

Datasheet for #sbcw23670 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 #sbcw23670 DN (please note that AlN submount numbering is A0Y5F)

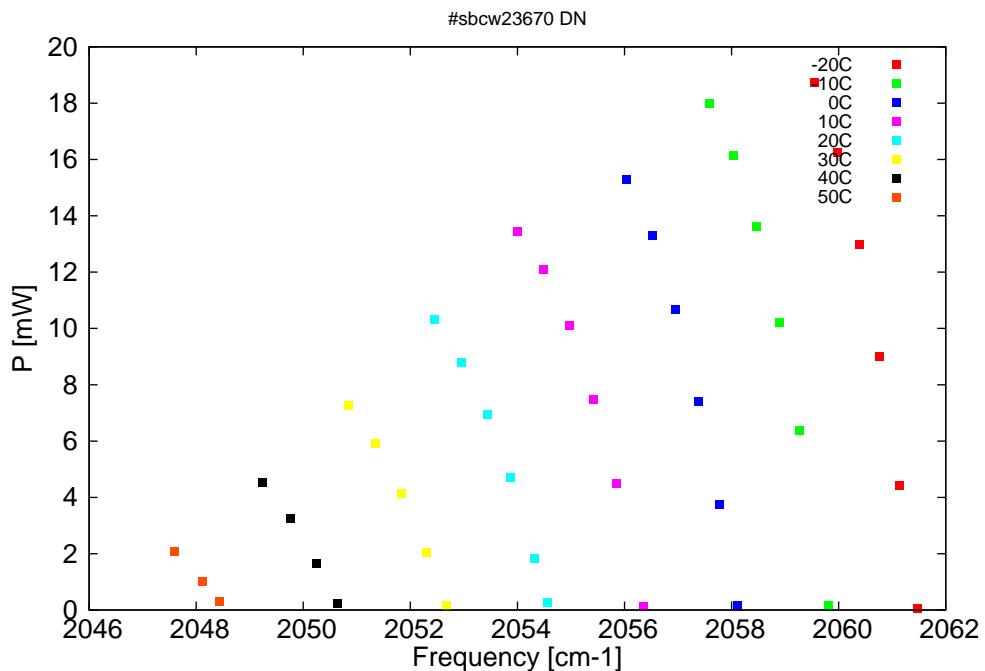


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

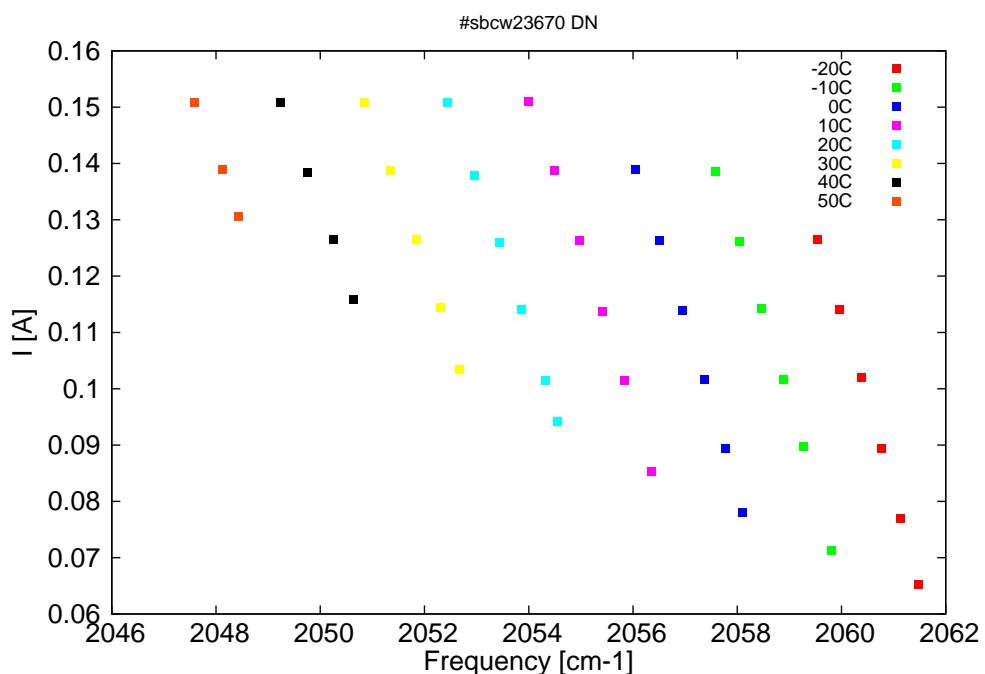


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4850.9	2061.5	0.1	-20	11.46	0.065
4851.7	2061.1	4.4	-20	11.76	0.077
4852.6	2060.8	9	-20	12.07	0.089
4853.4	2060.4	13	-20	12.37	0.102
4854.4	2060	16.2	-20	12.67	0.114
4855.4	2059.5	18.7	-20	12.96	0.126
4854.8	2059.8	0.2	-10	11.46	0.071
4856.1	2059.3	6.4	-10	11.89	0.09
4857	2058.9	10.2	-10	12.17	0.102
4858	2058.5	13.6	-10	12.46	0.114
4859	2058	16.1	-10	12.73	0.126
4860.1	2057.6	18	-10	13.02	0.139
4858.8	2058.1	0.2	0	11.48	0.078
4859.6	2057.8	3.8	0	11.73	0.089
4860.6	2057.4	7.4	0	12	0.102
4861.6	2057	10.7	0	12.28	0.114
4862.6	2056.5	13.3	0	12.55	0.126
4863.7	2056	15.3	0	12.82	0.139
4863	2056.4	0.1	10	11.53	0.085
4864.2	2055.8	4.5	10	11.86	0.102
4865.2	2055.4	7.5	10	12.13	0.114
4866.2	2055	10.1	10	12.38	0.126
4867.4	2054.5	12.1	10	12.64	0.139
4868.6	2054	13.5	10	12.91	0.151
4867.2	2054.6	0.3	20	11.6	0.094
4867.8	2054.3	1.8	20	11.74	0.101
4868.9	2053.9	4.7	20	12	0.114
4869.9	2053.4	6.9	20	12.24	0.126
4871	2053	8.8	20	12.48	0.138
4872.2	2052.4	10.3	20	12.74	0.151
4871.7	2052.7	0.2	30	11.69	0.103
4872.6	2052.3	2.1	30	11.89	0.114
4873.7	2051.8	4.1	30	12.13	0.127
4874.8	2051.4	5.9	30	12.37	0.139
4876	2050.9	7.3	30	12.61	0.151
4876.5	2050.6	0.2	40	11.83	0.116
4877.5	2050.2	1.7	40	12.02	0.126
4878.6	2049.8	3.2	40	12.24	0.138
4879.9	2049.2	4.5	40	12.48	0.151
4881.8	2048.4	0.3	50	12.02	0.131
4882.5	2048.1	1	50	12.16	0.139
4883.8	2047.6	2.1	50	12.37	0.151

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

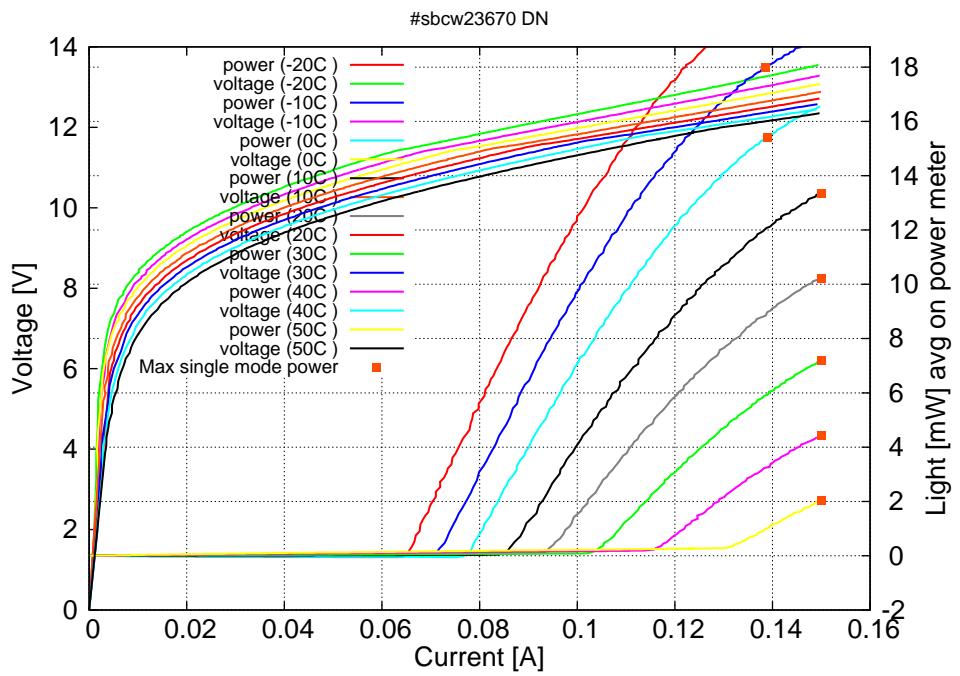


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: I_{th}=0.06A / V_{th}=11.4V (2-wires measurements). Maximum operation current: 0.125A at -20C, 0.14A between -10C and 0C, 0.15A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

