

Datasheet for #sbcw15873 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.

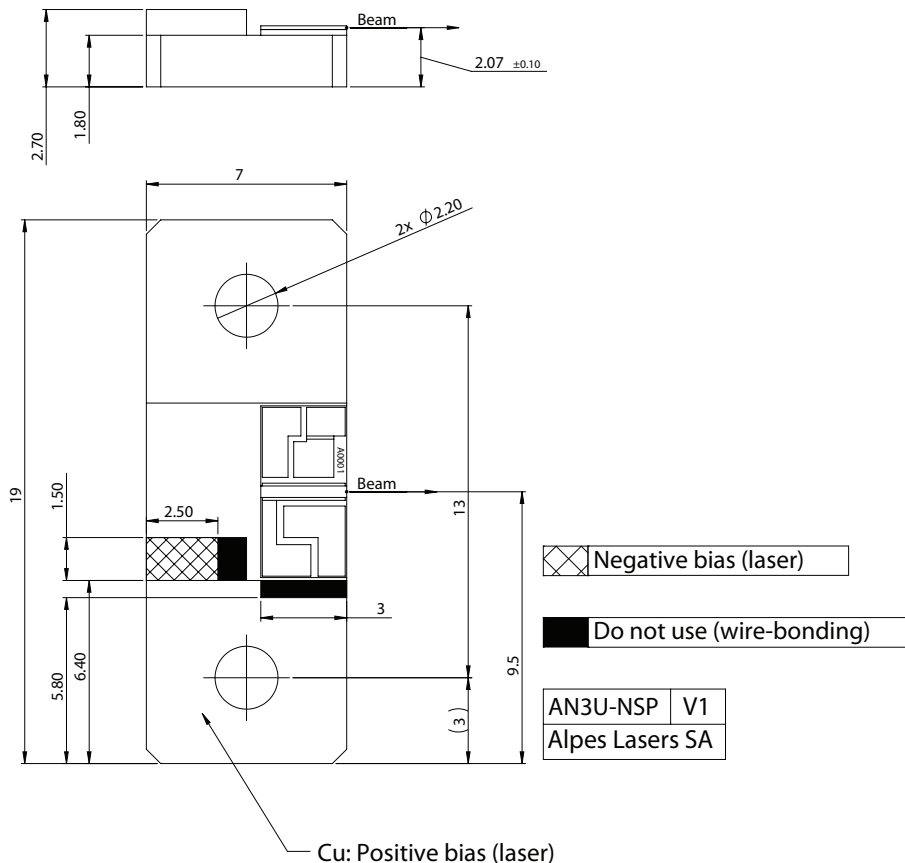


Figure 1: Mechanical and electrical interface for #sbcw15873 DN

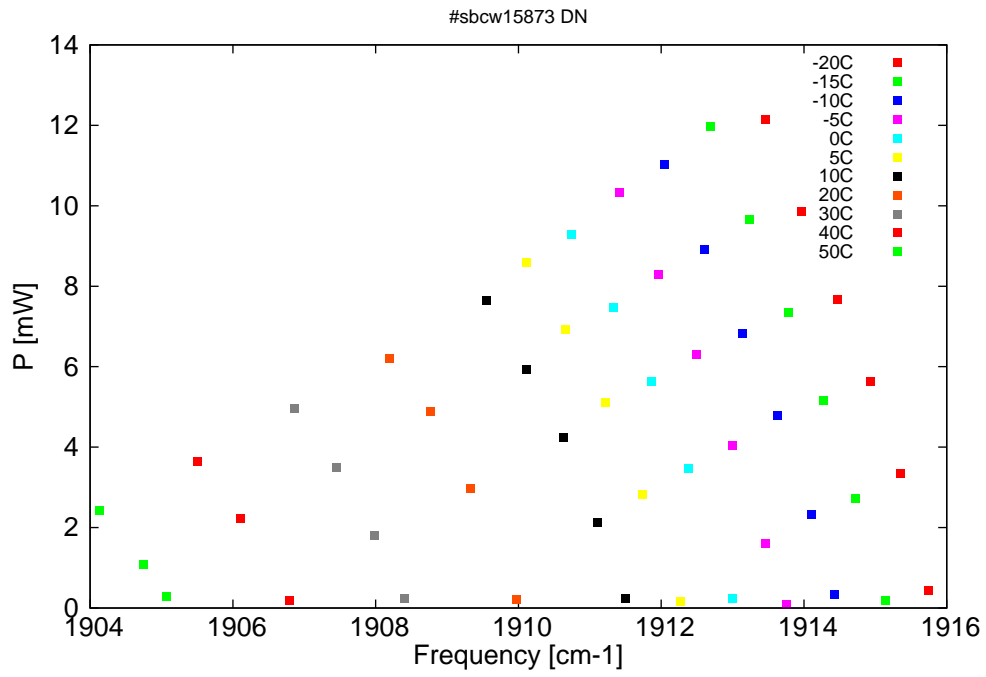


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

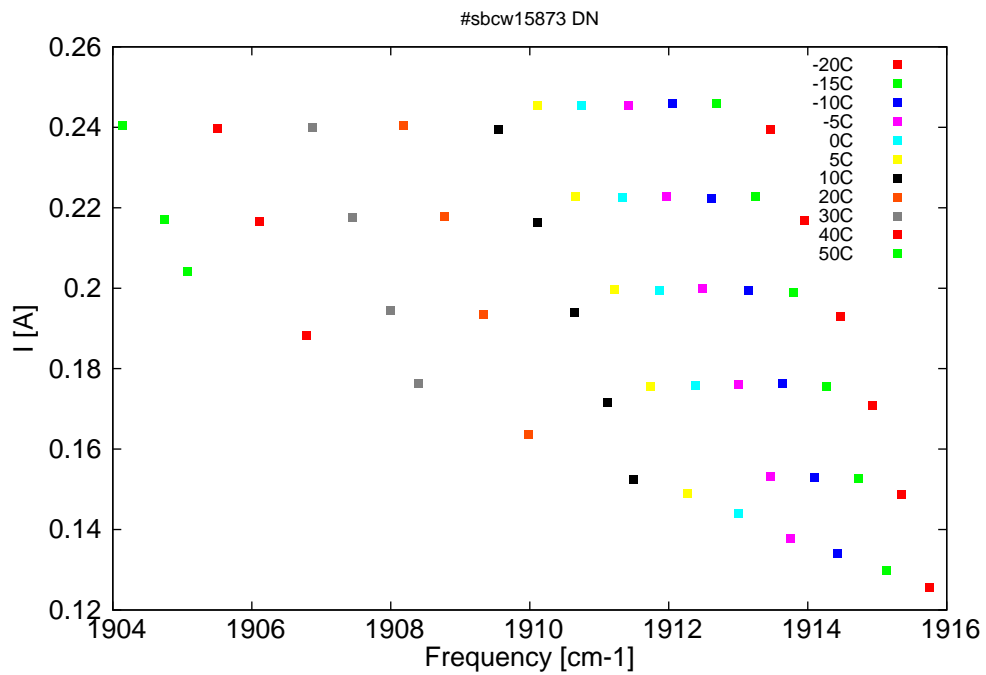


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5219.9	1915.7	0.4	-20	7.5	0.126
5221	1915.4	3.4	-20	7.71	0.149
5222.1	1914.9	5.6	-20	7.91	0.171
5223.4	1914.5	7.7	-20	8.11	0.193
5224.8	1914	9.9	-20	8.35	0.217
5226.1	1913.5	12.1	-20	8.58	0.239
5221.6	1915.1	0.2	-15	7.52	0.13
5222.7	1914.7	2.7	-15	7.73	0.153
5223.9	1914.3	5.2	-15	7.94	0.176
5225.2	1913.8	7.3	-15	8.16	0.199
5226.7	1913.2	9.7	-15	8.4	0.223
5228.2	1912.7	12	-15	8.64	0.246
5223.5	1914.4	0.3	-10	7.54	0.134
5224.4	1914.1	2.3	-10	7.72	0.153
5225.7	1913.6	4.8	-10	7.93	0.176
5227	1913.1	6.8	-10	8.15	0.199
5228.5	1912.6	8.9	-10	8.38	0.222
5230	1912	11	-10	8.63	0.246
5225.3	1913.7	0.1	-5	7.55	0.138
5226.1	1913.5	1.6	-5	7.7	0.153
5227.4	1913	4	-5	7.91	0.176
5228.8	1912.5	6.3	-5	8.14	0.2
5230.2	1912	8.3	-5	8.37	0.223
5231.7	1911.4	10.3	-5	8.62	0.246
5227.4	1913	0.2	0	7.59	0.144
5229.1	1912.4	3.5	0	7.89	0.176
5230.5	1911.9	5.6	0	8.12	0.199
5232	1911.3	7.5	0	8.35	0.222
5233.5	1910.7	9.3	0	8.61	0.245
5229.4	1912.3	0.2	5	7.62	0.149
5230.9	1911.7	2.8	5	7.88	0.176
5232.3	1911.2	5.1	5	8.11	0.2
5233.8	1910.7	6.9	5	8.35	0.223
5235.3	1910.1	8.6	5	8.6	0.245
5231.5	1911.5	0.2	10	7.63	0.152
5232.6	1911.1	2.1	10	7.82	0.172
5233.9	1910.6	4.3	10	8.04	0.194
5235.3	1910.1	5.9	10	8.27	0.216
5236.8	1909.6	7.6	10	8.52	0.239
5235.7	1910	0.2	20	7.71	0.164
5237.4	1909.3	3	20	8.01	0.194
5239	1908.8	4.9	20	8.26	0.218
5240.6	1908.2	6.2	20	8.51	0.24
5240	1908.4	0.2	30	7.8	0.176
5241.1	1908	1.8	30	7.99	0.195
5242.6	1907.5	3.5	30	8.22	0.217
5244.2	1906.9	5	30	8.48	0.24
5244.4	1906.8	0.2	40	7.89	0.188
5246.3	1906.1	2.2	40	8.19	0.216

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5247.9	1905.5	3.7	40	8.46	0.24
5249.1	1905.1	0.3	50	8.02	0.204
5250	1904.7	1.1	50	8.17	0.217
5251.7	1904.1	2.4	50	8.43	0.24

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

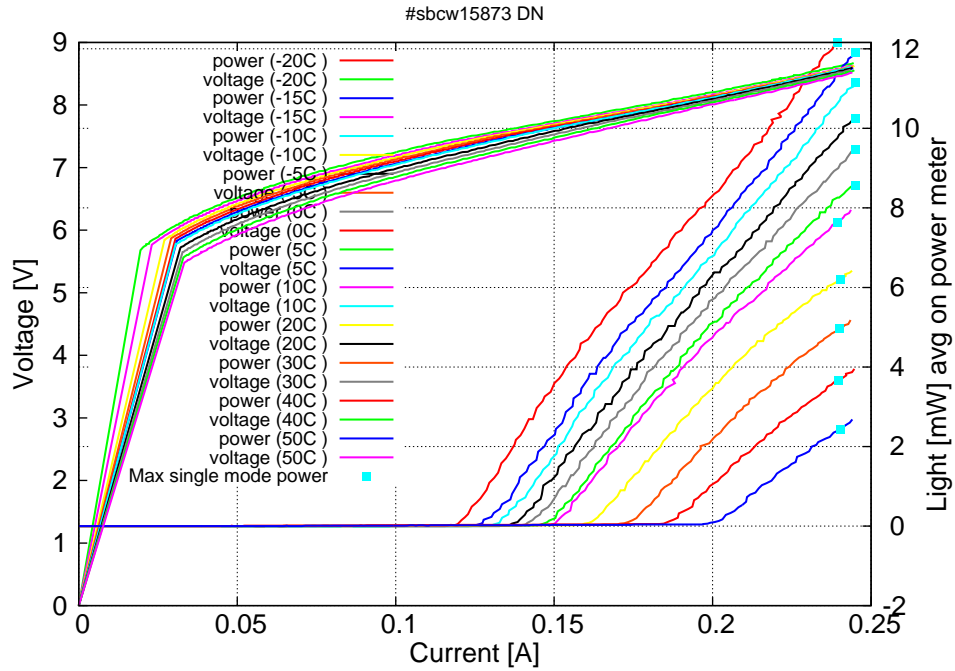


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.245A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

