	10.5	30	8.41	0.192
5253	1903.7	13.2	30	8.56	0.206
5254.2	1903.2	15.4	30	8.73	0.22
5252.8	1903.7	0.3	40	7.95	0.156
5253.4	1903.5	1.5	40	8.04	0.164
5254.4	1903.2	4	40	8.18	0.178
5255.6	1902.7	6.6	40	8.33	0.192
5256.7	1902.3	9	40	8.48	0.206
5257.9	1901.9	11	40	8.65	0.22
5257.7	1902	0.2	50	8.05	0.173
5259.2	1901.4	3	50	8.26	0.192
5260.4	1901	5.1	50	8.41	0.206
5261.6	1900.5	6.9	50	8.56	0.22

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

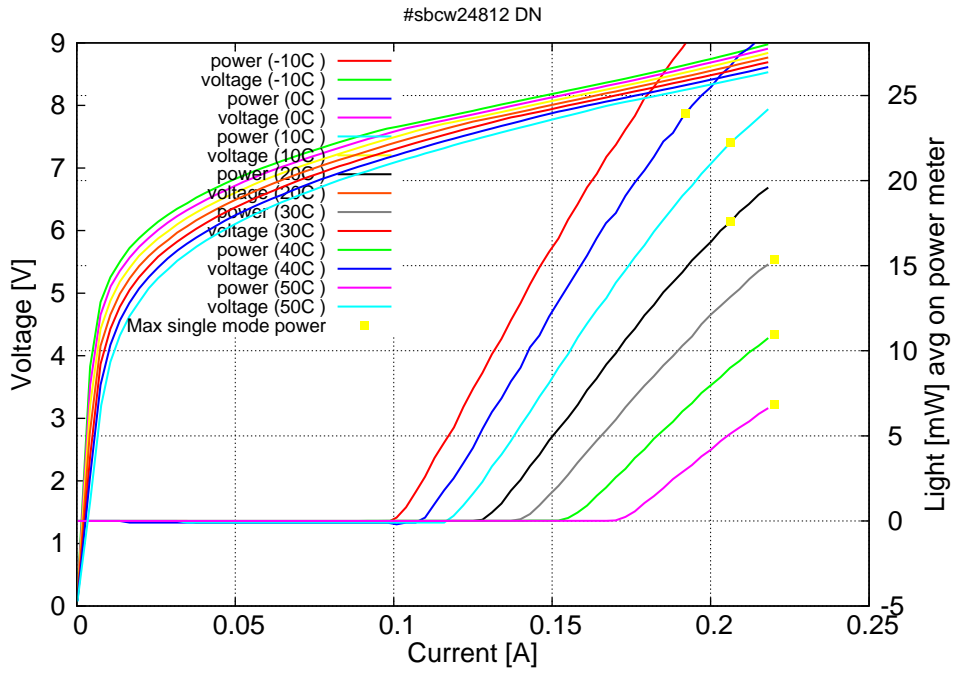


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.10A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.19A between -10C and 0C, 0.21A between 10C and 30C, 0.22A between 40C and 50c.

Figure 3: spectra at different temperatures for various DC currents

