

Datasheet for #sbcw24787 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 #sbcw24787 DN

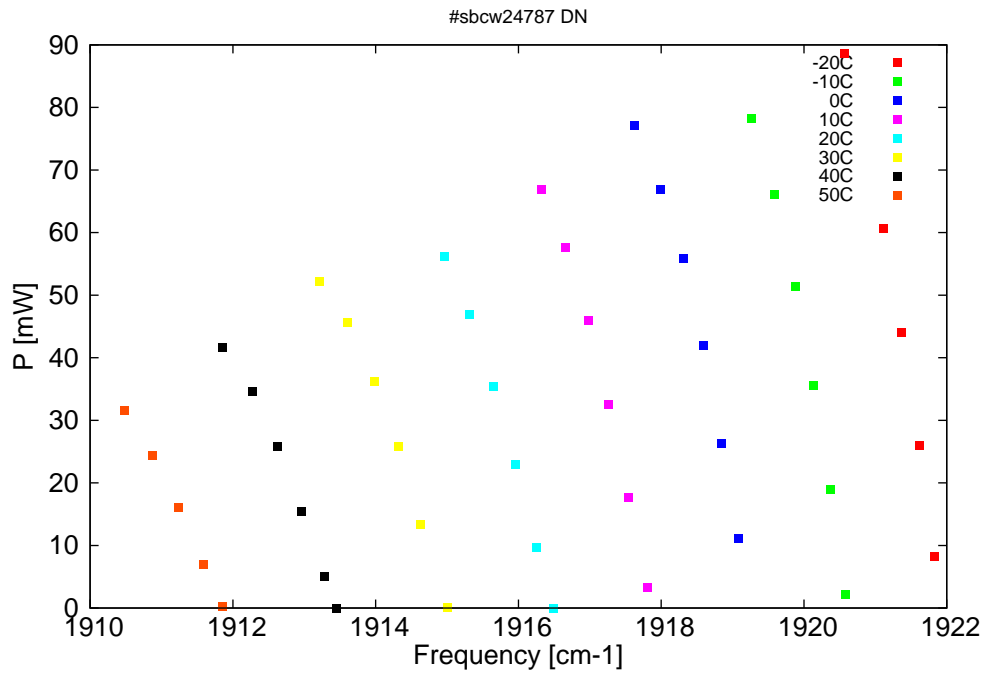


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

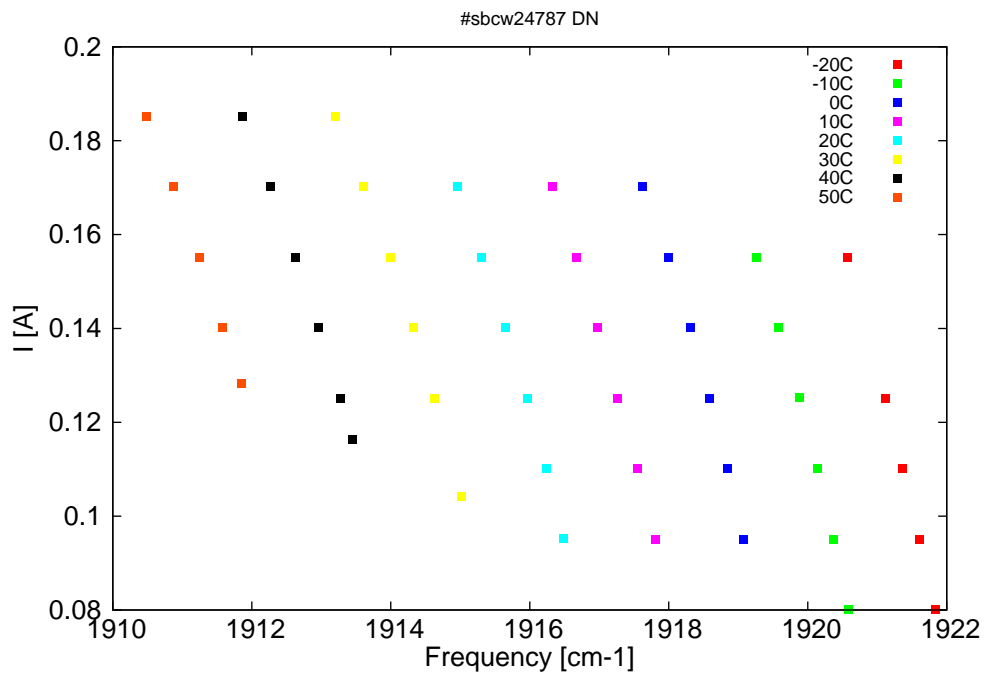


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5203.4	1921.8	8.3	-20	7.7	0.08
5204	1921.6	26	-20	7.87	0.095
5204.6	1921.4	44	-20	8.05	0.11
5205.3	1921.1	60.6	-20	8.23	0.125
5206.8	1920.6	88.6	-20	8.62	0.155
5206.7	1920.6	2.2	-10	7.66	0.08
5207.3	1920.4	18.9	-10	7.83	0.095
5208	1920.1	35.5	-10	8.01	0.11
5208.7	1919.9	51.4	-10	8.18	0.125
5209.5	1919.6	66.1	-10	8.37	0.14
5210.3	1919.3	78.3	-10	8.57	0.155
5210.8	1919.1	11.1	0	7.78	0.095
5211.5	1918.8	26.3	0	7.96	0.11
5212.2	1918.6	42	0	8.14	0.125
5212.9	1918.3	55.8	0	8.32	0.14
5213.8	1918	66.8	0	8.52	0.155
5214.8	1917.6	77.1	0	8.74	0.17
5214.3	1917.8	3.3	10	7.74	0.095
5215	1917.5	17.6	10	7.91	0.11
5215.8	1917.3	32.6	10	8.09	0.125
5216.5	1917	46	10	8.27	0.14
5217.4	1916.7	57.6	10	8.46	0.155
5218.3	1916.3	66.8	10	8.68	0.17
5217.9	1916.5	0	20	7.71	0.095
5218.5	1916.2	9.7	20	7.86	0.11
5219.3	1916	23	20	8.04	0.125
5220.2	1915.6	35.4	20	8.22	0.14
5221.1	1915.3	46.9	20	8.41	0.155
5222	1915	56.2	20	8.62	0.17
5221.9	1915	0	30	7.77	0.104
5222.9	1914.6	13.4	30	7.99	0.125
5223.8	1914.3	25.8	30	8.17	0.14
5224.7	1914	36.2	30	8.36	0.155
5225.7	1913.6	45.6	30	8.56	0.17
5226.8	1913.2	52.2	30	8.77	0.185
5226.2	1913.5	0	40	7.85	0.116
5226.6	1913.3	5	40	7.94	0.125
5227.5	1913	15.5	40	8.12	0.14
5228.4	1912.6	25.9	40	8.3	0.155
5229.4	1912.3	34.6	40	8.49	0.17
5230.5	1911.9	41.6	40	8.69	0.185
5230.5	1911.9	0.2	50	7.94	0.128
5231.3	1911.6	6.9	50	8.07	0.14
5232.2	1911.2	16.1	50	8.24	0.155
5233.2	1910.9	24.4	50	8.42	0.17
5234.3	1910.5	31.5	50	8.62	0.185

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

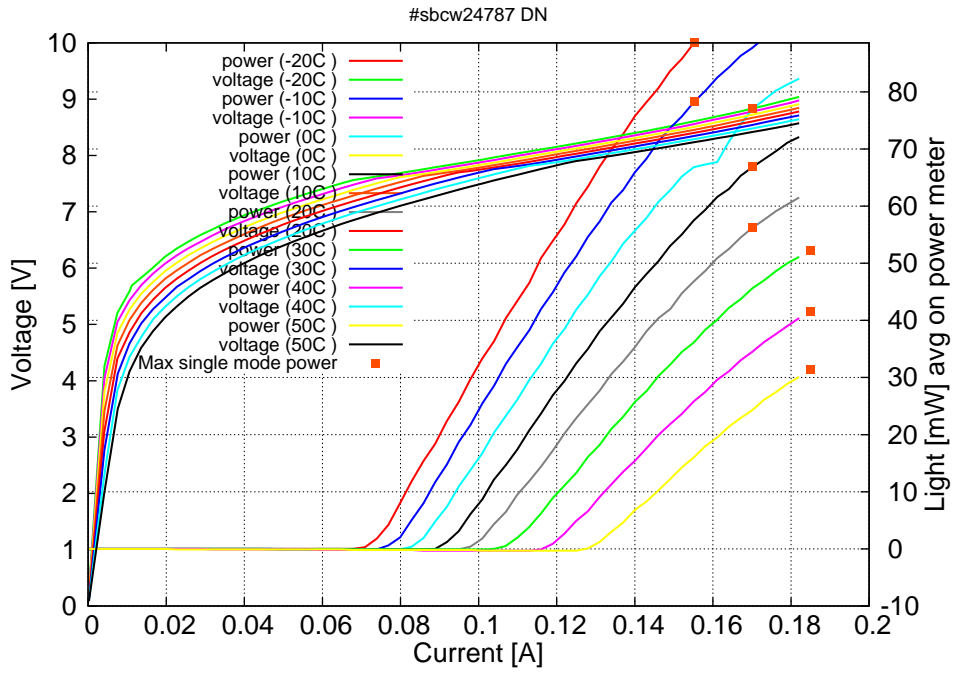


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.155A between -20C and -10C, 0.17A between 0C and 20C, 0.185A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

