

## Datasheet for #sbcw19779 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 #sbcw19779 DN (please note that AlN submount numbering is A0PC3)

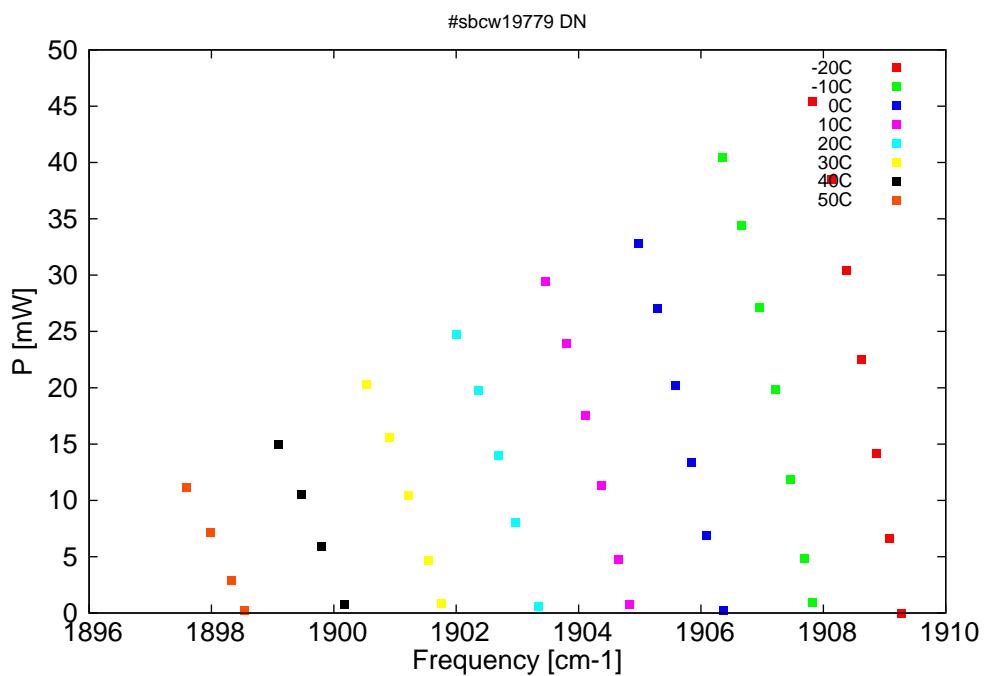


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

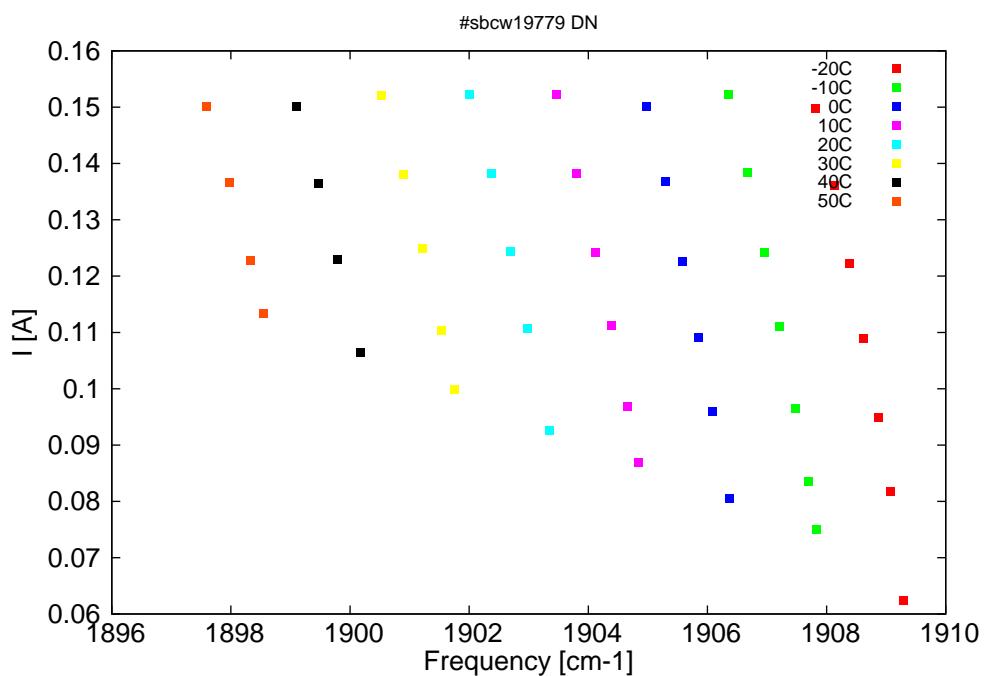


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm $^{-1}$ ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5237.6	1909.3	0	-20	7.42	0.062
5238.1	1909.1	6.6	-20	7.6	0.082
5238.7	1908.9	14.1	-20	7.78	0.095
5239.4	1908.6	22.5	-20	7.97	0.109
5240	1908.4	30.4	-20	8.15	0.122
5240.7	1908.1	38.5	-20	8.35	0.136
5241.6	1907.8	45.4	-20	8.58	0.15
5241.6	1907.8	1	-10	7.47	0.075
5241.9	1907.7	4.9	-10	7.59	0.084
5242.5	1907.5	11.8	-10	7.77	0.097
5243.2	1907.2	19.8	-10	7.97	0.111
5244	1907	27.2	-10	8.16	0.124
5244.8	1906.7	34.4	-10	8.37	0.138
5245.6	1906.4	40.5	-10	8.6	0.152
5245.6	1906.4	0.2	0	7.52	0.08
5246.3	1906.1	6.9	0	7.73	0.096
5247	1905.8	13.4	0	7.92	0.109
5247.7	1905.6	20.2	0	8.11	0.123
5248.5	1905.3	27.1	0	8.32	0.137
5249.4	1905	32.8	0	8.55	0.15
5249.8	1904.8	0.8	10	7.58	0.087
5250.3	1904.7	4.8	10	7.71	0.097
5251	1904.4	11.4	10	7.92	0.111
5251.8	1904.1	17.6	10	8.11	0.124
5252.6	1903.8	23.9	10	8.32	0.138
5253.6	1903.5	29.4	10	8.56	0.152
5253.9	1903.3	0.6	20	7.63	0.093
5254.9	1903	8	20	7.89	0.111
5255.7	1902.7	14	20	8.09	0.124
5256.6	1902.4	19.8	20	8.3	0.138
5257.6	1902	24.7	20	8.54	0.152
5258.3	1901.8	0.8	30	7.7	0.1
5258.9	1901.5	4.6	30	7.86	0.11
5259.8	1901.2	10.4	30	8.07	0.125
5260.7	1900.9	15.6	30	8.28	0.138
5261.7	1900.5	20.3	30	8.52	0.152
5262.7	1900.2	0.7	40	7.77	0.106
5263.7	1899.8	5.9	40	8.02	0.123
5264.6	1899.5	10.5	40	8.23	0.136
5265.7	1899.1	15	40	8.46	0.15
5267.2	1898.5	0.2	50	7.85	0.113
5267.8	1898.3	2.9	50	7.99	0.123
5268.8	1898	7.2	50	8.21	0.137
5269.8	1897.6	11.2	50	8.44	0.15

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

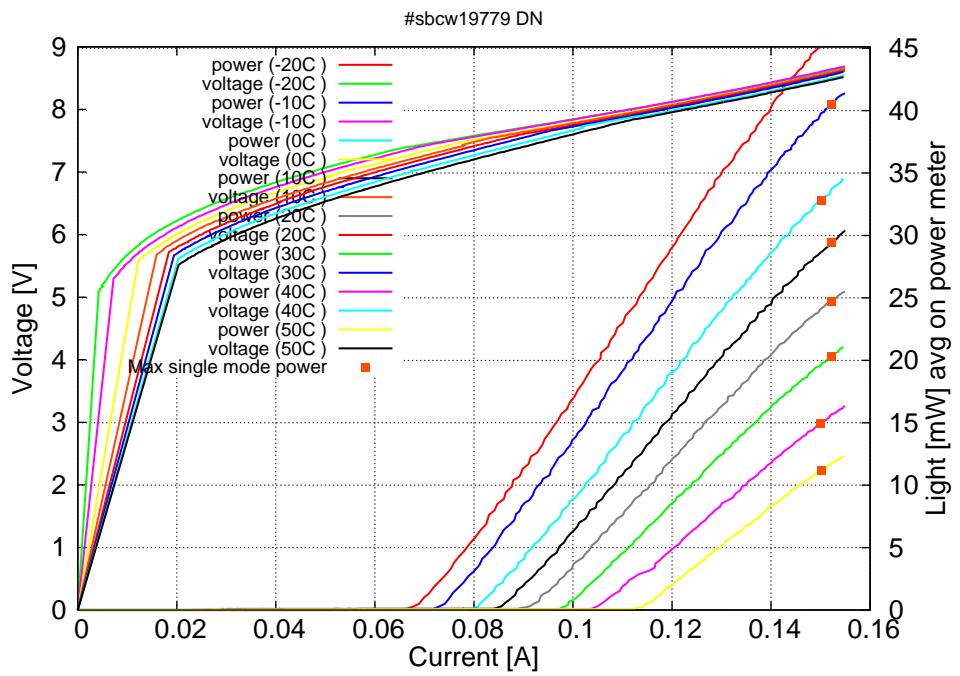


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.062A$  /  $V_{th}=7.4V$  (2-wires measurements). Maximum operation current: 0.155A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

