

**Datasheet for #sbcw18211 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 #sbcw18211 DN (please note that AlN submount numbering is A0K6D)

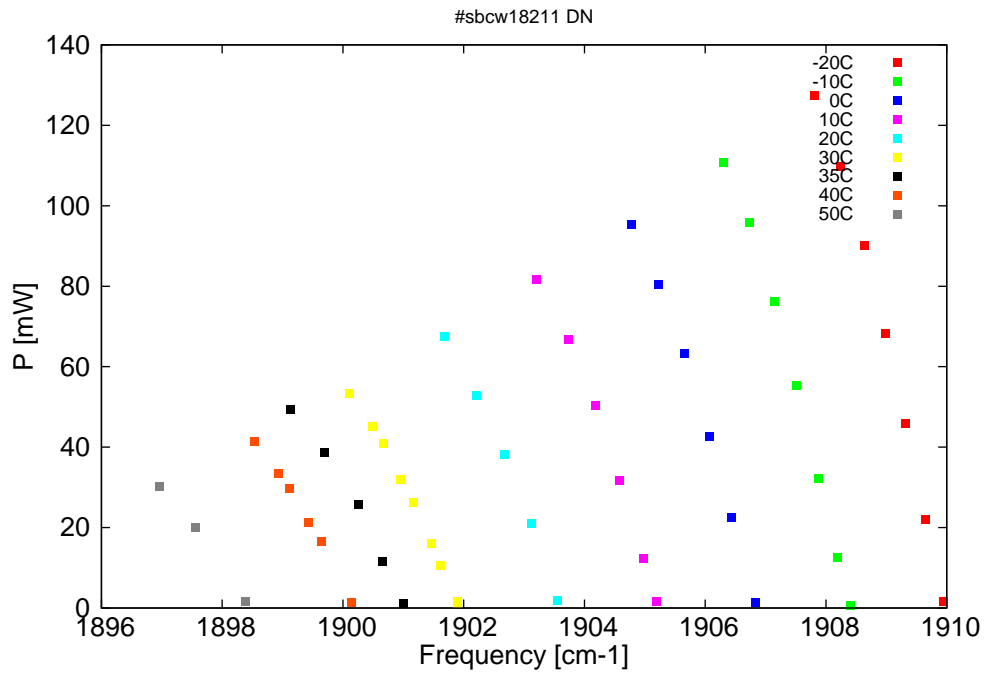


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

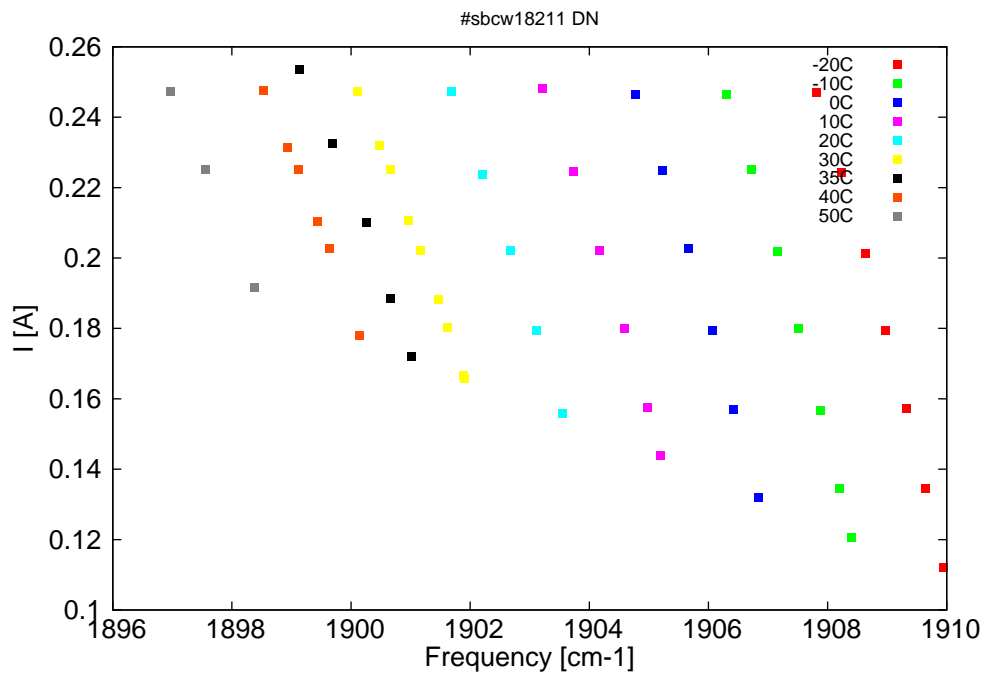


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5235.7	1909.9	1.7	-20	7.4	0.11
5236.6	1909.6	22.1	-20	7.5	0.13
5237.5	1909.3	45.9	-20	7.7	0.16
5238.4	1909	68.1	-20	7.9	0.18
5239.3	1908.6	90	-20	8.1	0.2
5240.4	1908.2	109.9	-20	8.3	0.22
5241.6	1907.8	127.5	-20	8.5	0.25
5240	1908.4	0.7	-10	7.4	0.12
5240.6	1908.2	12.4	-10	7.5	0.13
5241.4	1907.9	32.3	-10	7.7	0.16
5242.4	1907.5	55.3	-10	7.9	0.18
5243.4	1907.2	76.2	-10	8	0.2
5244.6	1906.7	95.9	-10	8.2	0.23
5245.8	1906.3	110.7	-10	8.4	0.25
5244.3	1906.8	1.4	0	7.5	0.13
5245.4	1906.4	22.6	0	7.7	0.16
5246.4	1906.1	42.5	0	7.8	0.18
5247.5	1905.7	63.4	0	8	0.2
5248.7	1905.2	80.4	0	8.2	0.22
5250	1904.8	95.2	0	8.4	0.25
5248.8	1905.2	1.8	10	7.5	0.14
5249.4	1905	12.2	10	7.6	0.16
5250.5	1904.6	31.6	10	7.8	0.18
5251.6	1904.2	50.4	10	8	0.2
5252.8	1903.7	66.8	10	8.2	0.22
5254.3	1903.2	81.7	10	8.4	0.25
5253.3	1903.6	1.9	20	7.6	0.16
5254.5	1903.1	20.9	20	7.8	0.18
5255.7	1902.7	38.1	20	8	0.2
5257	1902.2	52.8	20	8.2	0.22
5258.5	1901.7	67.6	20	8.4	0.25
5257.9	1901.9	1	30	7.7	0.17
5257.9	1901.9	1.6	30	7.7	0.17
5258.7	1901.6	10.5	30	7.8	0.18
5259.1	1901.5	16.1	30	7.8	0.19
5259.9	1901.2	26.2	30	8	0.2
5260.5	1901	32	30	8	0.21
5261.3	1900.7	41	30	8.2	0.23
5261.8	1900.5	45.2	30	8.2	0.23
5262.9	1900.1	53.4	30	8.4	0.25
5260.4	1901	1	35	7.7	0.17
5261.3	1900.7	11.5	35	7.8	0.19
5262.5	1900.3	25.7	35	8	0.21
5264	1899.7	38.8	35	8.2	0.23
5265.6	1899.1	49.3	35	8.5	0.25
5262.7	1900.1	1.4	40	7.7	0.18
5264.2	1899.6	16.6	40	8	0.2
5264.7	1899.4	21.1	40	8	0.21
5265.6	1899.1	29.7	40	8.2	0.23

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5266.1	1898.9	33.5	40	8.2	0.23
5267.2	1898.5	41.3	40	8.4	0.25
5267.6	1898.4	1.7	50	7.9	0.19
5270	1897.6	19.9	50	8.2	0.23
5271.6	1897	30.3	50	8.4	0.25

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

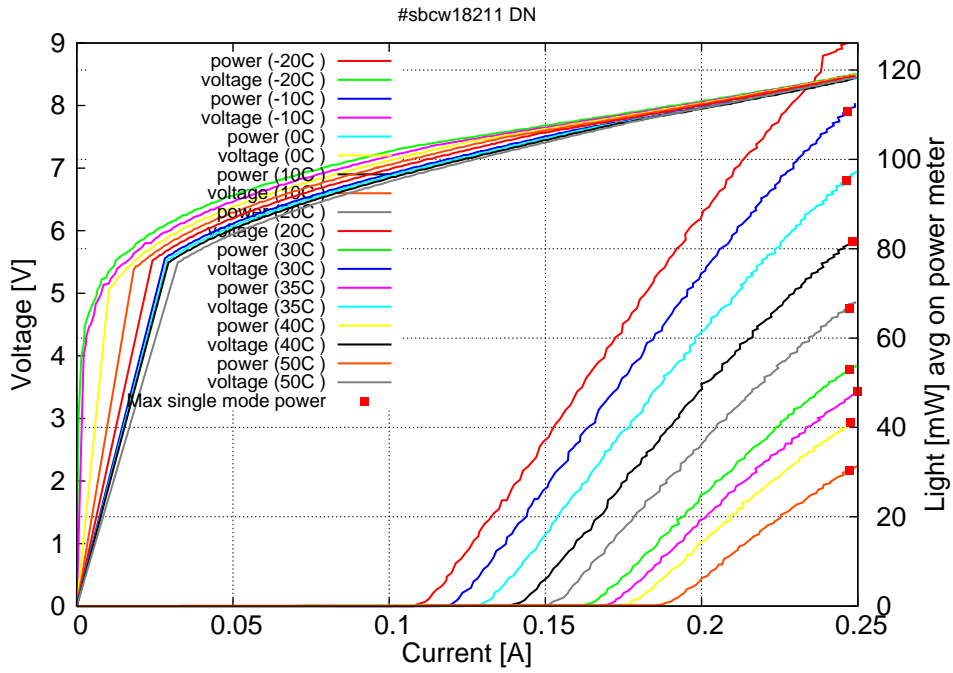


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

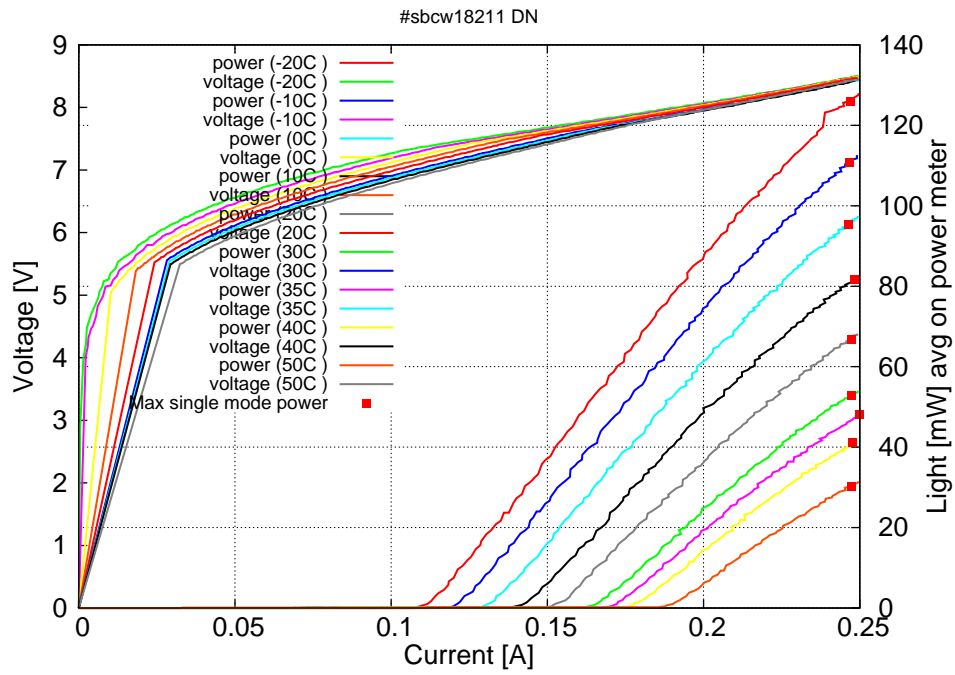


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=7.4V$  (2-wires measurements). Maximum operation current: 0.250A for all temperatures.

