

**Datasheet for #sbcw24774 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.

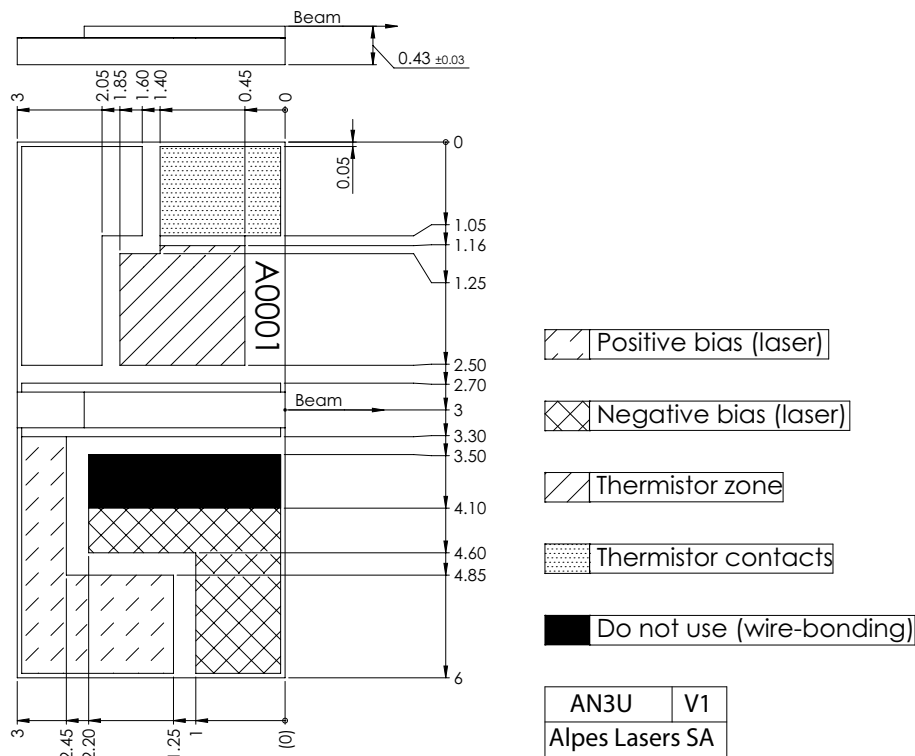


Figure 1: Mechanical and electrical interface for #sbcw24774 DN (please note that AlN submount numbering is A112W)

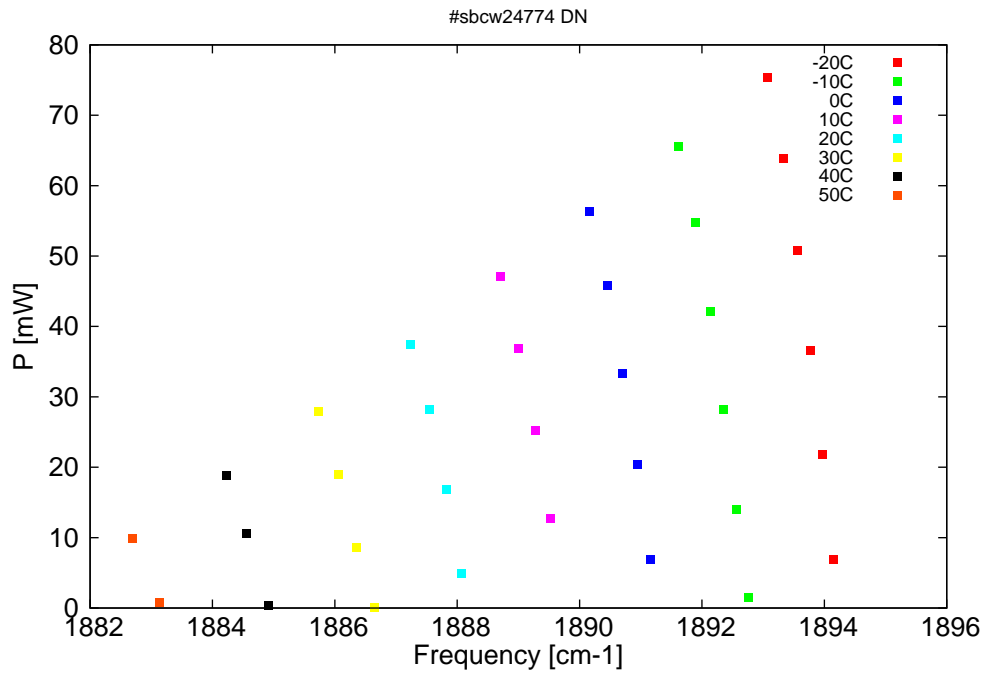


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

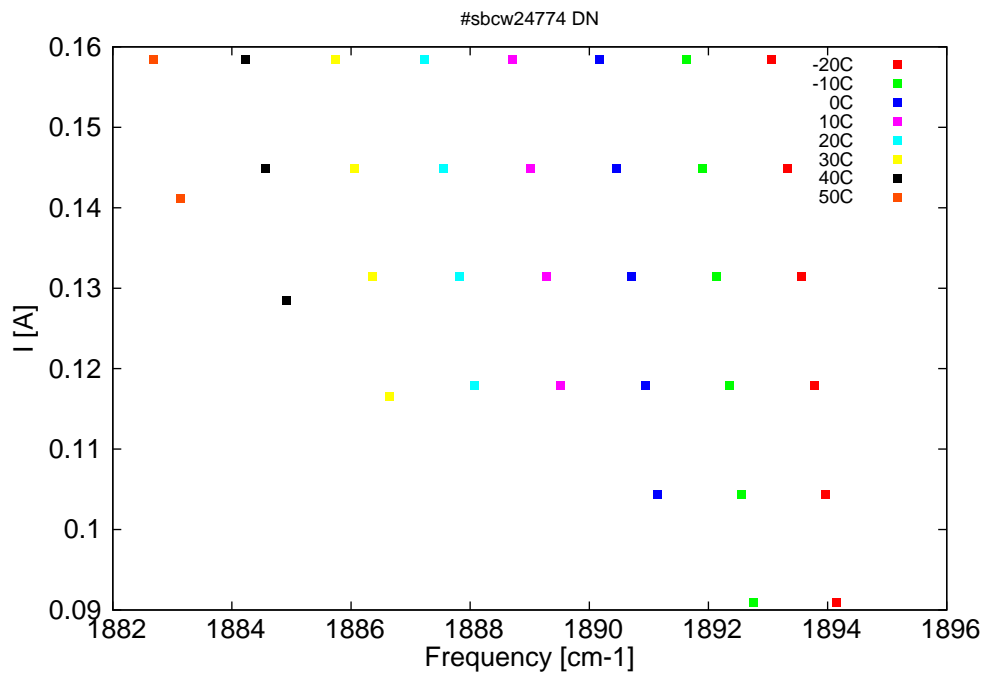


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
5279.4	1894.1	6.9	-20	7.64	0.091
5279.9	1894	21.8	-20	7.8	0.104
5280.5	1893.8	36.6	-20	7.97	0.118
5281.1	1893.6	50.8	-20	8.15	0.131
5281.7	1893.3	63.8	-20	8.34	0.145
5282.4	1893.1	75.4	-20	8.55	0.158
5283.3	1892.8	1.5	-10	7.6	0.091
5283.8	1892.6	14	-10	7.77	0.104
5284.4	1892.4	28.3	-10	7.94	0.118
5285	1892.1	42.1	-10	8.13	0.131
5285.7	1891.9	54.7	-10	8.32	0.145
5286.5	1891.6	65.6	-10	8.53	0.158
5287.8	1891.2	7	0	7.74	0.104
5288.4	1890.9	20.5	0	7.92	0.118
5289	1890.7	33.3	0	8.11	0.131
5289.7	1890.5	45.9	0	8.31	0.145
5290.5	1890.2	56.3	0	8.52	0.158
5292.4	1889.5	12.7	10	7.9	0.118
5293	1889.3	25.2	10	8.09	0.131
5293.8	1889	36.8	10	8.29	0.145
5294.6	1888.7	47.2	10	8.51	0.158
5296.4	1888.1	4.9	20	7.88	0.118
5297.1	1887.8	16.9	20	8.08	0.131
5297.9	1887.5	28.2	20	8.28	0.145
5298.8	1887.2	37.5	20	8.5	0.158
5300.4	1886.6	0	30	7.85	0.117
5301.2	1886.4	8.7	30	8.06	0.131
5302	1886.1	19	30	8.27	0.145
5303	1885.7	27.9	30	8.5	0.158
5305.3	1884.9	0.4	40	8.01	0.129
5306.3	1884.6	10.6	40	8.26	0.145
5307.2	1884.2	18.9	40	8.49	0.158
5310.3	1883.1	0.8	50	8.19	0.141
5311.5	1882.7	9.8	50	8.48	0.158

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

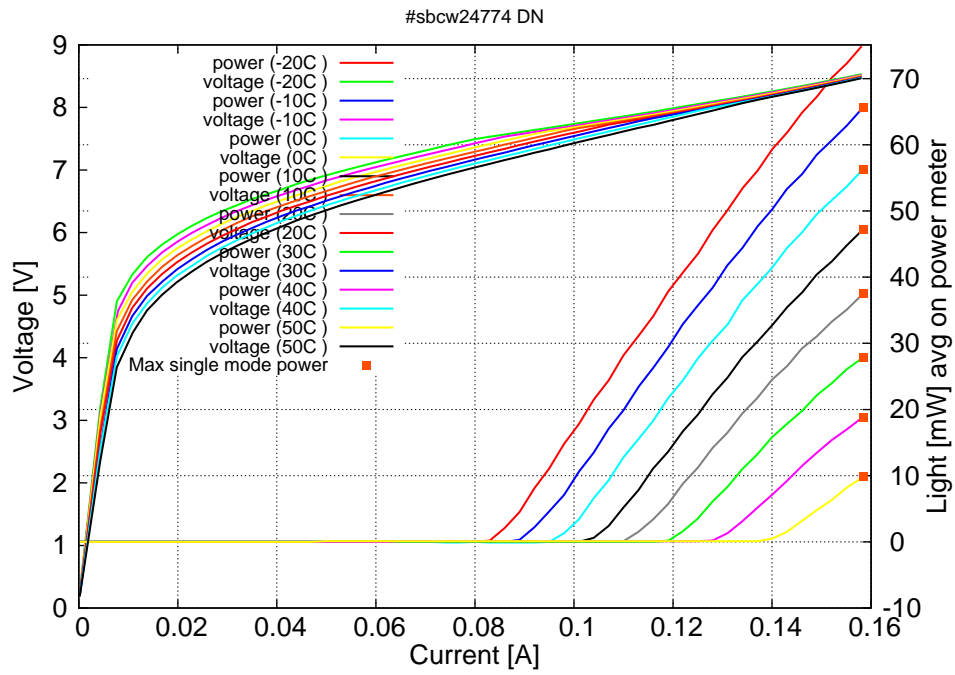


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.08A$  /  $V_{th}=7.5V$  (2-wires measurements). Maximum operation current: 0.160A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

