

**Datasheet for #sbcw24814 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 #sbcw24814 DN (please note that AlN submount numbering is A0ZNK)

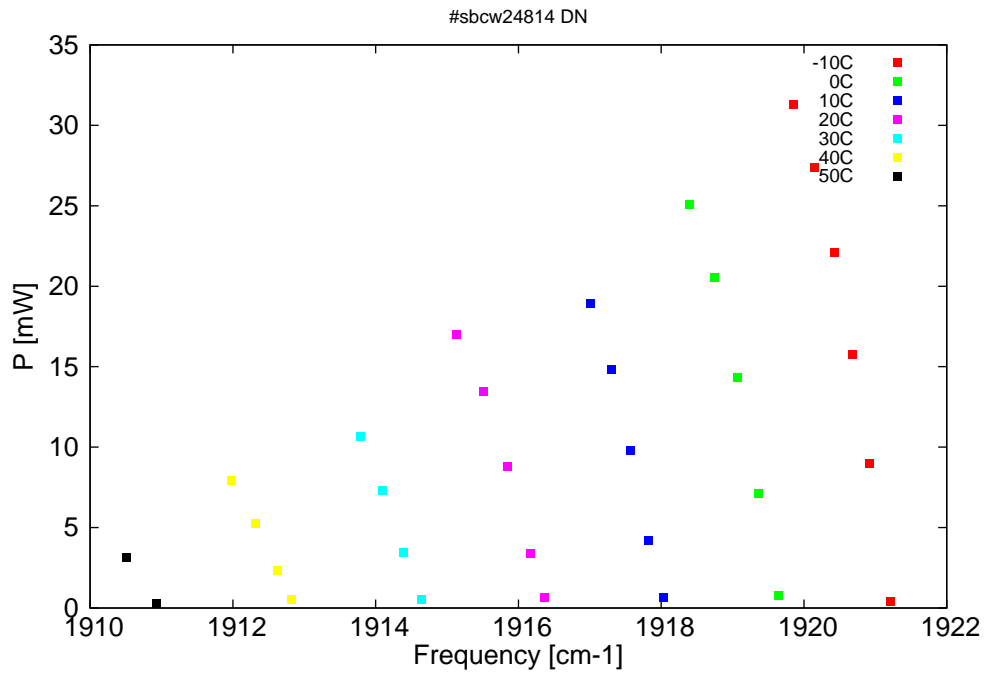


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

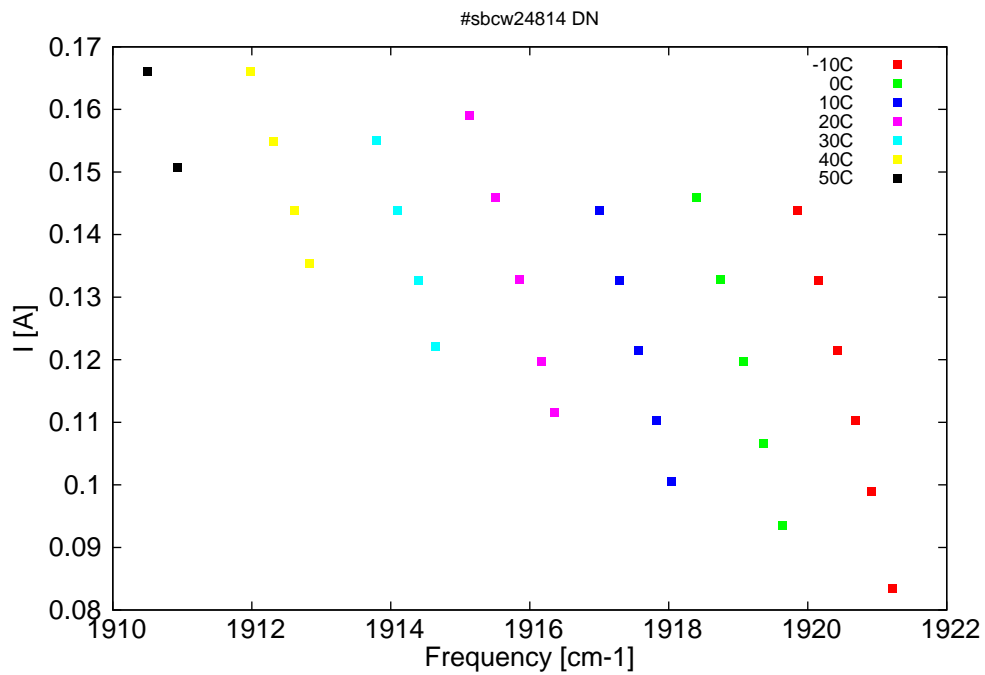


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5205	1921.2	0.4	-10	8.24	0.083
5205.8	1920.9	9	-10	8.48	0.099
5206.5	1920.7	15.7	-10	8.67	0.11
5207.2	1920.4	22.1	-10	8.86	0.121
5207.9	1920.2	27.4	-10	9.06	0.133
5208.7	1919.9	31.3	-10	9.29	0.144
5209.3	1919.6	0.8	0	8.32	0.094
5210.1	1919.4	7.1	0	8.52	0.107
5210.9	1919.1	14.3	0	8.74	0.12
5211.7	1918.7	20.5	0	8.96	0.133
5212.7	1918.4	25.1	0	9.2	0.146
5213.7	1918	0.6	10	8.36	0.101
5214.2	1917.8	4.2	10	8.5	0.11
5214.9	1917.6	9.8	10	8.68	0.121
5215.7	1917.3	14.9	10	8.86	0.133
5216.5	1917	19	10	9.05	0.144
5218.2	1916.4	0.7	20	8.46	0.112
5218.7	1916.2	3.4	20	8.57	0.12
5219.6	1915.8	8.8	20	8.77	0.133
5220.6	1915.5	13.4	20	8.98	0.146
5221.6	1915.1	17	20	9.21	0.159
5222.9	1914.6	0.5	30	8.55	0.122
5223.6	1914.4	3.4	30	8.69	0.133
5224.4	1914.1	7.3	30	8.85	0.144
5225.2	1913.8	10.6	30	9.03	0.155
5227.9	1912.8	0.5	40	8.67	0.135
5228.4	1912.6	2.3	40	8.77	0.144
5229.3	1912.3	5.3	40	8.93	0.155
5230.2	1912	7.9	40	9.1	0.166
5233	1910.9	0.3	50	8.8	0.151
5234.2	1910.5	3.1	50	9	0.166

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

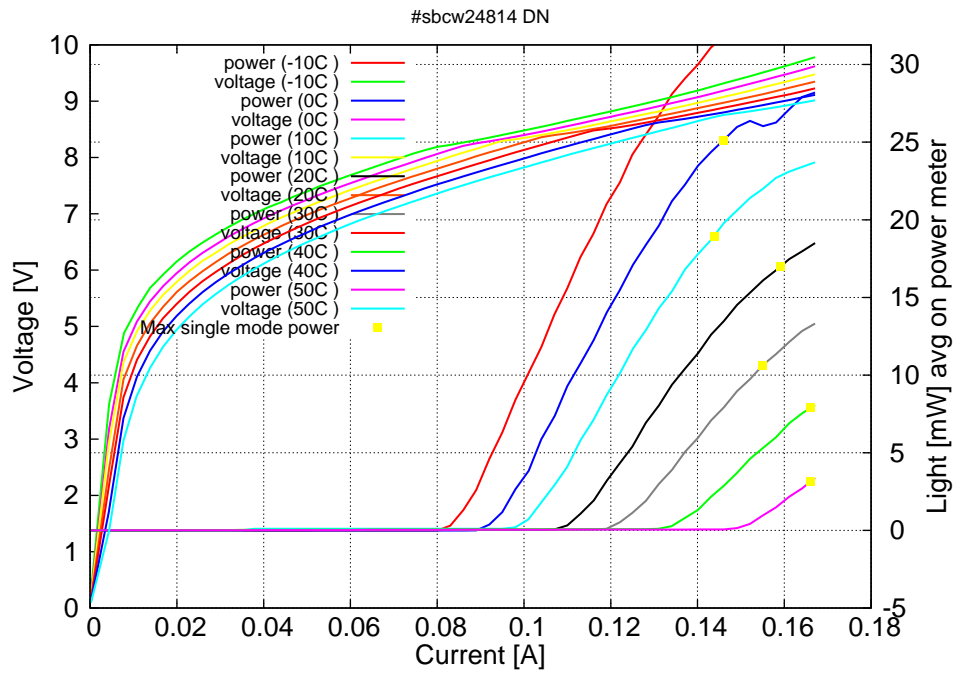


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.08A$  /  $V_{th}=8.2V$  (2-wires measurements). Maximum operation current: 0.146A between -10C and 10C, 0.160A at 20C and 30C, 0.170A at 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

