

Datasheet for #sbcw19751 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 #sbcw19751 DN (please note that AIN submount numbering is A0PXC)

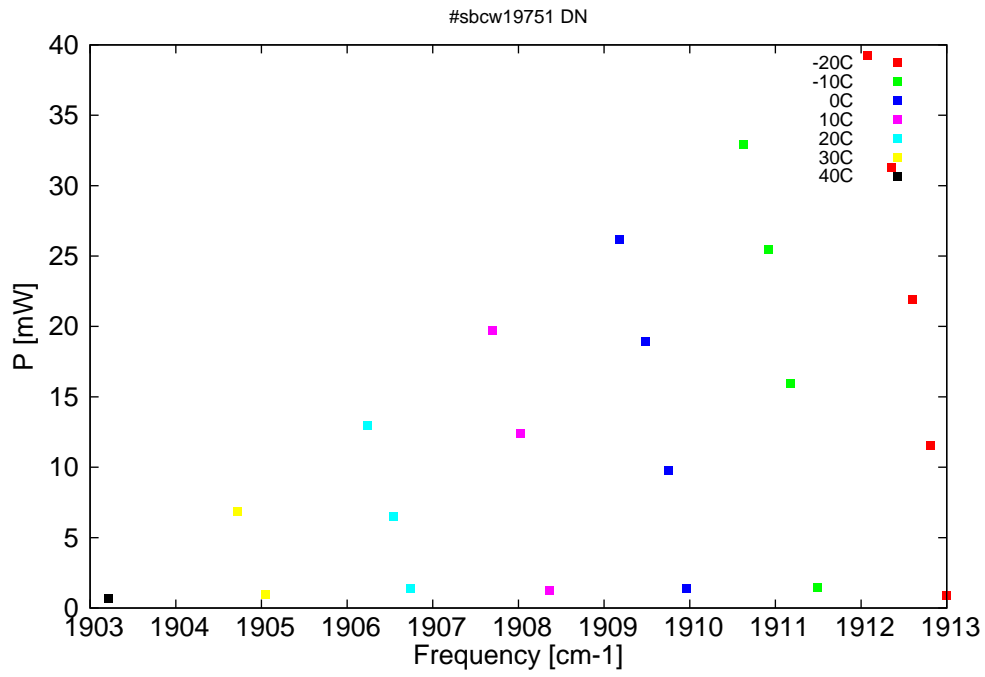


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

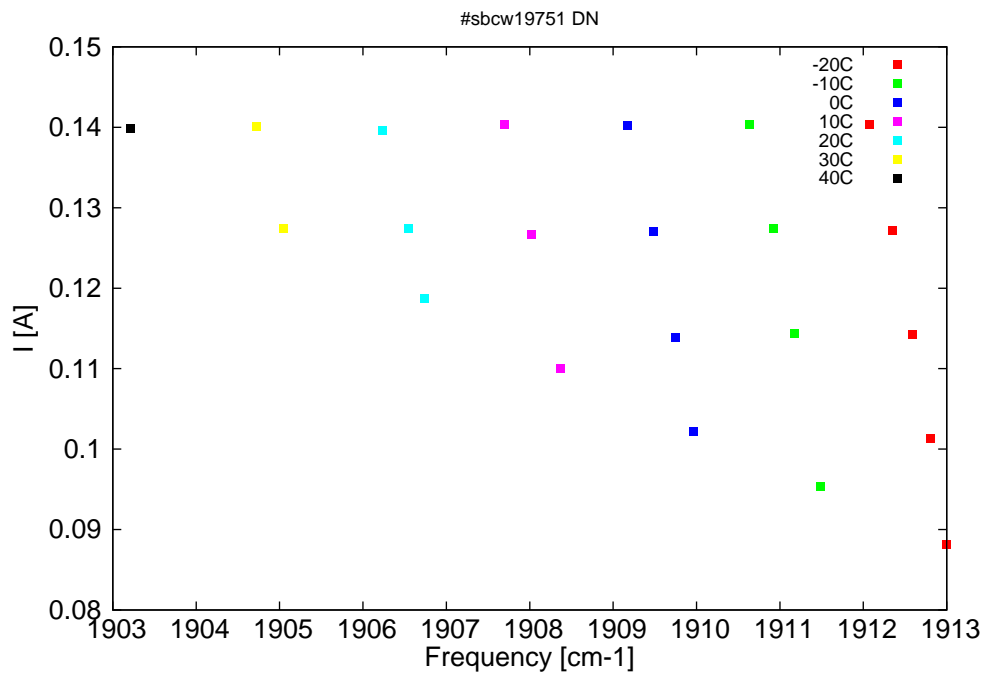


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5227.4	1913	0.9	-20	7.95	0.088
5227.9	1912.8	11.5	-20	8.15	0.101
5228.5	1912.6	21.9	-20	8.36	0.114
5229.2	1912.4	31.3	-20	8.59	0.127
5229.9	1912.1	39.3	-20	8.85	0.14
5231.5	1911.5	1.5	-10	8.02	0.095
5232.4	1911.2	15.9	-10	8.34	0.114
5233.1	1910.9	25.5	-10	8.58	0.127
5233.9	1910.6	32.9	-10	8.84	0.14
5235.7	1910	1.4	0	8.11	0.102
5236.3	1909.7	9.8	0	8.31	0.114
5237	1909.5	18.9	0	8.55	0.127
5237.9	1909.2	26.2	0	8.81	0.14
5240.1	1908.4	1.3	10	8.23	0.11
5241	1908	12.4	10	8.53	0.127
5241.9	1907.7	19.7	10	8.8	0.14
5244.6	1906.7	1.4	20	8.36	0.119
5245.1	1906.5	6.5	20	8.53	0.127
5245.9	1906.2	13	20	8.77	0.14
5249.2	1905	0.9	30	8.52	0.127
5250.1	1904.7	6.9	30	8.78	0.14
5254.3	1903.2	0.7	40	8.75	0.14

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

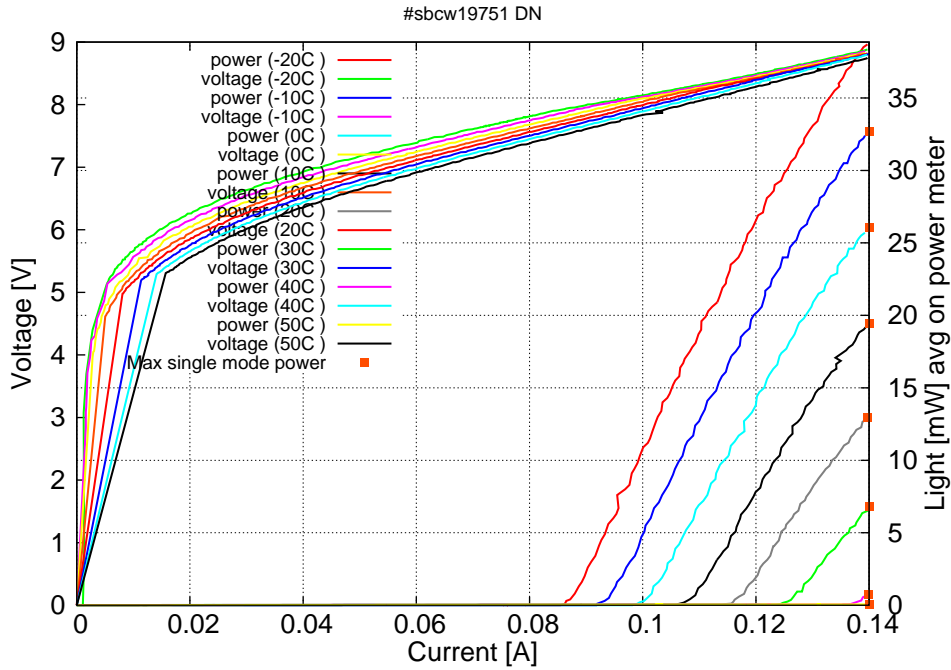


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=7.9V$ (2-wires measurements). Maximum operation current: 0.14A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

