

Datasheet for #sbcw19744 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 #sbcw19744 DN (please note that AlN submount numbering is A0RN1)

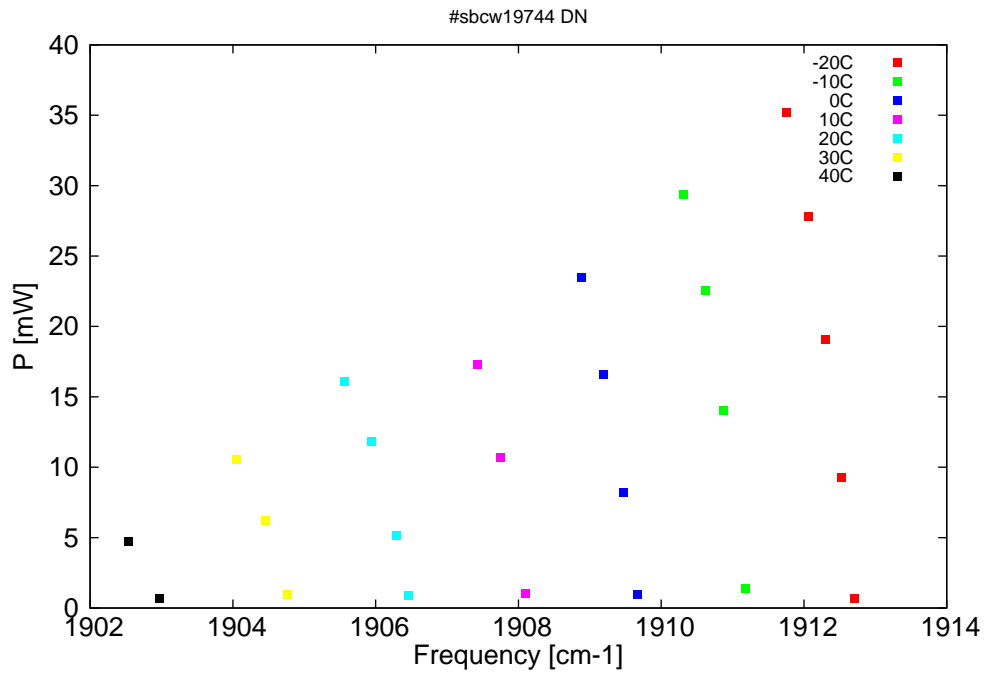


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

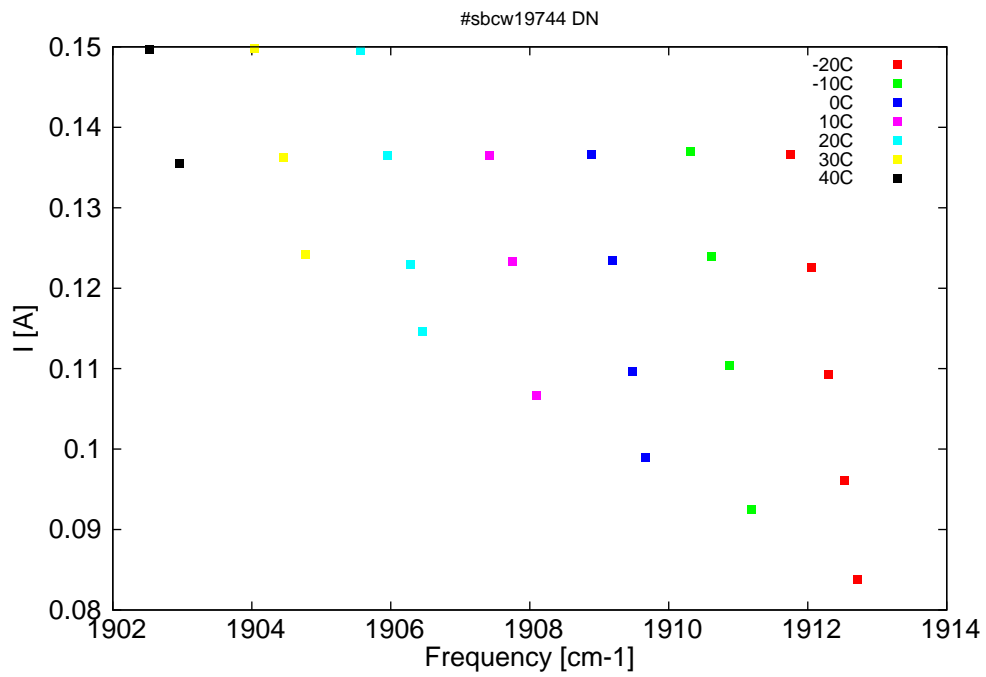


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5228.2	1912.7	0.7	-20	7.9	0.084
5228.7	1912.5	9.3	-20	8.12	0.096
5229.3	1912.3	19.1	-20	8.34	0.109
5230	1912.1	27.8	-20	8.58	0.123
5230.8	1911.8	35.2	-20	8.86	0.137
5232.4	1911.2	1.4	-10	7.98	0.093
5233.2	1910.9	14	-10	8.28	0.11
5233.9	1910.6	22.5	-10	8.52	0.124
5234.7	1910.3	29.4	-10	8.78	0.137
5236.5	1909.7	0.9	0	8.05	0.099
5237	1909.5	8.2	0	8.23	0.11
5237.8	1909.2	16.6	0	8.48	0.123
5238.7	1908.9	23.5	0	8.74	0.137
5240.8	1908.1	1	10	8.15	0.107
5241.8	1907.8	10.7	10	8.45	0.123
5242.7	1907.4	17.3	10	8.72	0.137
5245.3	1906.5	0.9	20	8.28	0.115
5245.8	1906.3	5.2	20	8.43	0.123
5246.7	1905.9	11.8	20	8.69	0.136
5247.8	1905.6	16.1	20	8.98	0.15
5250	1904.8	1	30	8.43	0.124
5250.9	1904.5	6.2	30	8.68	0.136
5252	1904	10.6	30	8.98	0.15
5255	1903	0.6	40	8.64	0.135
5256.1	1902.5	4.8	40	8.94	0.15

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

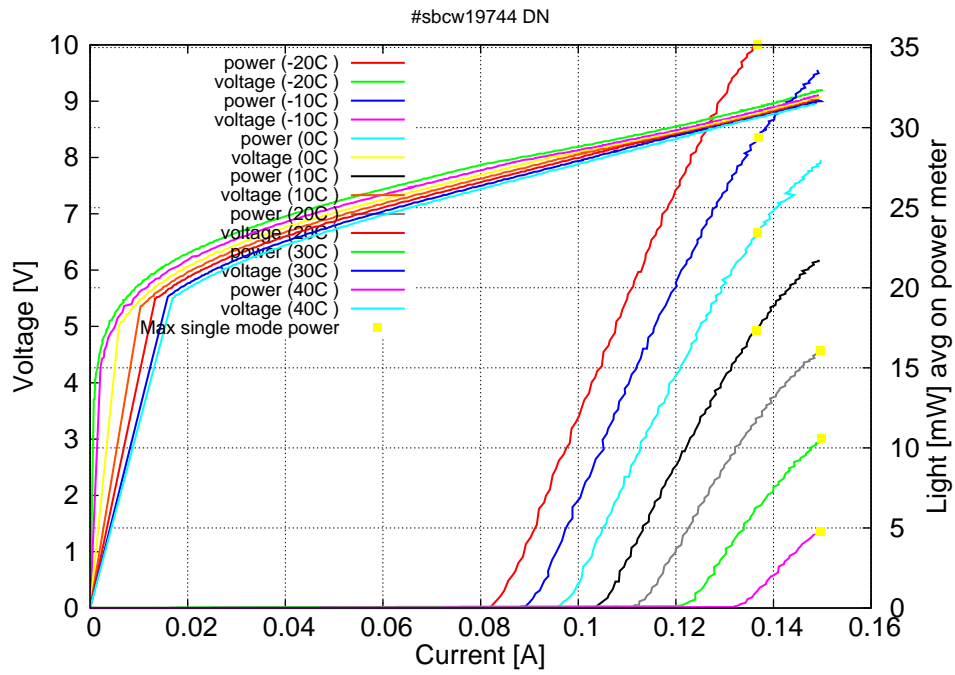


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.9V$ (2-wires measurements). Maximum operation current: 0.14A between -20C and 10C, 0.15A between 20C and 40C.

Figure 3: spectra at different temperatures for various DC currents

