

Datasheet for #sbcw24802 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 #sbcw24802 DN (please note that AlN submount numbering is A0Z5J)

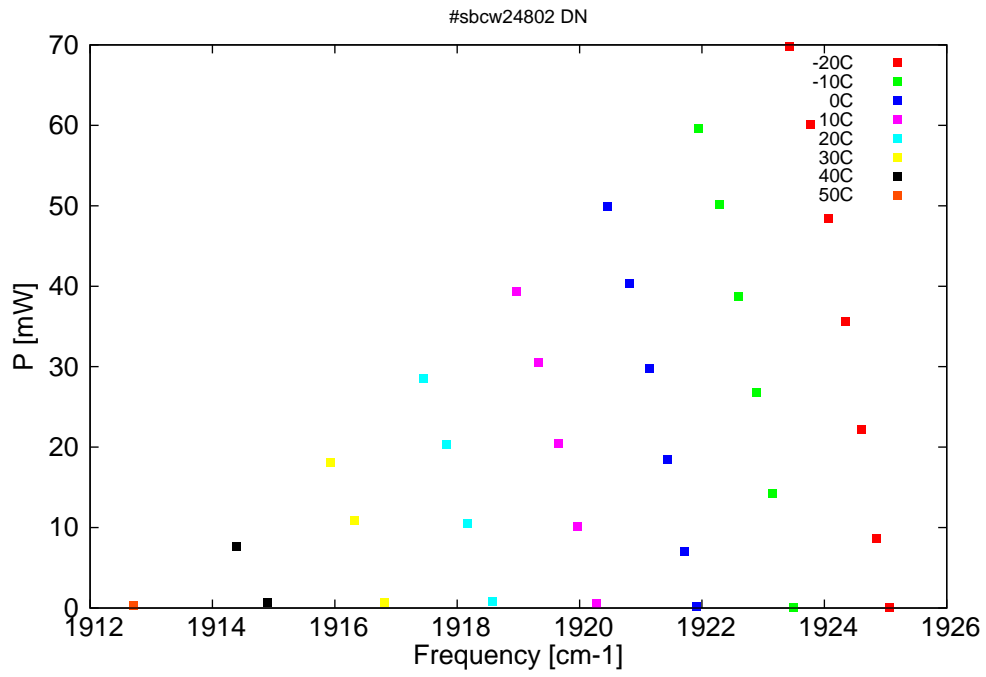


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

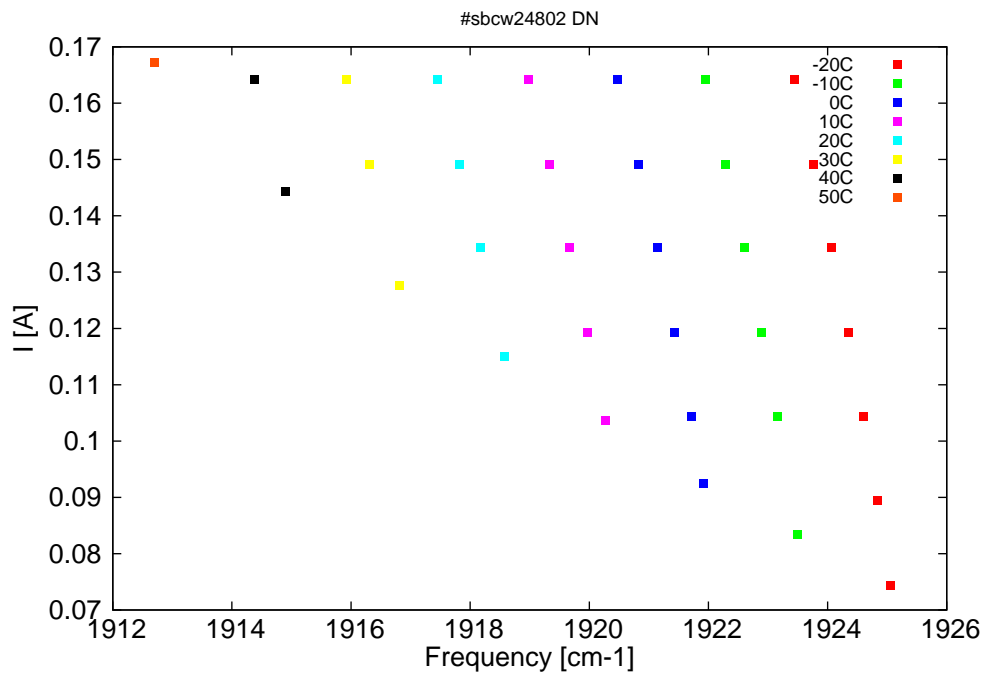


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5194.6	1925.1	0	-20	7.62	0.074
5195.2	1924.8	8.7	-20	7.77	0.089
5195.9	1924.6	22.2	-20	7.93	0.104
5196.6	1924.3	35.6	-20	8.1	0.119
5197.3	1924.1	48.4	-20	8.26	0.134
5198.1	1923.8	60.1	-20	8.44	0.149
5199	1923.4	69.7	-20	8.64	0.164
5198.9	1923.5	0.1	-10	7.67	0.083
5199.8	1923.2	14.2	-10	7.88	0.104
5200.5	1922.9	26.8	-10	8.05	0.119
5201.3	1922.6	38.7	-10	8.22	0.134
5202.1	1922.3	50.1	-10	8.4	0.149
5203.1	1921.9	59.6	-10	8.59	0.164
5203.1	1921.9	0.2	0	7.72	0.092
5203.7	1921.7	7	0	7.84	0.104
5204.5	1921.4	18.5	0	8.01	0.119
5205.2	1921.1	29.8	0	8.18	0.134
5206.1	1920.8	40.3	0	8.36	0.149
5207.1	1920.5	50	0	8.55	0.164
5207.6	1920.3	0.6	10	7.8	0.104
5208.4	1920	10.1	10	7.97	0.119
5209.3	1919.7	20.5	10	8.14	0.134
5210.1	1919.3	30.5	10	8.32	0.149
5211.1	1919	39.4	10	8.51	0.164
5212.2	1918.6	0.8	20	7.89	0.115
5213.3	1918.2	10.5	20	8.1	0.134
5214.2	1917.8	20.4	20	8.28	0.149
5215.2	1917.5	28.6	20	8.47	0.164
5217	1916.8	0.7	30	8	0.128
5218.3	1916.3	10.8	30	8.24	0.149
5219.4	1915.9	18	30	8.43	0.164
5222.2	1914.9	0.6	40	8.16	0.144
5223.6	1914.4	7.7	40	8.39	0.164
5228.2	1912.7	0.3	50	8.41	0.167

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

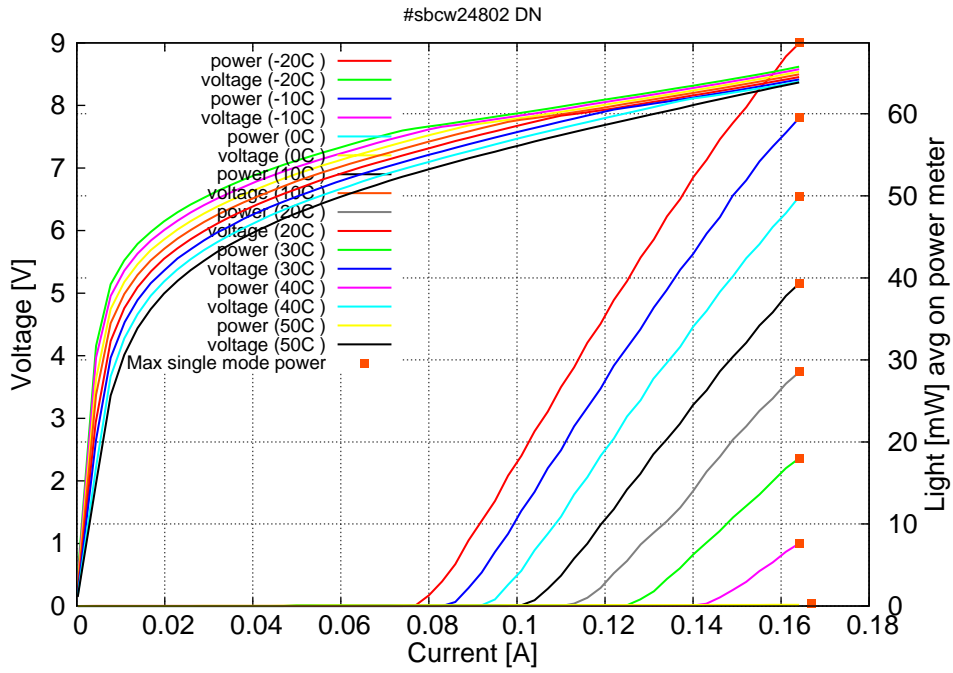


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.074A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.167A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

