

**Datasheet for #sbcw10204 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw10204 DN

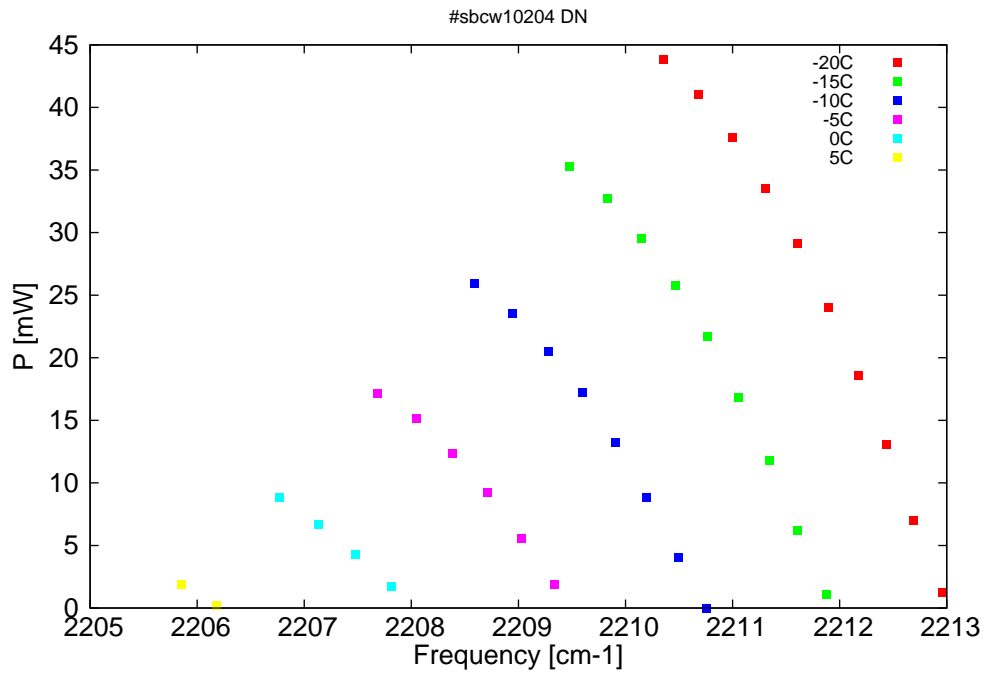


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

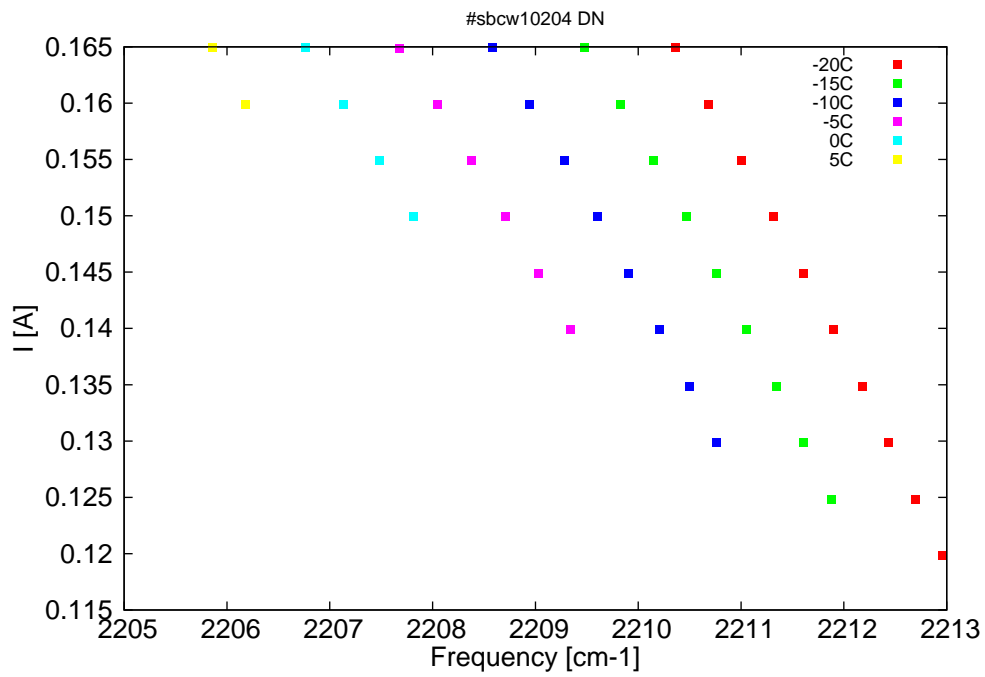


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4518.8	2213	1.2	-20	9.49	0.12
4519.4	2212.7	7	-20	9.56	0.125
4519.9	2212.4	13	-20	9.63	0.13
4520.4	2212.2	18.5	-20	9.71	0.135
4521	2211.9	24	-20	9.78	0.14
4521.6	2211.6	29.1	-20	9.86	0.145
4522.2	2211.3	33.5	-20	9.94	0.15
4522.8	2211	37.6	-20	10.02	0.155
4523.5	2210.7	41	-20	10.1	0.16
4524.2	2210.4	43.8	-20	10.19	0.165
4521	2211.9	1.1	-15	9.55	0.125
4521.6	2211.6	6.2	-15	9.62	0.13
4522.1	2211.3	11.8	-15	9.7	0.135
4522.7	2211.1	16.8	-15	9.78	0.14
4523.3	2210.8	21.7	-15	9.85	0.145
4523.9	2210.5	25.8	-15	9.93	0.15
4524.6	2210.1	29.5	-15	10.01	0.155
4525.2	2209.8	32.7	-15	10.1	0.16
4526	2209.5	35.3	-15	10.18	0.165
4523.3	2210.8	0	-10	9.62	0.13
4523.9	2210.5	4	-10	9.69	0.135
4524.5	2210.2	8.8	-10	9.77	0.14
4525.1	2209.9	13.2	-10	9.85	0.145
4525.7	2209.6	17.2	-10	9.93	0.15
4526.4	2209.3	20.5	-10	10.01	0.155
4527.1	2208.9	23.5	-10	10.09	0.16
4527.8	2208.6	25.9	-10	10.18	0.165
4526.2	2209.3	1.9	-5	9.77	0.14
4526.9	2209	5.6	-5	9.85	0.145
4527.5	2208.7	9.2	-5	9.93	0.15
4528.2	2208.4	12.4	-5	10.01	0.155
4528.9	2208	15.1	-5	10.09	0.16
4529.6	2207.7	17.2	-5	10.18	0.165
4529.4	2207.8	1.7	0	9.93	0.15
4530.1	2207.5	4.2	0	10.01	0.155
4530.8	2207.1	6.7	0	10.09	0.16
4531.5	2206.8	8.8	0	10.18	0.165
4532.7	2206.2	0.2	5	10.11	0.16
4533.4	2205.9	1.9	5	10.18	0.165

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

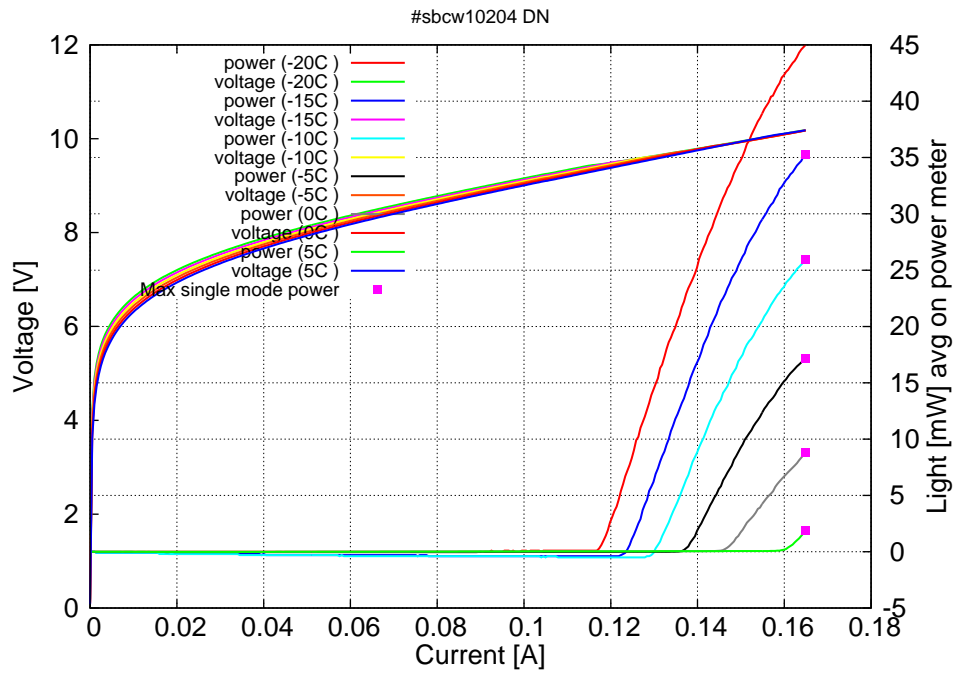


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=9.4V$  (2-wires measurements). Maximum operation current: 0.165A for all temperatures.

