

**Datasheet for #sbcw24051 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 #sbcw24051 DN (please note that AlN submount numbering is A0ZPZ)

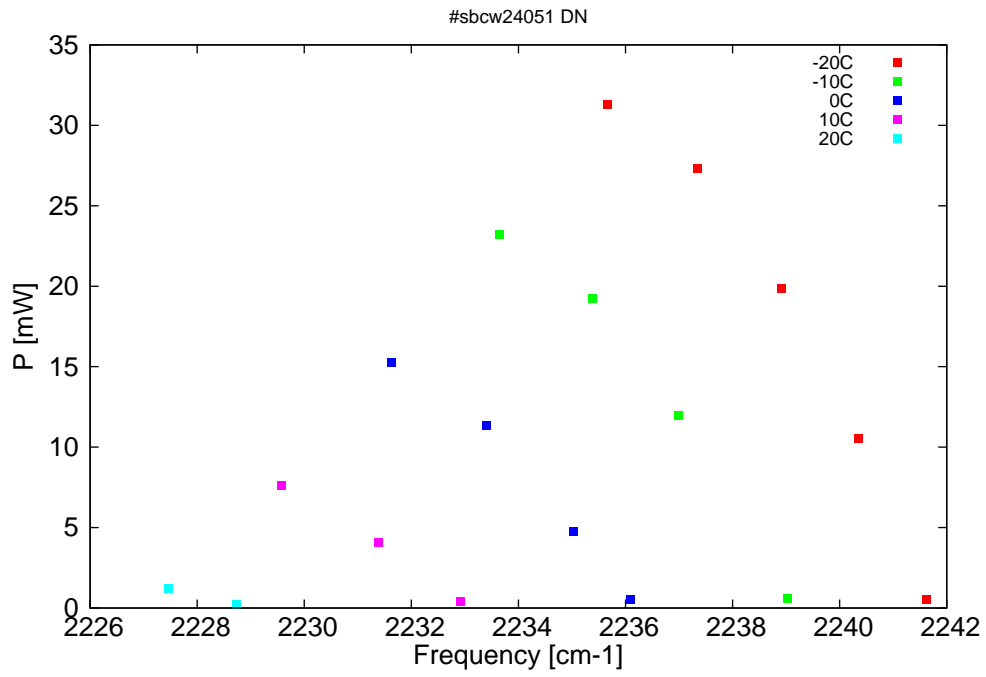


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

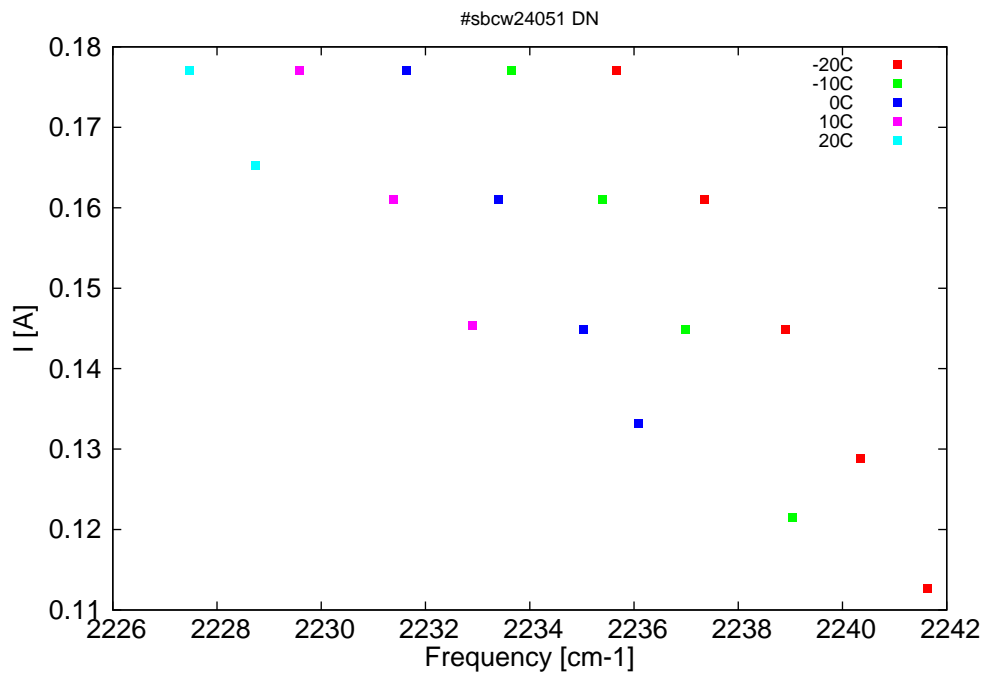


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4461	2241.6	0.5	-20	13.16	0.113
4463.6	2240.4	10.5	-20	13.42	0.129
4466.5	2238.9	19.8	-20	13.71	0.145
4469.6	2237.4	27.3	-20	14	0.161
4473	2235.7	31.3	-20	14.29	0.177
4466.2	2239	0.6	-10	13.18	0.122
4470.3	2237	12	-10	13.57	0.145
4473.5	2235.4	19.3	-10	13.85	0.161
4477	2233.6	23.2	-10	14.14	0.177
4472.1	2236.1	0.5	0	13.26	0.133
4474.2	2235	4.8	0	13.44	0.145
4477.5	2233.4	11.3	0	13.72	0.161
4481	2231.6	15.2	0	14	0.177
4478.5	2232.9	0.4	10	13.37	0.145
4481.5	2231.4	4.1	10	13.61	0.161
4485.2	2229.6	7.6	10	13.89	0.177
4486.8	2228.7	0.2	20	13.62	0.165
4489.4	2227.5	1.2	20	13.8	0.177

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

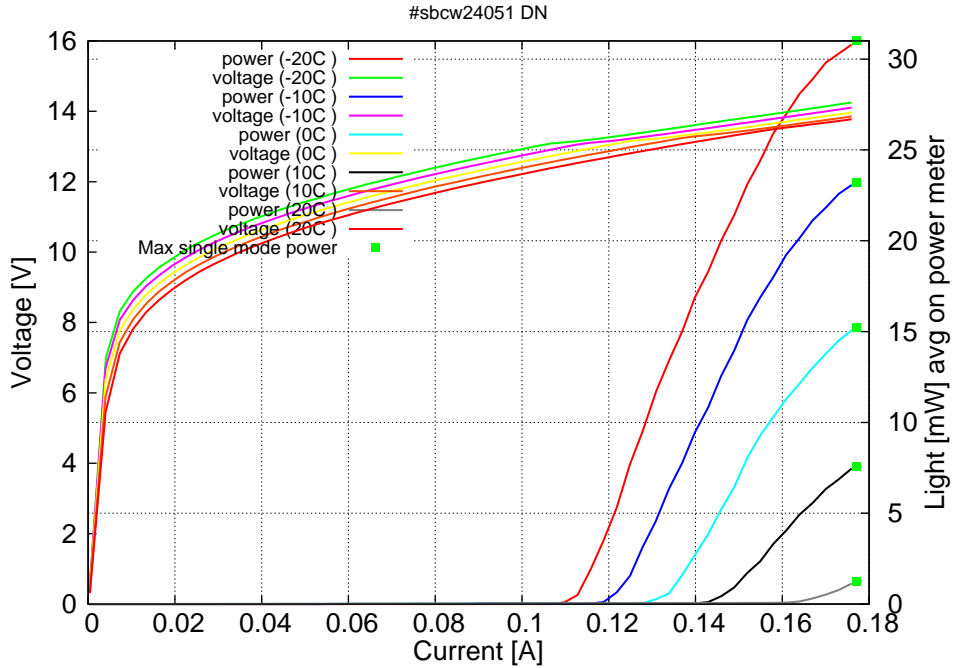


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=13.1V$  (2-wires measurements). Maximum operation current: 0.177A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

