

Datasheet for #sbcw24808 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.

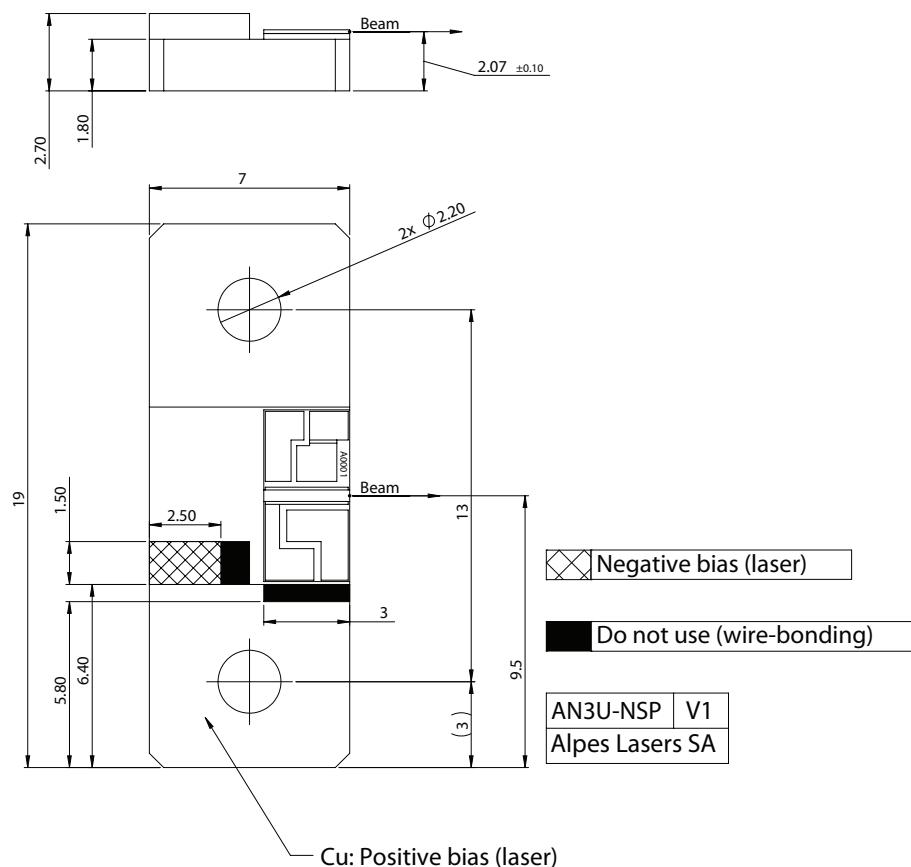


Figure 1: Mechanical and electrical interface for #sbcw24808 DN

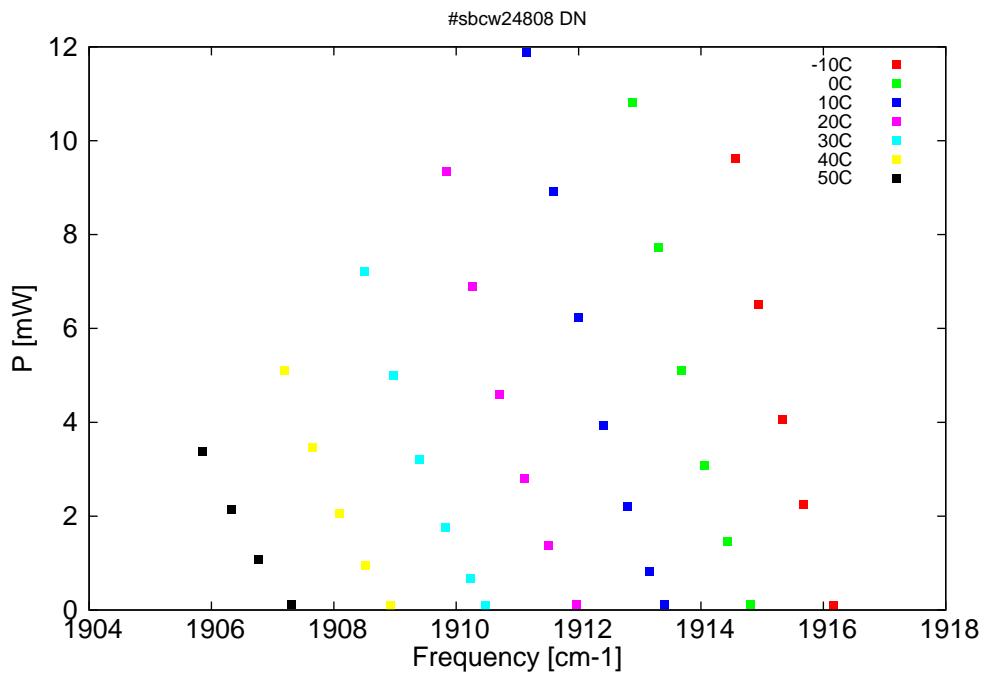


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

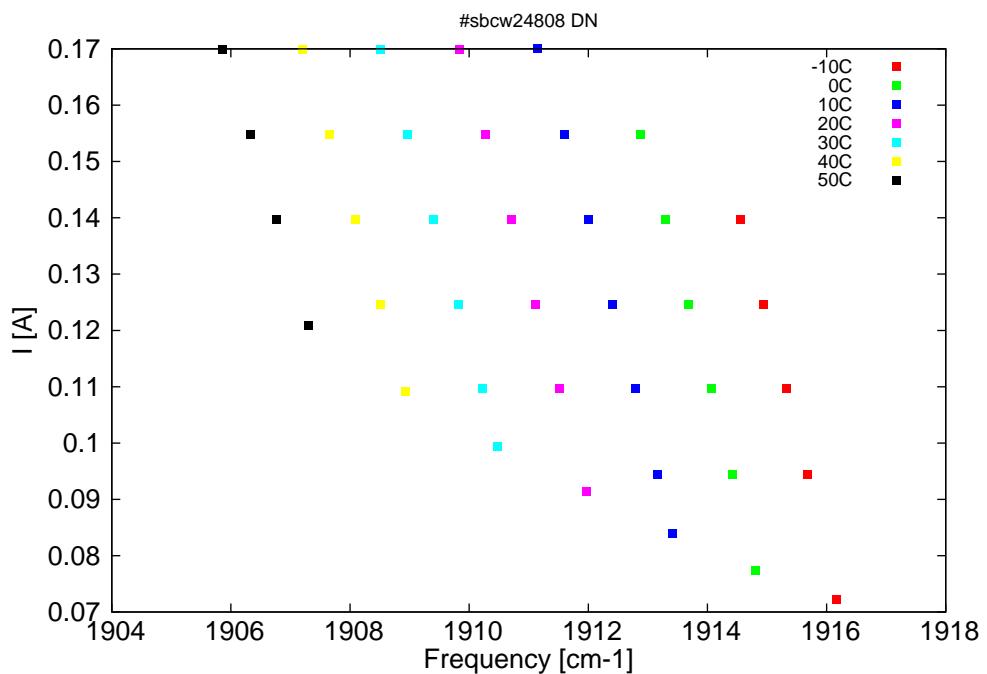


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5218.7	1916.2	0.1	-10	7.62	0.072
5220.1	1915.7	2.2	-10	7.92	0.095
5221	1915.3	4.1	-10	8.13	0.11
5222.1	1914.9	6.5	-10	8.34	0.125
5223.1	1914.6	9.6	-10	8.55	0.14
5222.4	1914.8	0.1	0	7.64	0.077
5223.5	1914.4	1.5	0	7.87	0.095
5224.5	1914.1	3.1	0	8.08	0.11
5225.5	1913.7	5.1	0	8.28	0.125
5226.6	1913.3	7.7	0	8.49	0.14
5227.7	1912.9	10.8	0	8.72	0.155
5226.3	1913.4	0.1	10	7.67	0.084
5226.9	1913.2	0.8	10	7.82	0.095
5228	1912.8	2.2	10	8.02	0.11
5229	1912.4	3.9	10	8.23	0.125
5230.1	1912	6.2	10	8.44	0.14
5231.2	1911.6	8.9	10	8.66	0.155
5232.4	1911.2	11.9	10	8.89	0.17
5230.2	1912	0.1	20	7.72	0.091
5231.5	1911.5	1.4	20	7.97	0.11
5232.5	1911.1	2.8	20	8.17	0.125
5233.7	1910.7	4.6	20	8.38	0.14
5234.9	1910.3	6.9	20	8.59	0.155
5236	1909.8	9.3	20	8.82	0.17
5234.3	1910.5	0.1	30	7.77	0.099
5235	1910.2	0.7	30	7.9	0.11
5236.1	1909.8	1.8	30	8.11	0.125
5237.2	1909.4	3.2	30	8.32	0.14
5238.4	1909	5	30	8.53	0.155
5239.7	1908.5	7.2	30	8.75	0.17
5238.5	1908.9	0.1	40	7.84	0.109
5239.7	1908.5	1	40	8.05	0.125
5240.9	1908.1	2.1	40	8.25	0.14
5242.1	1907.6	3.5	40	8.46	0.155
5243.3	1907.2	5.1	40	8.68	0.17
5243	1907.3	0.1	50	7.94	0.121
5244.5	1906.8	1.1	50	8.19	0.14
5245.7	1906.3	2.1	50	8.39	0.155
5247	1905.9	3.4	50	8.6	0.17

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

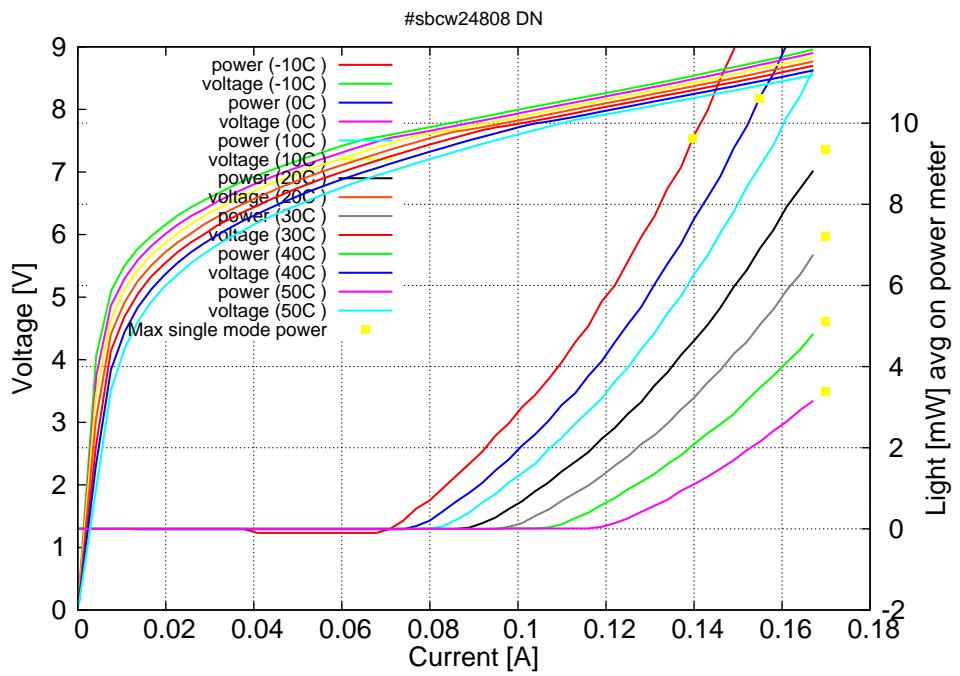


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.07A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.14A at -10C, 0.155A at 0C, 0.17A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

