

Datasheet for #sbcw24786 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 bias and positive bias on the specific zones drawn below. 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 #sbcw24786 DN (please note that AlN submount numbering is A0YWK)

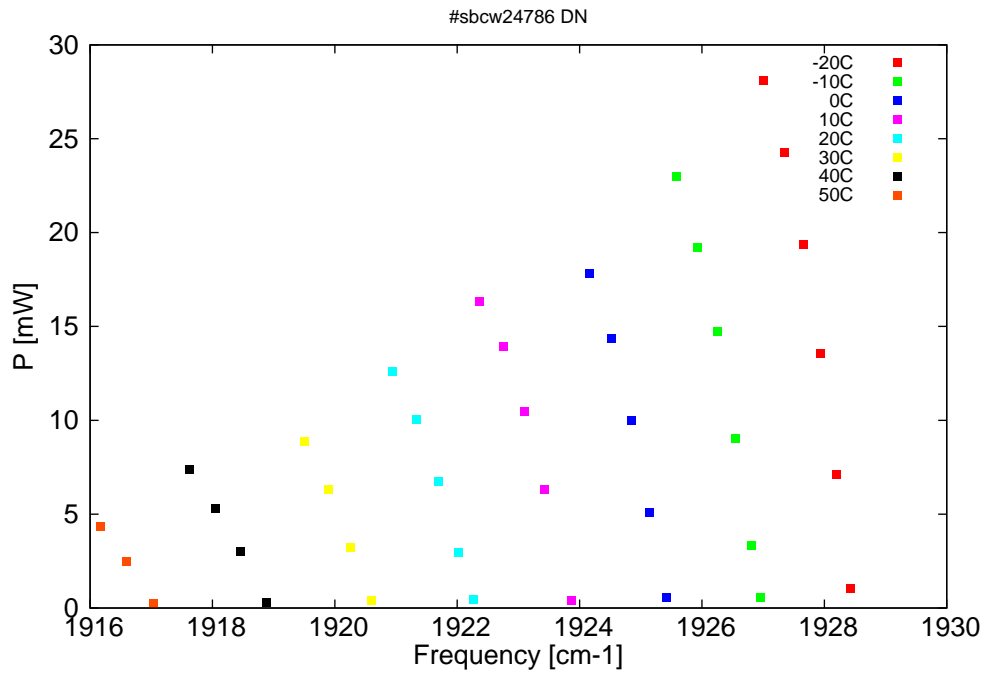


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

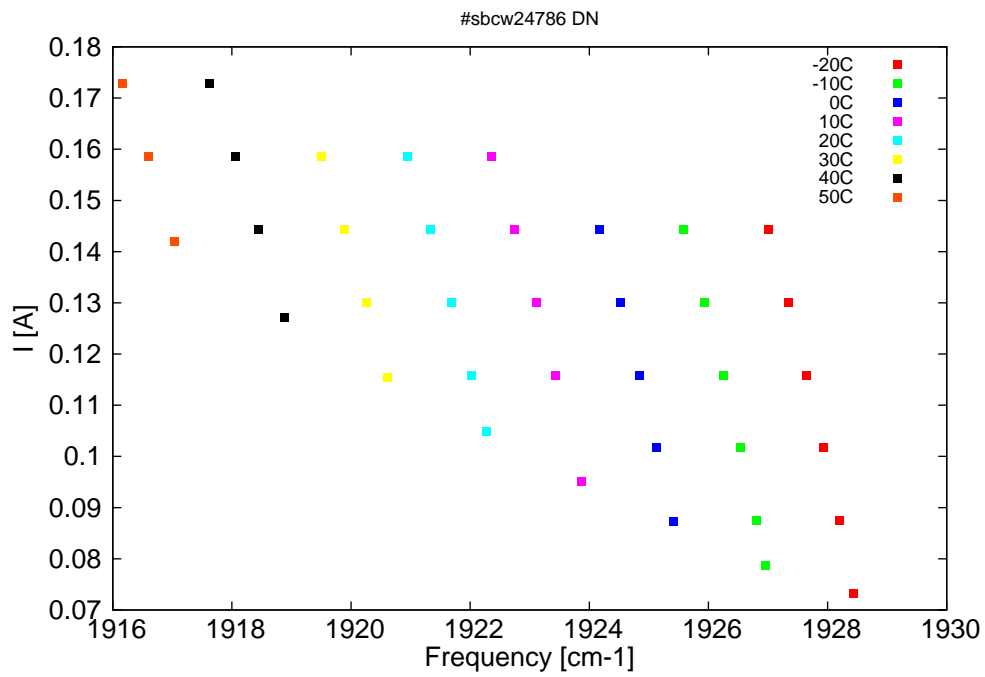


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5185.6	1928.4	1	-20	7.76	0.073
5186.2	1928.2	7.1	-20	7.95	0.088
5186.9	1927.9	13.6	-20	8.15	0.102
5187.7	1927.7	19.4	-20	8.35	0.116
5188.5	1927.3	24.3	-20	8.56	0.13
5189.4	1927	28.1	-20	8.79	0.144
5189.5	1927	0.5	-10	7.78	0.079
5189.9	1926.8	3.3	-10	7.89	0.088
5190.6	1926.5	9	-10	8.09	0.102
5191.4	1926.3	14.7	-10	8.29	0.116
5192.3	1925.9	19.2	-10	8.5	0.13
5193.2	1925.6	23	-10	8.73	0.144
5193.7	1925.4	0.6	0	7.85	0.087
5194.4	1925.1	5.1	0	8.04	0.102
5195.2	1924.8	10	0	8.24	0.116
5196.1	1924.5	14.3	0	8.45	0.13
5197.1	1924.2	17.8	0	8.67	0.144
5197.9	1923.9	0.4	10	7.95	0.095
5199.1	1923.4	6.3	10	8.25	0.116
5199.9	1923.1	10.5	10	8.46	0.13
5200.9	1922.8	13.9	10	8.69	0.144
5201.9	1922.4	16.3	10	8.93	0.159
5202.2	1922.3	0.5	20	8.06	0.105
5202.8	1922	3	20	8.21	0.116
5203.7	1921.7	6.8	20	8.43	0.13
5204.7	1921.3	10	20	8.66	0.144
5205.8	1920.9	12.6	20	8.88	0.159
5206.7	1920.6	0.4	30	8.17	0.115
5207.6	1920.3	3.2	30	8.37	0.13
5208.6	1919.9	6.3	30	8.58	0.144
5209.7	1919.5	8.9	30	8.81	0.159
5211.4	1918.9	0.3	40	8.33	0.127
5212.5	1918.5	3	40	8.58	0.144
5213.6	1918.1	5.3	40	8.81	0.159
5214.8	1917.6	7.4	40	9.02	0.173
5216.4	1917	0.2	50	8.41	0.142
5217.6	1916.6	2.5	50	8.63	0.159
5218.8	1916.2	4.4	50	8.85	0.173

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

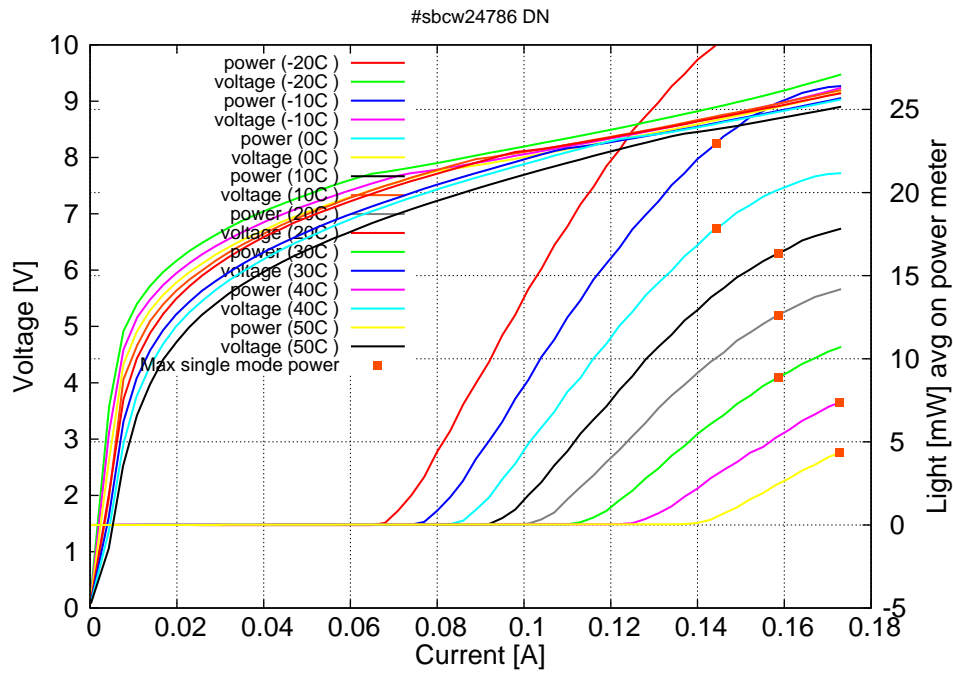


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=7.8V$ (2-wires measurements). Maximum operation current: 0.145A between -20C and 0C, 0.16A between 10C and 30C, 0.175A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

