

Datasheet for #sbcw23671 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.

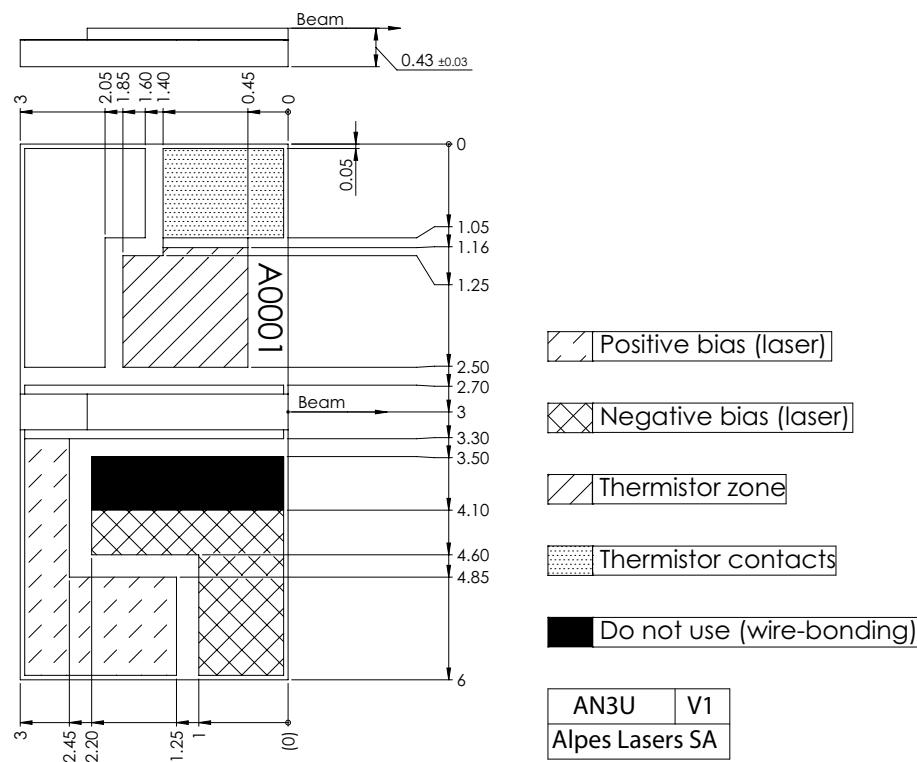


Figure 1: Mechanical and electrical interface for #sbcw23671 DN (please note that AlN submount numbering is A0Y5E)

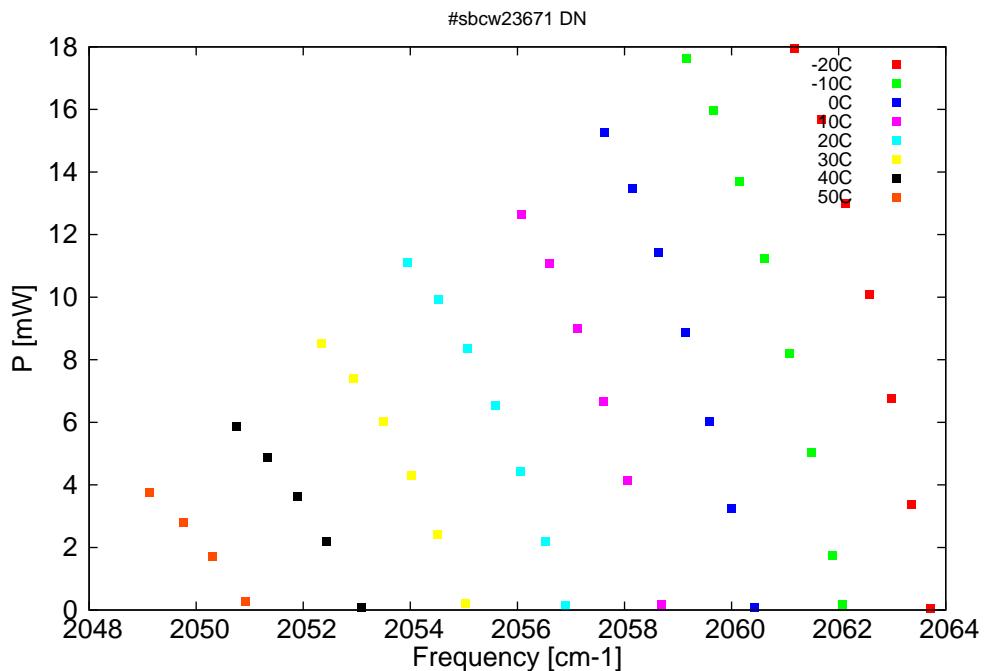


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

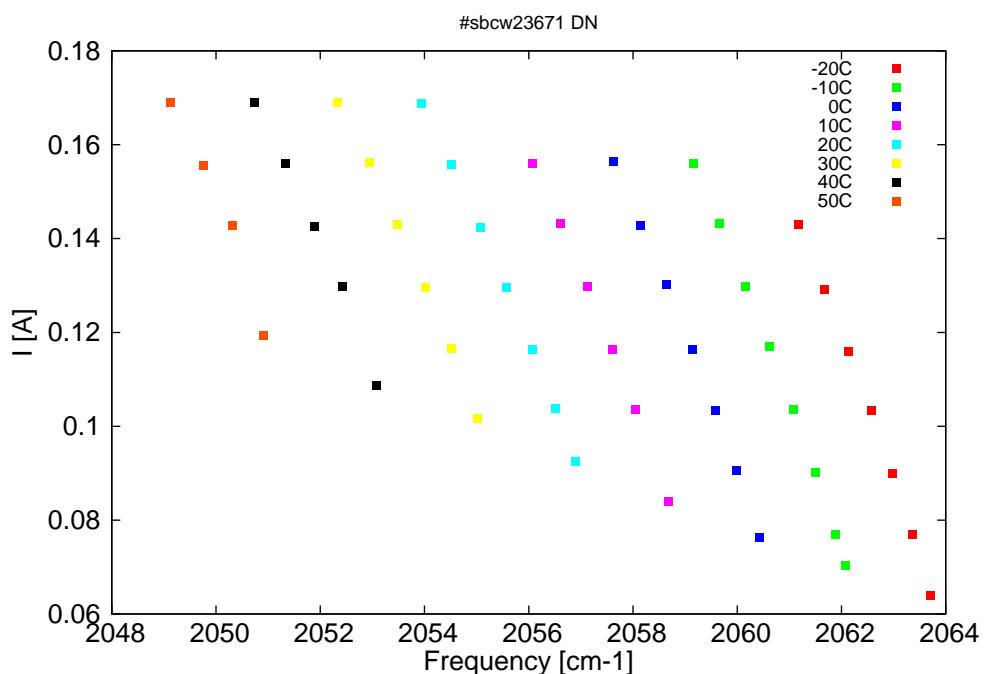


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4845.6	2063.7	0	-20	11.4	0.064
4846.5	2063.4	3.4	-20	11.71	0.077
4847.3	2063	6.8	-20	12.02	0.09
4848.3	2062.6	10.1	-20	12.32	0.103
4849.3	2062.1	13	-20	12.62	0.116
4850.4	2061.7	15.7	-20	12.92	0.129
4851.6	2061.2	17.9	-20	13.24	0.143
4849.5	2062.1	0.2	-10	11.4	0.07
4849.9	2061.9	1.7	-10	11.55	0.077
4850.8	2061.5	5	-10	11.85	0.09
4851.8	2061.1	8.2	-10	12.15	0.104
4852.9	2060.6	11.2	-10	12.44	0.117
4854	2060.2	13.7	-10	12.72	0.13
4855.2	2059.7	16	-10	13.02	0.143
4856.4	2059.2	17.6	-10	13.31	0.156
4853.4	2060.4	0.1	0	11.41	0.076
4854.4	2060	3.2	0	11.71	0.091
4855.4	2059.6	6	0	11.99	0.103
4856.4	2059.1	8.9	0	12.27	0.116
4857.6	2058.6	11.4	0	12.55	0.13
4858.7	2058.2	13.5	0	12.81	0.143
4860	2057.6	15.3	0	13.11	0.156
4857.5	2058.7	0.2	10	11.46	0.084
4859	2058.1	4.2	10	11.86	0.104
4860	2057.6	6.7	10	12.13	0.116
4861.1	2057.1	9	10	12.39	0.13
4862.4	2056.6	11.1	10	12.66	0.143
4863.6	2056.1	12.6	10	12.93	0.156
4861.7	2056.9	0.2	20	11.53	0.092
4862.6	2056.5	2.2	20	11.75	0.104
4863.7	2056.1	4.4	20	12	0.116
4864.8	2055.6	6.5	20	12.25	0.13
4866	2055.1	8.4	20	12.5	0.142
4867.3	2054.5	9.9	20	12.77	0.156
4868.7	2053.9	11.1	20	13.04	0.169
4866.1	2055	0.2	30	11.62	0.102
4867.3	2054.5	2.4	30	11.88	0.117
4868.5	2054	4.3	30	12.13	0.13
4869.8	2053.5	6	30	12.38	0.143
4871.1	2052.9	7.4	30	12.63	0.156
4872.5	2052.3	8.5	30	12.89	0.169
4870.7	2053.1	0.1	40	11.73	0.109
4872.3	2052.4	2.2	40	12.03	0.13
4873.5	2051.9	3.6	40	12.26	0.143
4874.9	2051.3	4.9	40	12.5	0.156
4876.3	2050.7	5.9	40	12.75	0.169
4875.9	2050.9	0.3	50	11.9	0.119
4877.3	2050.3	1.7	50	12.15	0.143
4878.6	2049.8	2.8	50	12.38	0.156

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λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4880.1	2049.1	3.8	50	12.62	0.169

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

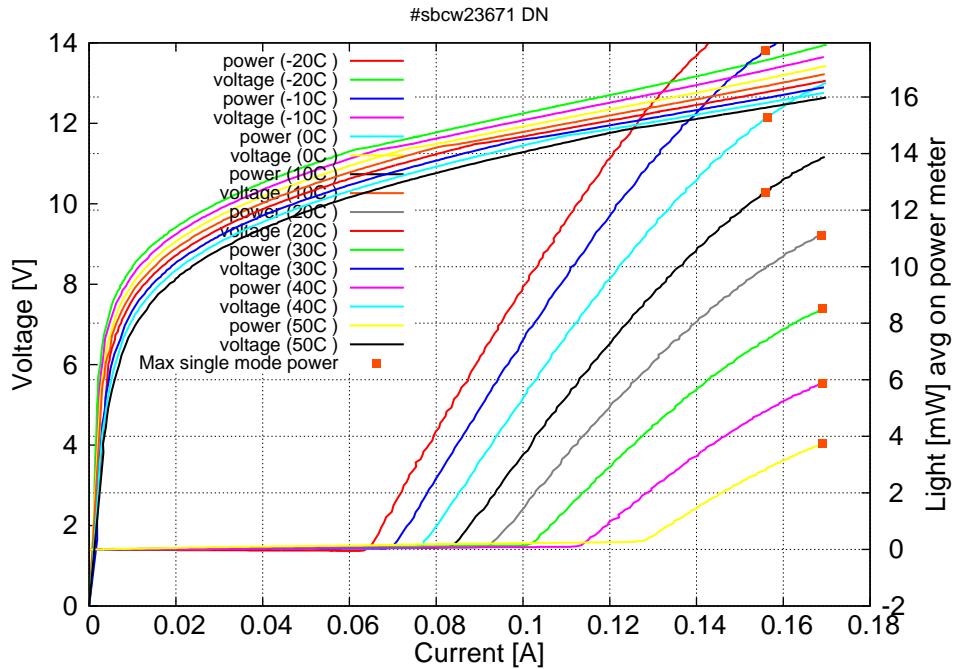


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=11.4V$ (2-wires measurements). Maximum operation current: 0.145A at -20C, 0.155A between -10C and 10C, 0.17A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

