

Datasheet for #sbcw24671 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.

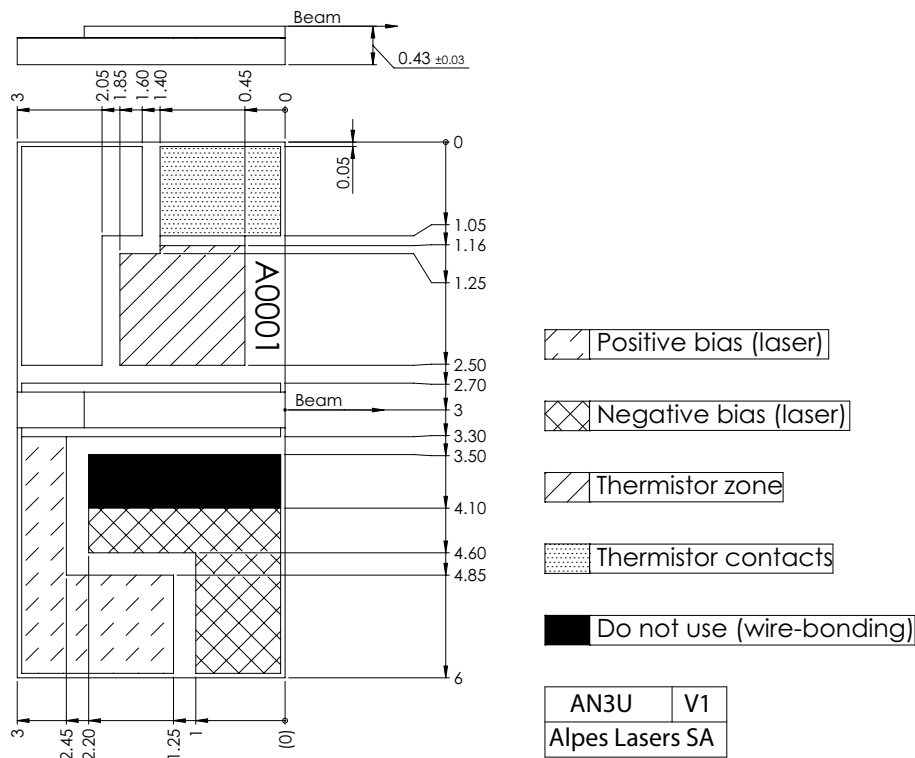


Figure 1: Mechanical and electrical interface for #sbcw24671 DN (please note that AlN submount numbering is A11V9)

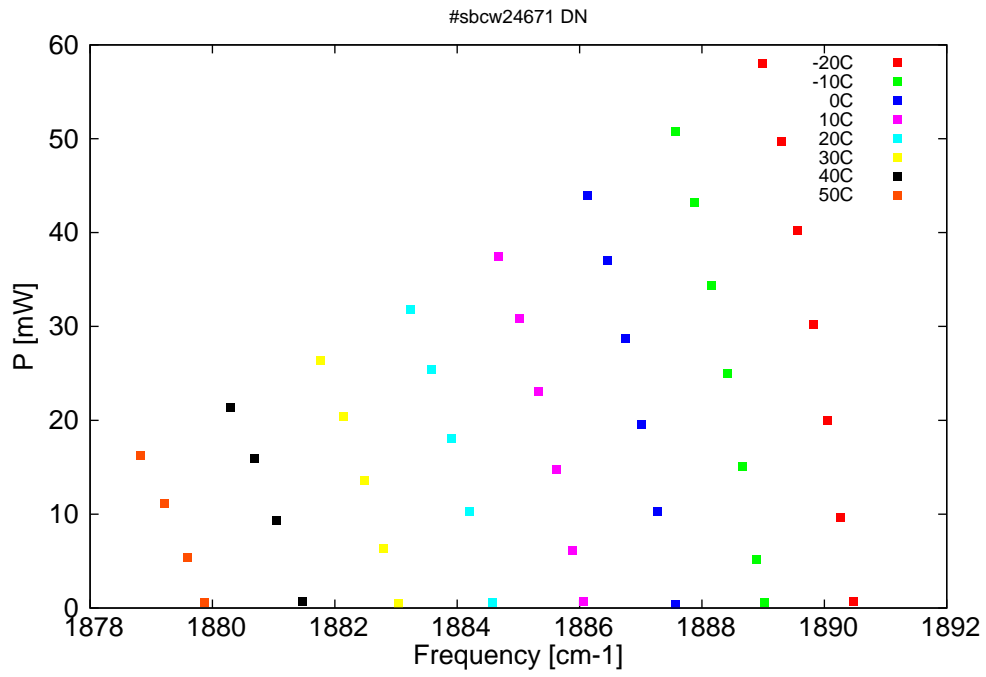


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

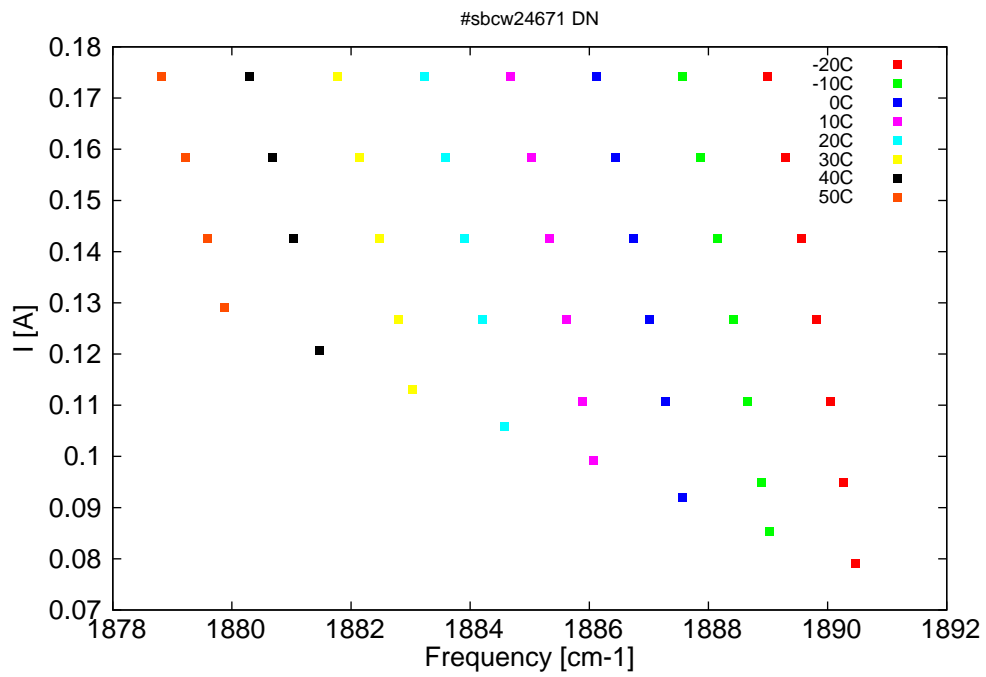


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5289.7	1890.5	0.7	-20	7.43	0.079
5290.3	1890.3	9.6	-20	7.62	0.095
5290.9	1890	20	-20	7.81	0.111
5291.5	1889.8	30.2	-20	8	0.127
5292.2	1889.6	40.2	-20	8.2	0.143
5293	1889.3	49.7	-20	8.4	0.158
5293.8	1889	58	-20	8.62	0.174
5293.7	1889	0.6	-10	7.46	0.085
5294.1	1888.9	5.2	-10	7.57	0.095
5294.8	1888.7	15	-10	7.76	0.111
5295.4	1888.4	25	-10	7.95	0.127
5296.2	1888.2	34.4	-10	8.15	0.143
5297	1887.9	43.2	-10	8.35	0.158
5297.8	1887.6	50.8	-10	8.57	0.174
5297.8	1887.6	0.4	0	7.5	0.092
5298.6	1887.3	10.3	0	7.73	0.111
5299.4	1887	19.6	0	7.92	0.127
5300.1	1886.7	28.7	0	8.12	0.143
5301	1886.4	37	0	8.33	0.158
5301.9	1886.1	43.9	0	8.56	0.174
5302	1886.1	0.7	10	7.56	0.099
5302.5	1885.9	6.1	10	7.71	0.111
5303.3	1885.6	14.7	10	7.9	0.127
5304.1	1885.3	23.1	10	8.11	0.143
5305	1885	30.9	10	8.32	0.158
5305.9	1884.7	37.5	10	8.54	0.174
5306.3	1884.6	0.6	20	7.62	0.106
5307.3	1884.2	10.3	20	7.88	0.127
5308.1	1883.9	18.1	20	8.09	0.143
5309	1883.6	25.4	20	8.29	0.158
5310	1883.2	31.8	20	8.52	0.174
5310.6	1883	0.5	30	7.72	0.113
5311.3	1882.8	6.4	30	7.89	0.127
5312.2	1882.5	13.6	30	8.11	0.143
5313.1	1882.1	20.4	30	8.33	0.158
5314.1	1881.8	26.4	30	8.56	0.174
5315	1881.5	0.7	40	7.81	0.121
5316.2	1881	9.3	40	8.11	0.143
5317.2	1880.7	15.9	40	8.33	0.158
5318.3	1880.3	21.3	40	8.56	0.174
5319.5	1879.9	0.6	50	7.9	0.129
5320.3	1879.6	5.3	50	8.09	0.143
5321.4	1879.2	11.2	50	8.31	0.158
5322.5	1878.8	16.2	50	8.55	0.174

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

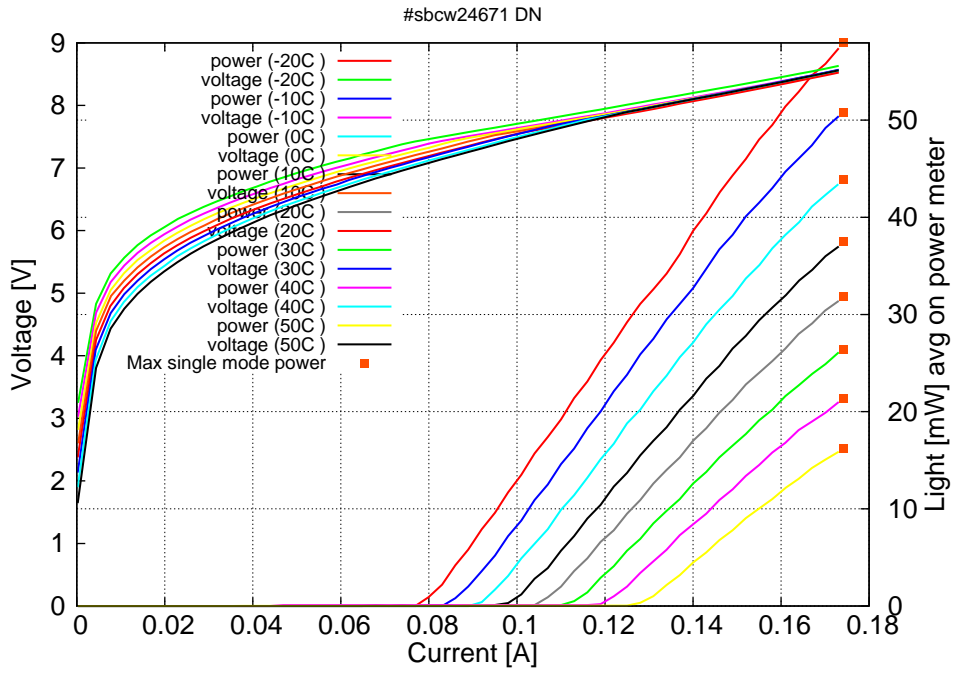


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.08A$ / $V_{th}=7.5V$ (2-wires measurements). Maximum operation current: 0.175A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

