

Datasheet for #sbcw24771 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 #sbcw24771 DN (please note that AlN submount numbering is A11VD)

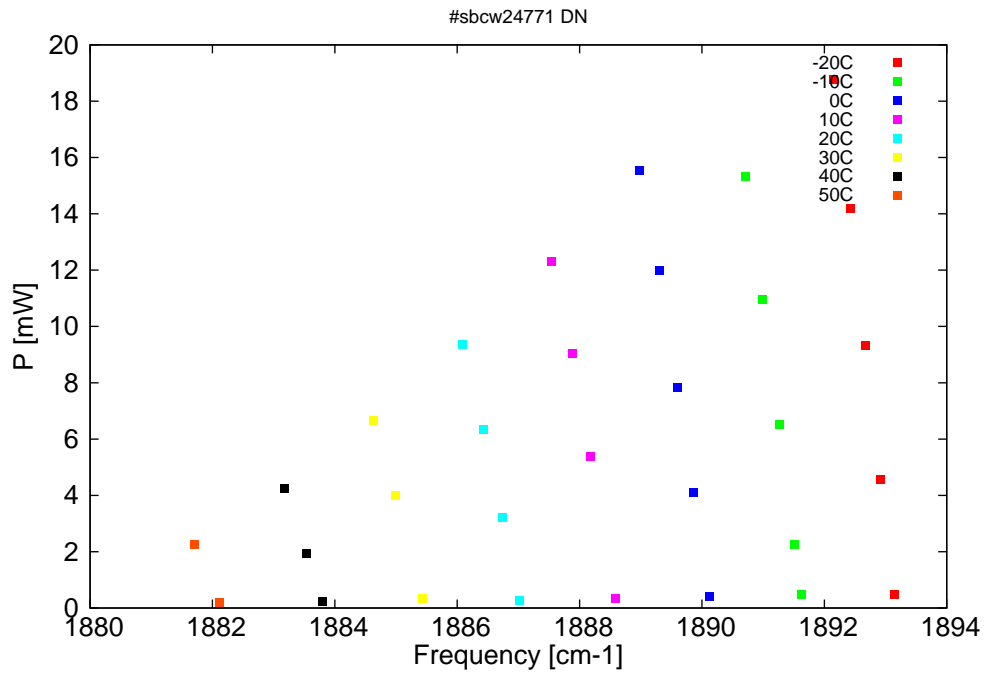


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

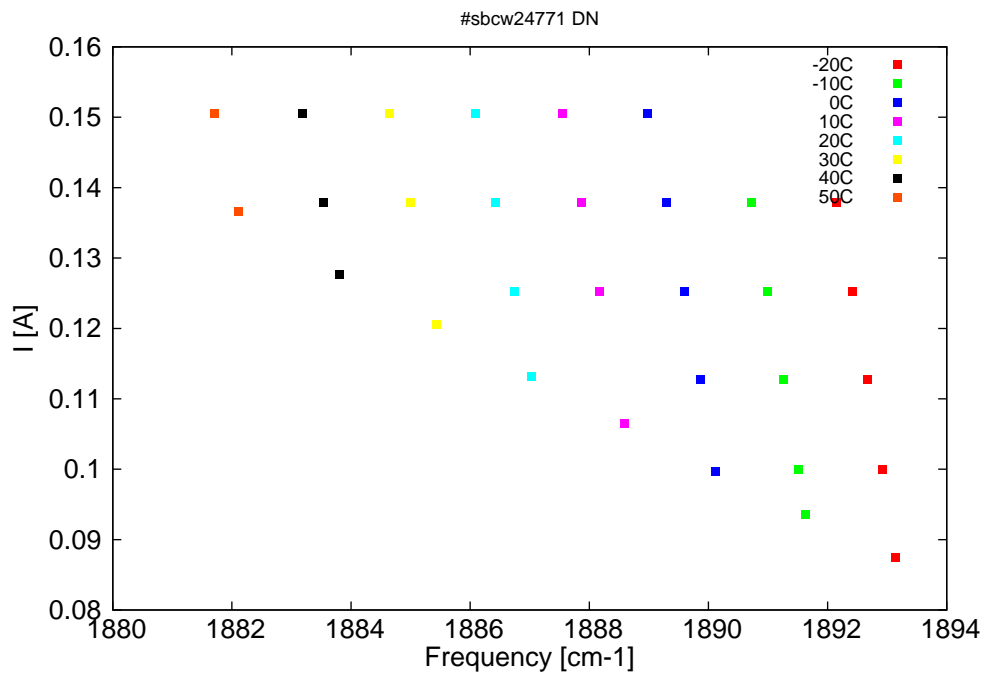


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5282.2	1893.1	0.5	-20	7.76	0.087
5282.8	1892.9	4.6	-20	7.95	0.1
5283.5	1892.7	9.3	-20	8.15	0.113
5284.2	1892.4	14.2	-20	8.35	0.125
5285	1892.2	18.8	-20	8.56	0.138
5286.4	1891.6	0.5	-10	7.81	0.094
5286.8	1891.5	2.2	-10	7.91	0.1
5287.5	1891.3	6.5	-10	8.11	0.113
5288.2	1891	11	-10	8.31	0.125
5289	1890.7	15.3	-10	8.53	0.138
5290.6	1890.1	0.4	0	7.86	0.1
5291.4	1889.9	4.1	0	8.07	0.113
5292.1	1889.6	7.8	0	8.28	0.125
5293	1889.3	12	0	8.5	0.138
5293.9	1889	15.5	0	8.74	0.151
5295	1888.6	0.3	10	7.93	0.107
5296.1	1888.2	5.4	10	8.25	0.125
5297	1887.9	9	10	8.47	0.138
5297.9	1887.5	12.3	10	8.71	0.151
5299.3	1887	0.3	20	8.01	0.113
5300.2	1886.7	3.2	20	8.21	0.125
5301	1886.4	6.3	20	8.43	0.138
5302	1886.1	9.4	20	8.67	0.151
5303.8	1885.4	0.3	30	8.09	0.121
5305.1	1885	4	30	8.4	0.138
5306.1	1884.6	6.6	30	8.64	0.151
5308.4	1883.8	0.2	40	8.18	0.128
5309.2	1883.5	1.9	40	8.36	0.138
5310.2	1883.2	4.2	40	8.59	0.151
5313.2	1882.1	0.2	50	8.29	0.137
5314.3	1881.7	2.3	50	8.55	0.151

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

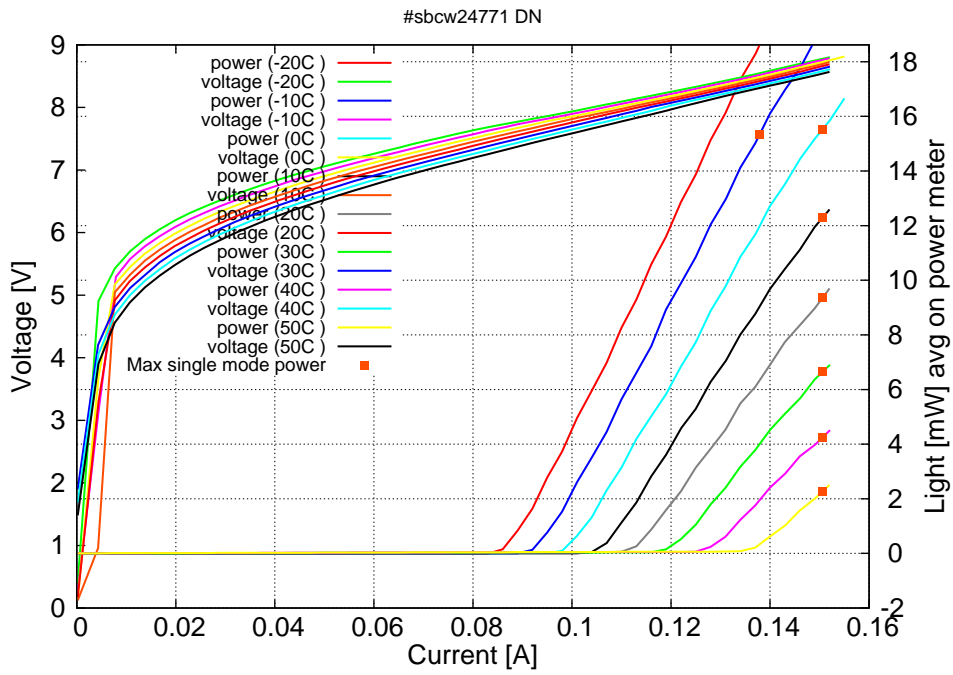


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=7.7V$ (2-wires measurements). Maximum operation current: 0.14A at -20C and -10C, 0.155A between 0C and 50C.

Figure 3: spectra at different temperatures for various DC currents

