

Datasheet for #sbcw24794 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 #sbcw24794 DN (please note that AlN submount numbering is A0ZKJ)

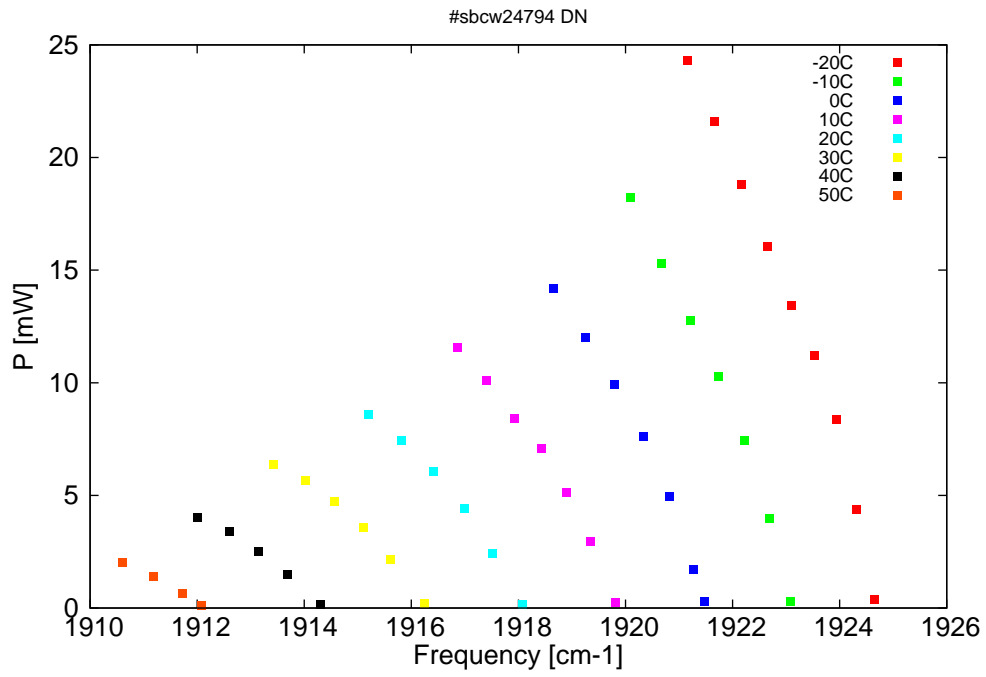


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

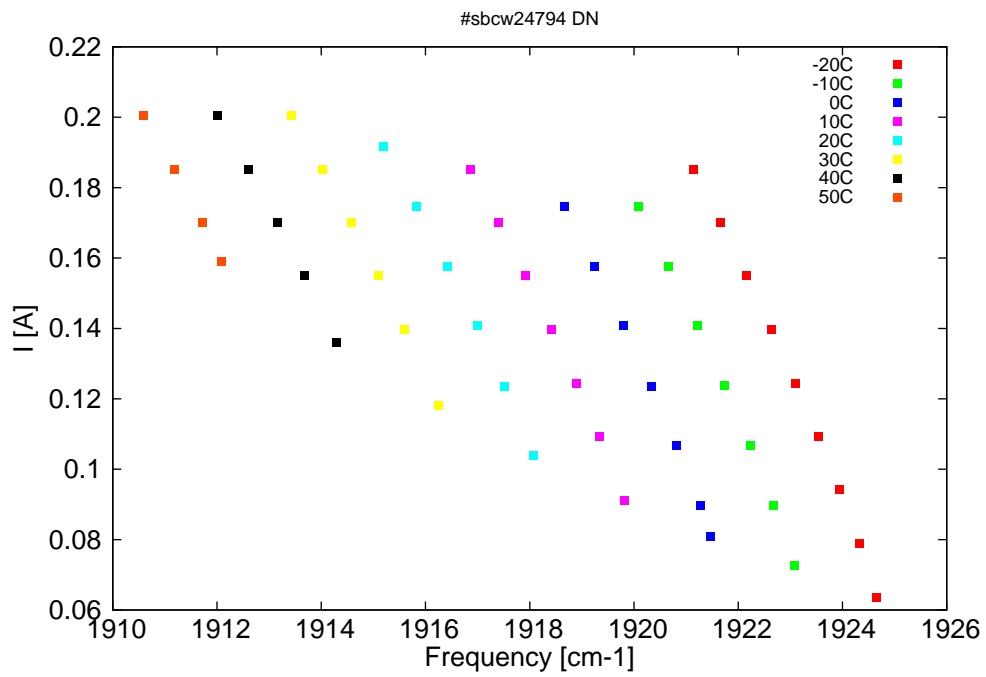


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5195.7	1924.7	0.4	-20	8.31	0.064
5196.6	1924.3	4.4	-20	8.59	0.079
5197.7	1923.9	8.4	-20	8.88	0.094
5198.8	1923.5	11.2	-20	9.15	0.109
5199.9	1923.1	13.4	-20	9.44	0.125
5201.2	1922.6	16.1	-20	9.73	0.14
5202.5	1922.2	18.8	-20	10.02	0.155
5203.8	1921.7	21.6	-20	10.33	0.17
5205.2	1921.2	24.3	-20	10.66	0.185
5200	1923.1	0.3	-10	8.38	0.073
5201.1	1922.7	4	-10	8.69	0.09
5202.3	1922.2	7.4	-10	9	0.107
5203.6	1921.7	10.3	-10	9.32	0.124
5205	1921.2	12.8	-10	9.63	0.141
5206.5	1920.7	15.3	-10	9.95	0.158
5208.1	1920.1	18.2	-10	10.28	0.175
5204.3	1921.5	0.3	0	8.43	0.081
5204.9	1921.3	1.7	0	8.58	0.09
5206.1	1920.8	5	0	8.89	0.107
5207.4	1920.3	7.6	0	9.2	0.124
5208.9	1919.8	9.9	0	9.51	0.141
5210.4	1919.2	12	0	9.82	0.158
5212	1918.7	14.2	0	10.14	0.175
5208.8	1919.8	0.3	10	8.52	0.091
5210.1	1919.3	2.9	10	8.83	0.109
5211.3	1918.9	5.1	10	9.1	0.125
5212.6	1918.4	7.1	10	9.37	0.14
5214	1917.9	8.4	10	9.64	0.155
5215.4	1917.4	10.1	10	9.92	0.17
5216.9	1916.9	11.6	10	10.2	0.185
5213.6	1918.1	0.1	20	8.64	0.104
5215.1	1917.5	2.4	20	8.96	0.124
5216.5	1917	4.4	20	9.26	0.141
5218.1	1916.4	6.1	20	9.55	0.158
5219.7	1915.8	7.4	20	9.85	0.175
5221.4	1915.2	8.6	20	10.16	0.192
5218.5	1916.2	0.2	30	8.78	0.118
5220.3	1915.6	2.1	30	9.11	0.14
5221.6	1915.1	3.6	30	9.37	0.155
5223.1	1914.6	4.7	30	9.63	0.17
5224.6	1914	5.6	30	9.89	0.185
5226.2	1913.4	6.4	30	10.15	0.201
5223.9	1914.3	0.2	40	8.95	0.136
5225.5	1913.7	1.5	40	9.23	0.155
5227	1913.2	2.5	40	9.48	0.17
5228.5	1912.6	3.4	40	9.72	0.185
5230.1	1912	4	40	9.97	0.201
5229.9	1912.1	0.1	50	9.18	0.159
5230.9	1911.7	0.6	50	9.34	0.17

continued on next page

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5232.4	1911.2	1.4	50	9.56	0.185
5234	1910.6	2	50	9.79	0.201

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

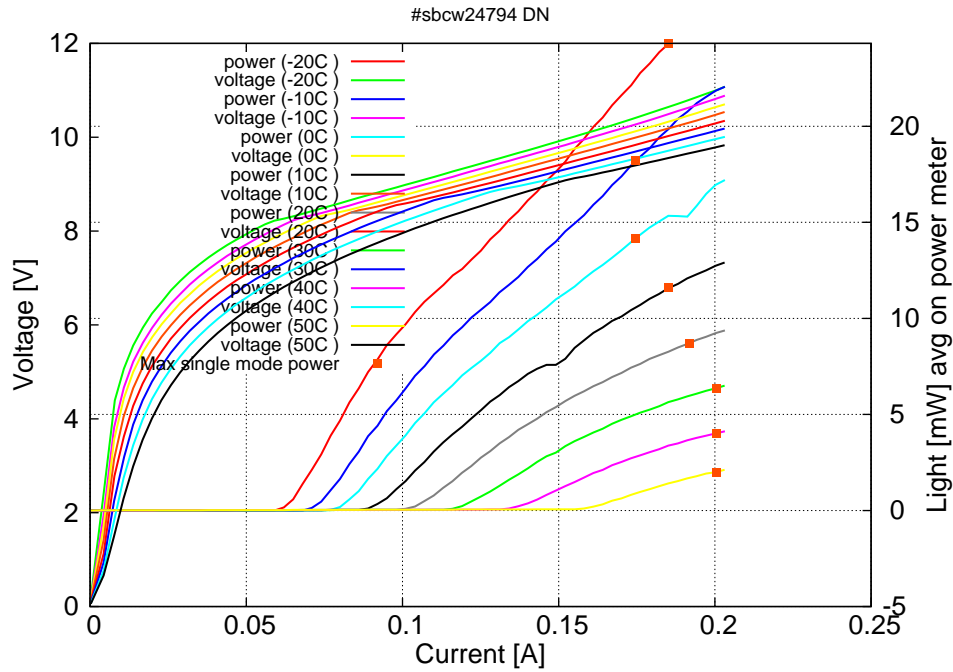


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.185A between -20C and 20C, 0.205A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

