

Datasheet for #sbcw24799 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 #sbcw24799 DN (please note that AlN submount numbering is A12ZT)

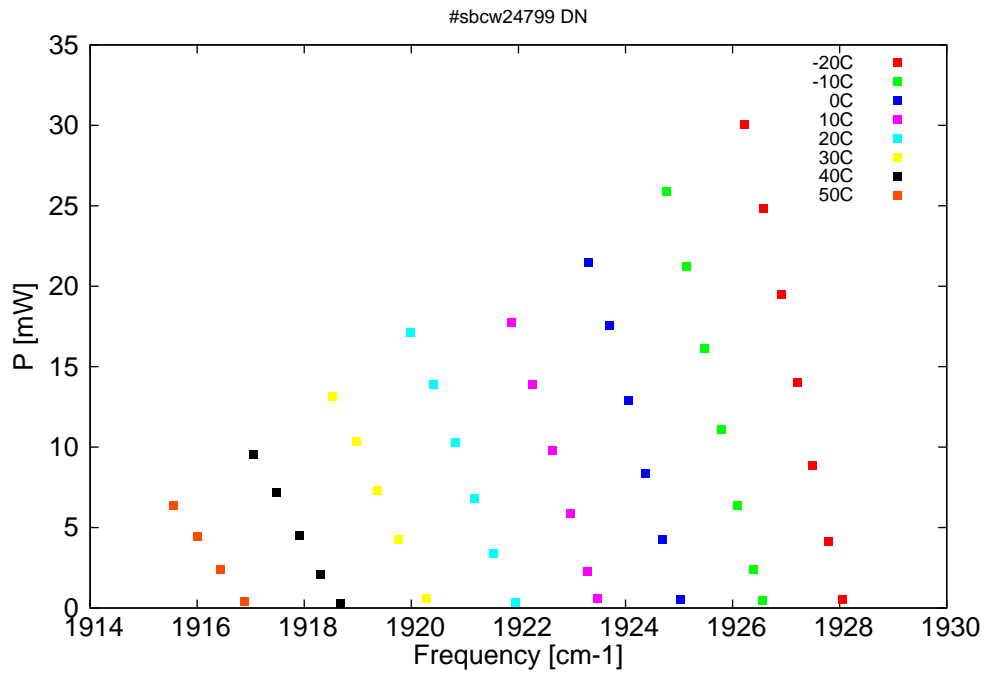


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

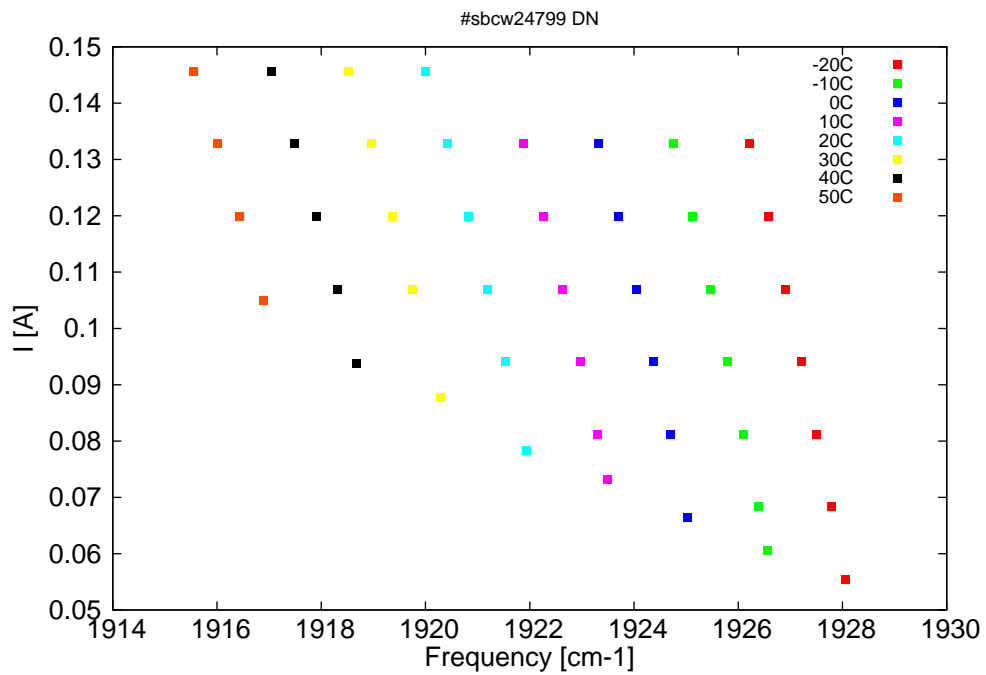


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5186.6	1928.1	0.5	-20	7.57	0.055
5187.3	1927.8	4.1	-20	7.75	0.068
5188.1	1927.5	8.8	-20	7.94	0.081
5188.8	1927.2	14	-20	8.13	0.094
5189.7	1926.9	19.5	-20	8.31	0.107
5190.6	1926.6	24.8	-20	8.51	0.12
5191.5	1926.2	30	-20	8.74	0.133
5190.6	1926.6	0.4	-10	7.59	0.061
5191.1	1926.4	2.4	-10	7.7	0.068
5191.8	1926.1	6.3	-10	7.89	0.081
5192.7	1925.8	11.1	-10	8.08	0.094
5193.5	1925.5	16.1	-10	8.27	0.107
5194.5	1925.1	21.2	-10	8.47	0.12
5195.4	1924.8	25.9	-10	8.69	0.133
5194.7	1925	0.6	0	7.64	0.067
5195.6	1924.7	4.3	0	7.84	0.081
5196.5	1924.4	8.4	0	8.04	0.094
5197.4	1924	12.9	0	8.23	0.107
5198.3	1923.7	17.6	0	8.42	0.12
5199.3	1923.3	21.5	0	8.64	0.133
5198.9	1923.5	0.6	10	7.68	0.073
5199.4	1923.3	2.3	10	7.8	0.081
5200.3	1923	5.9	10	7.99	0.094
5201.2	1922.6	9.8	10	8.18	0.107
5202.2	1922.3	13.9	10	8.37	0.12
5203.3	1921.9	17.8	10	8.58	0.133
5203.1	1921.9	0.3	20	7.71	0.078
5204.2	1921.5	3.4	20	7.93	0.094
5205.1	1921.2	6.8	20	8.12	0.107
5206.1	1920.8	10.3	20	8.32	0.12
5207.2	1920.4	13.9	20	8.52	0.133
5208.4	1920	17.1	20	8.74	0.146
5207.6	1920.3	0.6	30	7.81	0.088
5209	1919.8	4.2	30	8.08	0.107
5210	1919.4	7.3	30	8.27	0.12
5211.1	1919	10.3	30	8.47	0.133
5212.3	1918.5	13.2	30	8.69	0.146
5211.9	1918.7	0.3	40	7.86	0.094
5212.9	1918.3	2.1	40	8.04	0.107
5214	1917.9	4.5	40	8.23	0.12
5215.2	1917.5	7.2	40	8.42	0.133
5216.4	1917	9.6	40	8.63	0.146
5216.8	1916.9	0.4	50	8	0.105
5218	1916.4	2.4	50	8.21	0.12
5219.2	1916	4.4	50	8.4	0.133
5220.4	1915.5	6.4	50	8.6	0.146

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

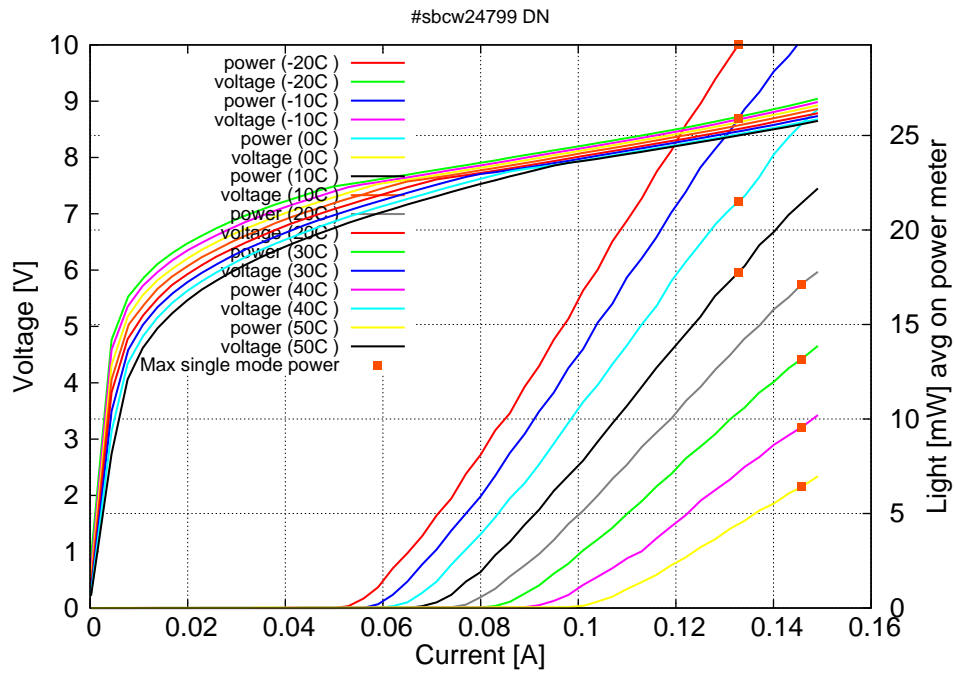


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.05A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.135A between -20C and 10C, 0.150A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

