

Datasheet for #sbcw24778 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.

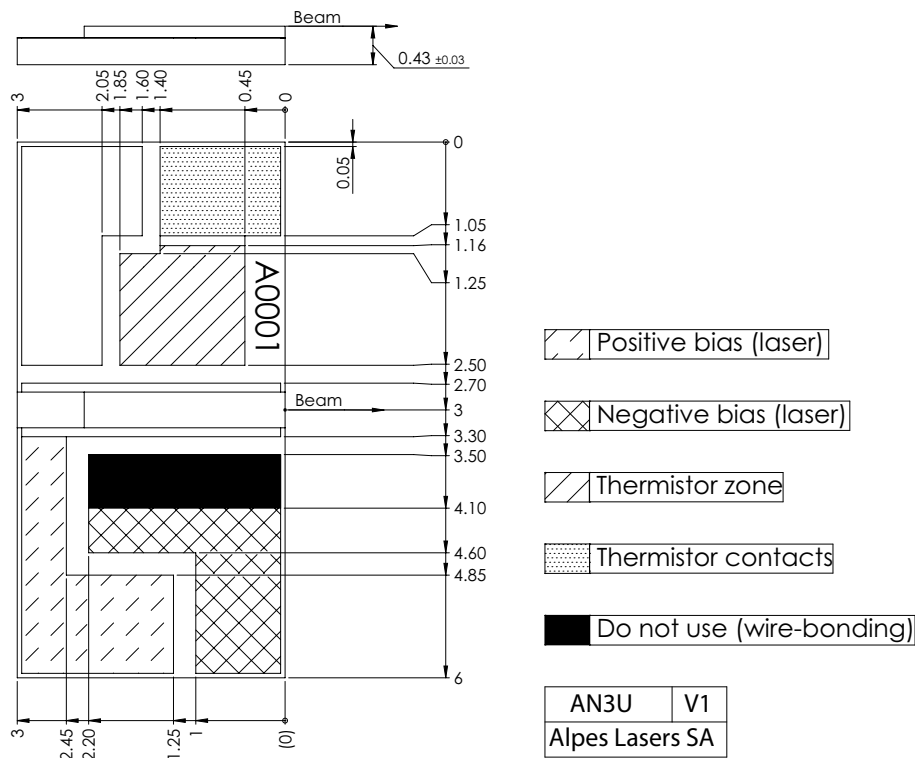


Figure 1: Mechanical and electrical interface for #sbcw24778 DN (please note that AlN submount numbering is A1134)

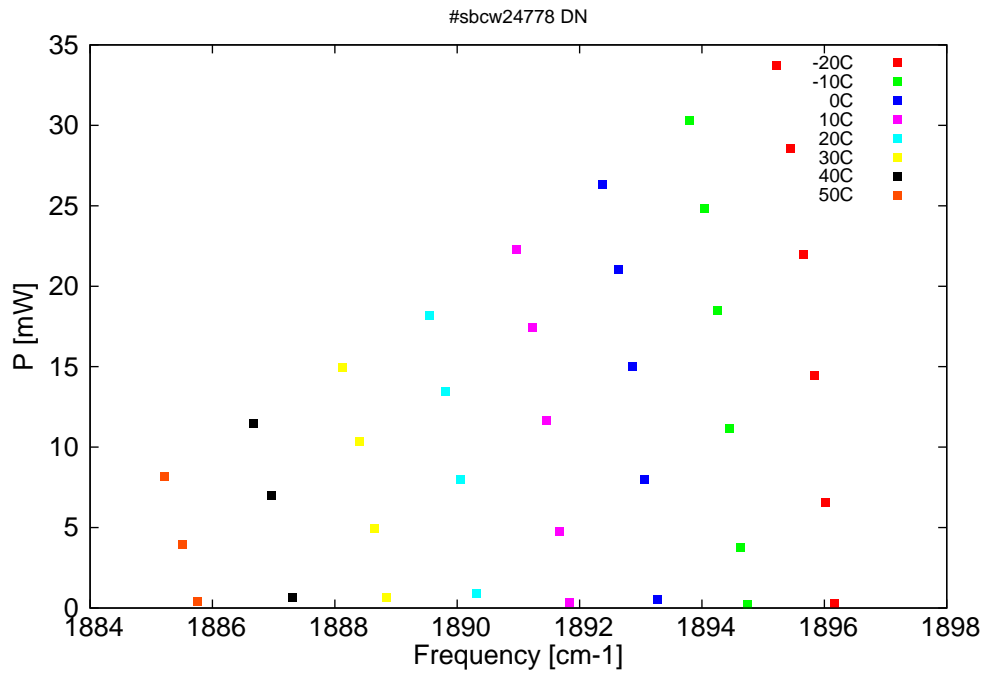


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

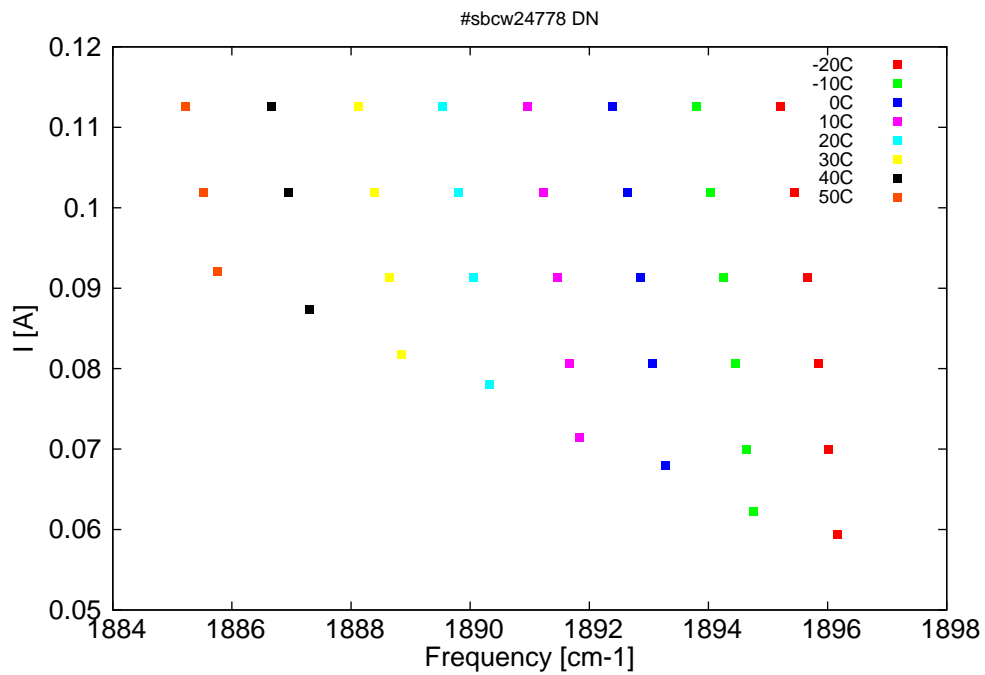


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5273.8	1896.2	0.3	-20	7.66	0.059
5274.2	1896	6.5	-20	7.84	0.07
5274.7	1895.8	14.5	-20	8.04	0.081
5275.2	1895.7	22	-20	8.24	0.091
5275.8	1895.4	28.6	-20	8.46	0.102
5276.5	1895.2	33.7	-20	8.71	0.113
5277.7	1894.7	0.2	-10	7.67	0.062
5278.1	1894.6	3.8	-10	7.81	0.07
5278.6	1894.4	11.2	-10	8.01	0.081
5279.1	1894.3	18.5	-10	8.22	0.091
5279.7	1894	24.8	-10	8.44	0.102
5280.4	1893.8	30.3	-10	8.69	0.113
5281.9	1893.3	0.5	0	7.74	0.068
5282.5	1893.1	8	0	7.98	0.081
5283	1892.9	15	0	8.19	0.091
5283.6	1892.6	21.1	0	8.41	0.102
5284.3	1892.4	26.3	0	8.67	0.113
5285.9	1891.8	0.3	10	7.77	0.071
5286.3	1891.7	4.8	10	7.95	0.081
5286.9	1891.5	11.6	10	8.16	0.091
5287.6	1891.2	17.4	10	8.39	0.102
5288.3	1891	22.3	10	8.64	0.113
5290.1	1890.3	0.9	20	7.87	0.078
5290.9	1890	8	20	8.14	0.091
5291.5	1889.8	13.5	20	8.37	0.102
5292.3	1889.5	18.2	20	8.62	0.113
5294.2	1888.8	0.7	30	7.92	0.082
5294.8	1888.6	4.9	30	8.11	0.091
5295.5	1888.4	10.3	30	8.34	0.102
5296.3	1888.1	14.9	30	8.59	0.113
5298.6	1887.3	0.6	40	8.01	0.087
5299.5	1887	7	40	8.31	0.102
5300.4	1886.7	11.5	40	8.56	0.113
5302.9	1885.8	0.4	50	8.07	0.092
5303.6	1885.5	4	50	8.28	0.102
5304.4	1885.2	8.2	50	8.52	0.113

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

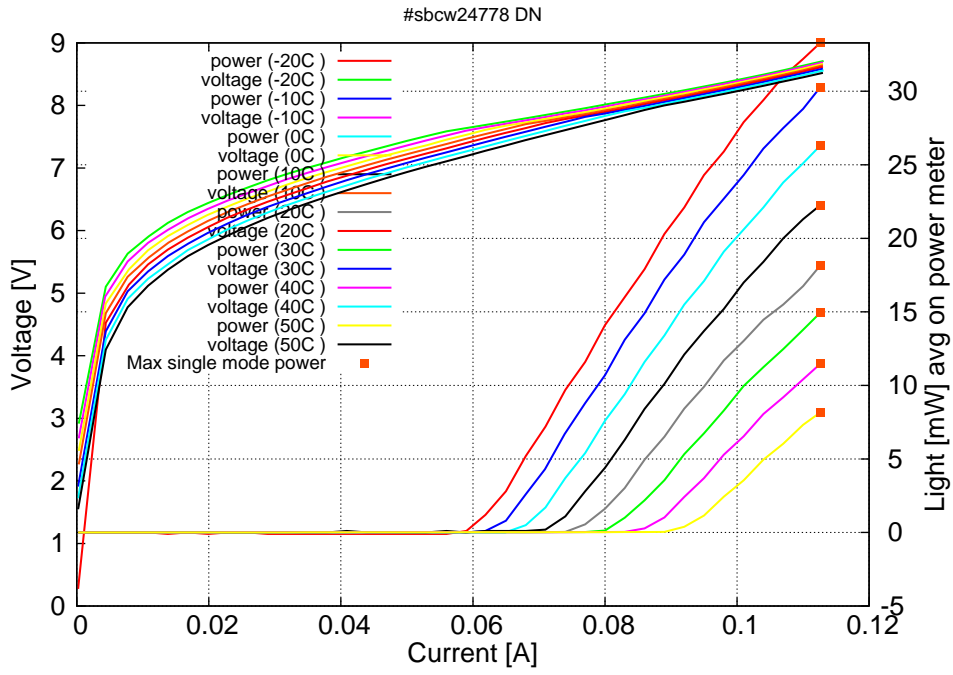


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.058A$ / $V_{th}=7.6V$ (2-wires measurements). Maximum operation current: 0.115A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

