

Datasheet for #sbcw23752 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 #sbcw23752 DN (please note that AlN submount numbering is A0Y4P)

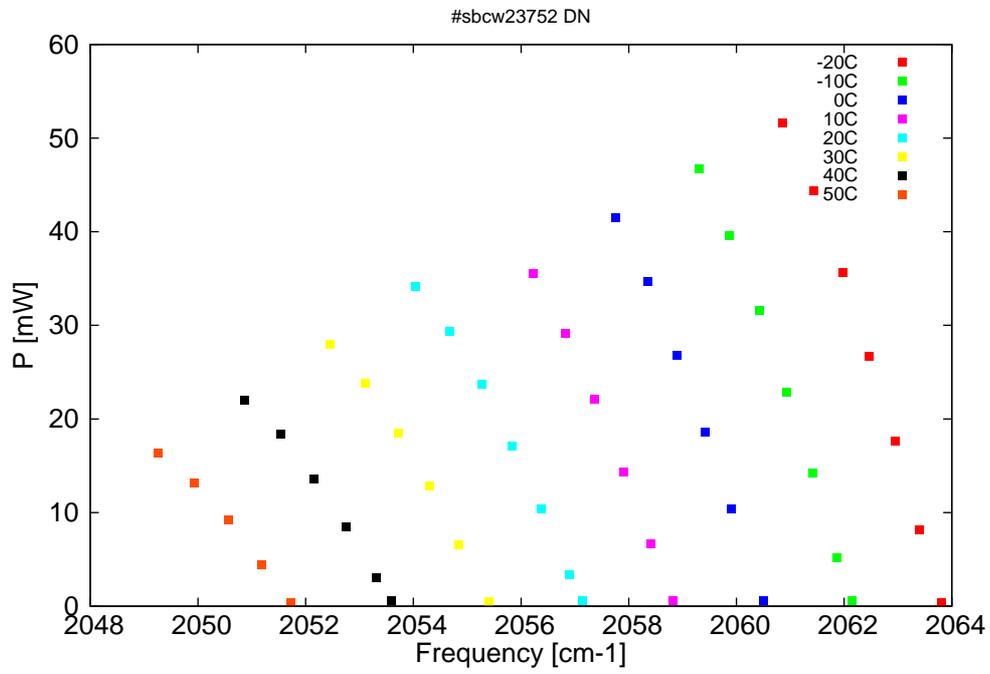


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

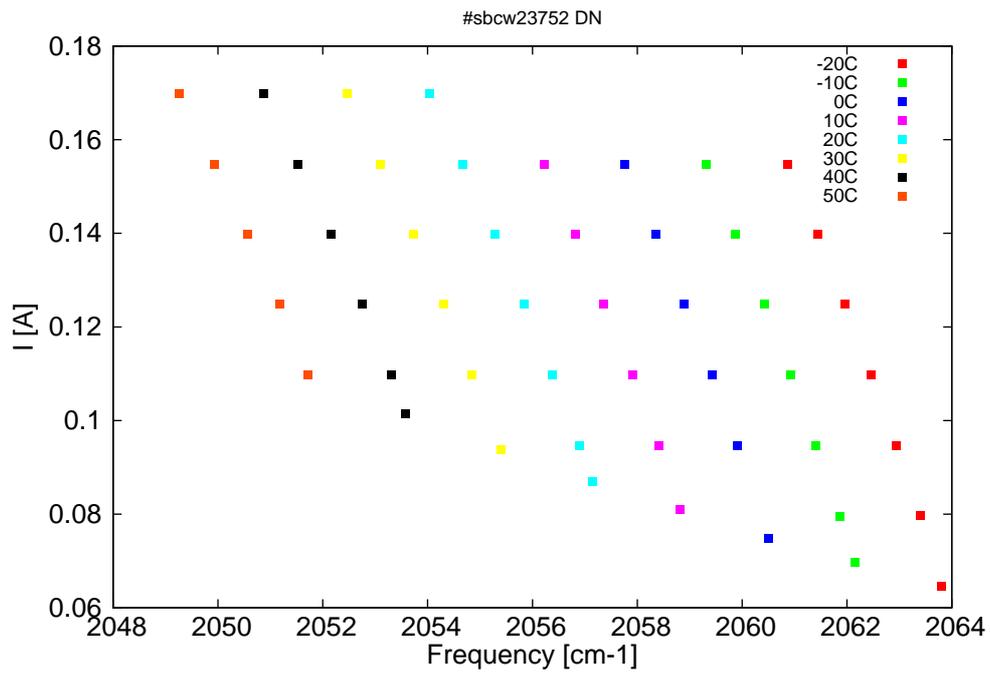


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4845.4	2063.8	0.4	-20	11.46	0.065
4846.4	2063.4	8.1	-20	11.82	0.08
4847.4	2062.9	17.7	-20	12.16	0.095
4848.6	2062.5	26.7	-20	12.49	0.11
4849.7	2062	35.6	-20	12.81	0.125
4851	2061.4	44.4	-20	13.14	0.14
4852.3	2060.9	51.6	-20	13.49	0.155
4849.3	2062.2	0.6	-10	11.42	0.07
4850	2061.9	5.1	-10	11.64	0.08
4851	2061.4	14.2	-10	11.97	0.095
4852.2	2060.9	22.8	-10	12.29	0.11
4853.4	2060.4	31.6	-10	12.6	0.125
4854.7	2059.9	39.5	-10	12.91	0.14
4856	2059.3	46.8	-10	13.23	0.155
4853.2	2060.5	0.6	0	11.4	0.075
4854.6	2059.9	10.4	0	11.82	0.095
4855.7	2059.4	18.7	0	12.12	0.11
4857	2058.9	26.8	0	12.42	0.125
4858.3	2058.3	34.6	0	12.72	0.14
4859.6	2057.8	41.5	0	13.02	0.155
4857.1	2058.8	0.6	10	11.41	0.081
4858.1	2058.4	6.7	10	11.68	0.095
4859.3	2057.9	14.4	10	11.98	0.11
4860.6	2057.4	22.1	10	12.27	0.125
4861.9	2056.8	29.1	10	12.55	0.14
4863.3	2056.2	35.6	10	12.84	0.155
4861.1	2057.1	0.6	20	11.42	0.087
4861.7	2056.9	3.4	20	11.56	0.095
4862.9	2056.4	10.4	20	11.85	0.11
4864.2	2055.8	17.1	20	12.13	0.125
4865.5	2055.3	23.8	20	12.41	0.14
4866.9	2054.7	29.4	20	12.69	0.155
4868.5	2054	34.1	20	12.97	0.17
4865.2	2055.4	0.5	30	11.45	0.094
4866.5	2054.8	6.6	30	11.74	0.11
4867.8	2054.3	12.8	30	12.01	0.125
4869.2	2053.7	18.5	30	12.28	0.14
4870.7	2053.1	23.9	30	12.55	0.155
4872.2	2052.5	28	30	12.82	0.17
4869.5	2053.6	0.6	40	11.5	0.101
4870.2	2053.3	3.1	40	11.63	0.11
4871.5	2052.7	8.5	40	11.9	0.125
4872.9	2052.1	13.6	40	12.17	0.14
4874.4	2051.5	18.4	40	12.43	0.155
4876	2050.9	22	40	12.69	0.17
4873.9	2051.7	0.4	50	11.55	0.11
4875.2	2051.2	4.5	50	11.8	0.125
4876.7	2050.6	9.2	50	12.05	0.14
4878.2	2049.9	13.2	50	12.31	0.155

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4879.8	2049.3	16.4	50	12.57	0.17

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

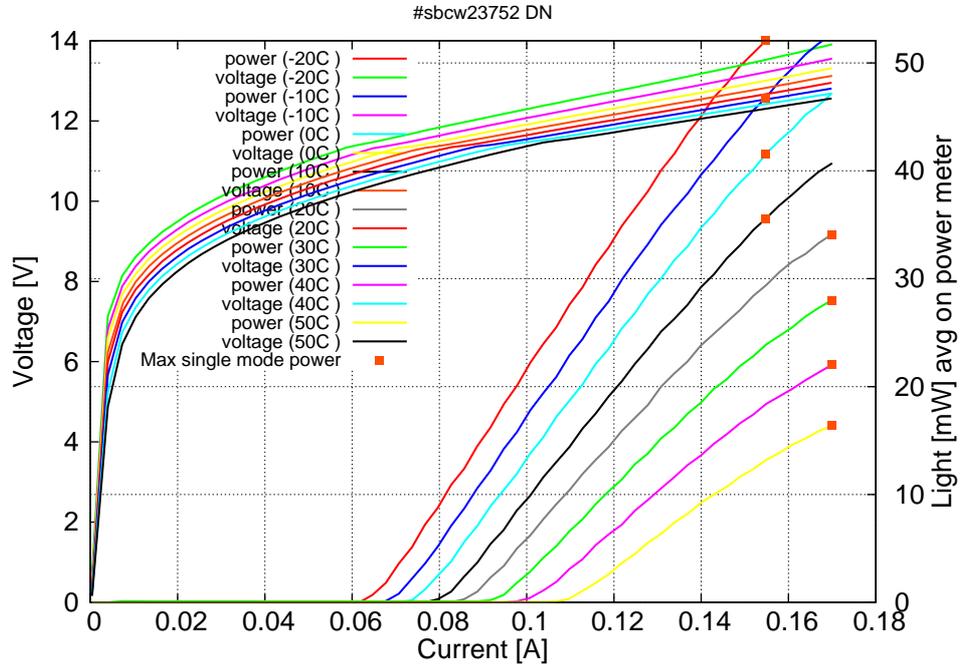


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=11.3V$ (2-wires measurements). Maximum operation current: 0.16A between -20C and 10C, 0.17A between 20C and 50C.

