

Datasheet for #sbcw23672 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 #sbcw23672 DN (please note that AlN submount numbering is A0Y5Y)

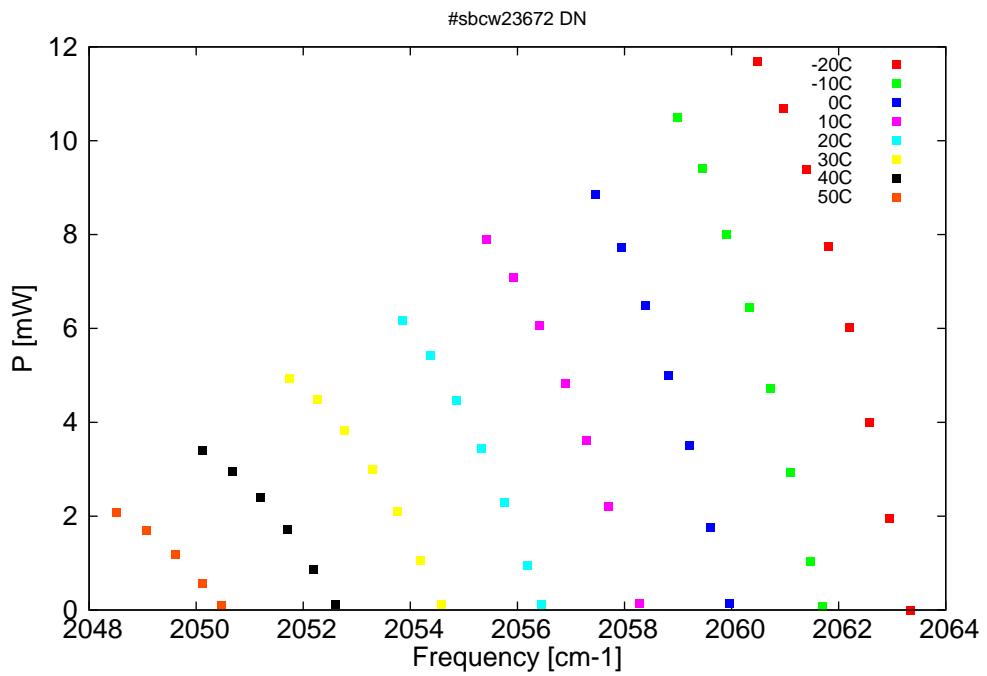


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

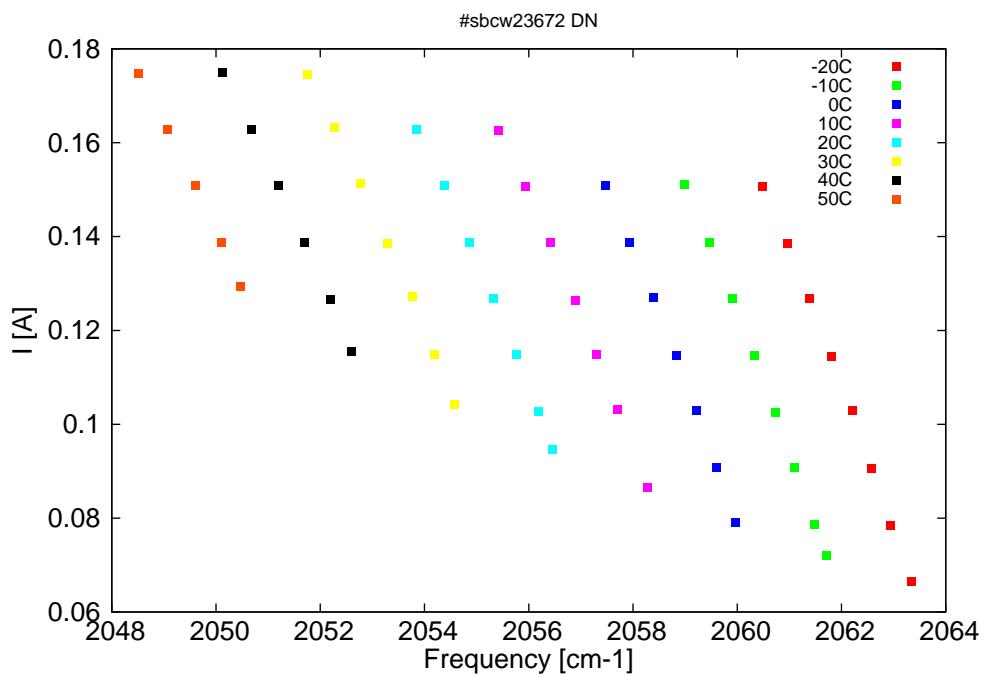


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4846.5	2063.3	0	-20	11.36	0.066
4847.4	2062.9	1.9	-20	11.65	0.078
4848.3	2062.6	4	-20	11.94	0.091
4849.2	2062.2	6	-20	12.24	0.103
4850.1	2061.8	7.7	-20	12.51	0.114
4851.1	2061.4	9.4	-20	12.8	0.127
4852.1	2061	10.7	-20	13.1	0.138
4853.2	2060.5	11.7	-20	13.42	0.151
4850.4	2061.7	0.1	-10	11.34	0.072
4850.9	2061.5	1	-10	11.49	0.079
4851.8	2061.1	2.9	-10	11.77	0.091
4852.7	2060.7	4.7	-10	12.04	0.102
4853.6	2060.3	6.5	-10	12.32	0.115
4854.6	2059.9	8	-10	12.59	0.127
4855.6	2059.5	9.4	-10	12.86	0.139
4856.8	2059	10.5	-10	13.15	0.151
4854.5	2060	0.1	0	11.36	0.079
4855.3	2059.6	1.8	0	11.62	0.091
4856.2	2059.2	3.5	0	11.88	0.103
4857.1	2058.8	5	0	12.14	0.115
4858.1	2058.4	6.5	0	12.4	0.127
4859.2	2057.9	7.7	0	12.66	0.139
4860.3	2057.5	8.9	0	12.93	0.151
4858.4	2058.3	0.1	10	11.4	0.086
4859.8	2057.7	2.2	10	11.75	0.103
4860.8	2057.3	3.6	10	11.99	0.115
4861.7	2056.9	4.8	10	12.23	0.126
4862.8	2056.4	6.1	10	12.49	0.139
4864	2055.9	7.1	10	12.74	0.151
4865.2	2055.4	7.9	10	13.01	0.163
4862.7	2056.5	0.1	20	11.46	0.095
4863.4	2056.2	0.9	20	11.62	0.103
4864.4	2055.8	2.3	20	11.86	0.115
4865.4	2055.3	3.4	20	12.1	0.127
4866.5	2054.9	4.5	20	12.34	0.139
4867.6	2054.4	5.4	20	12.59	0.151
4868.9	2053.9	6.2	20	12.84	0.163
4867.2	2054.6	0.1	30	11.55	0.104
4868.1	2054.2	1.1	30	11.75	0.115
4869.1	2053.8	2.1	30	11.99	0.127
4870.2	2053.3	3	30	12.21	0.139
4871.5	2052.8	3.8	30	12.46	0.151
4872.7	2052.3	4.5	30	12.7	0.163
4873.9	2051.7	4.9	30	12.93	0.174
4871.9	2052.6	0.1	40	11.68	0.115
4872.8	2052.2	0.9	40	11.87	0.127
4874	2051.7	1.7	40	12.11	0.139
4875.2	2051.2	2.4	40	12.33	0.151
4876.4	2050.7	3	40	12.56	0.163

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λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4877.8	2050.1	3.4	40	12.8	0.175
4876.9	2050.5	0.1	50	11.84	0.129
4877.8	2050.1	0.6	50	12	0.139
4879	2049.6	1.2	50	12.22	0.151
4880.3	2049.1	1.7	50	12.45	0.163
4881.6	2048.5	2.1	50	12.67	0.175

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

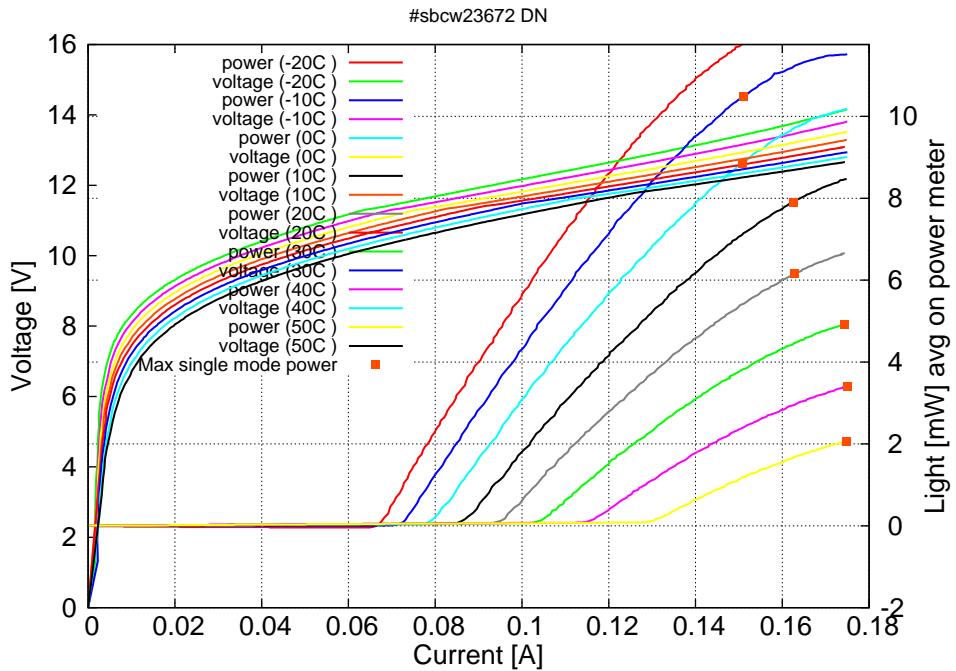


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=11.3V$ (2-wires measurements). Maximum operation current: 0.15A between -20C and 0C, 0.165A between 10C and 20C, 0.175A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

