

Datasheet for #sbcw23774 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 #sbcw23774 DN (please note that AlN submount numbering is A110G)

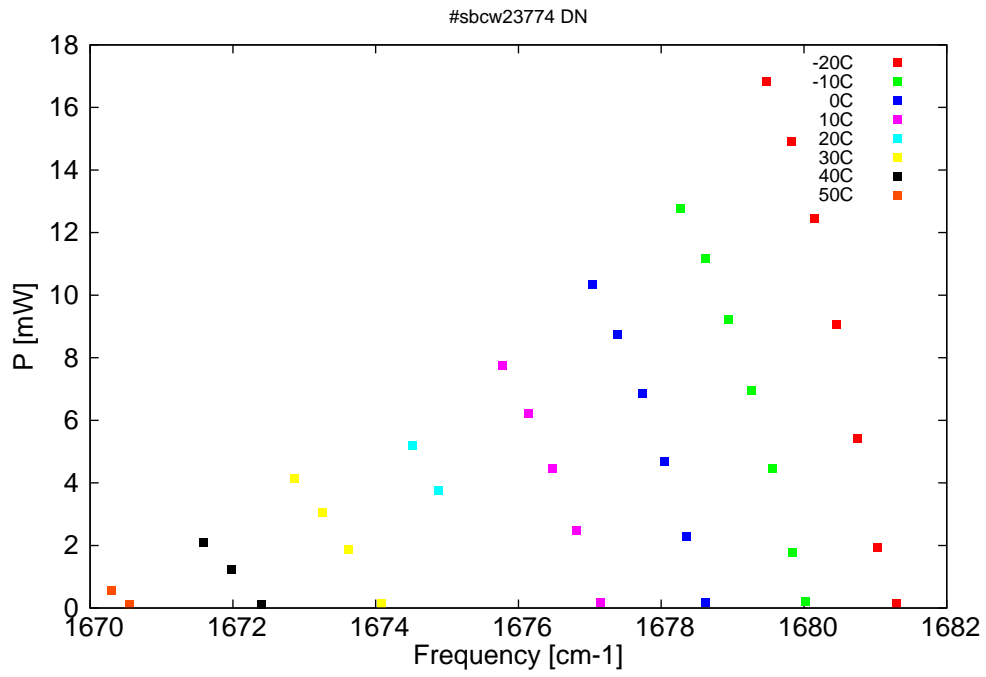


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

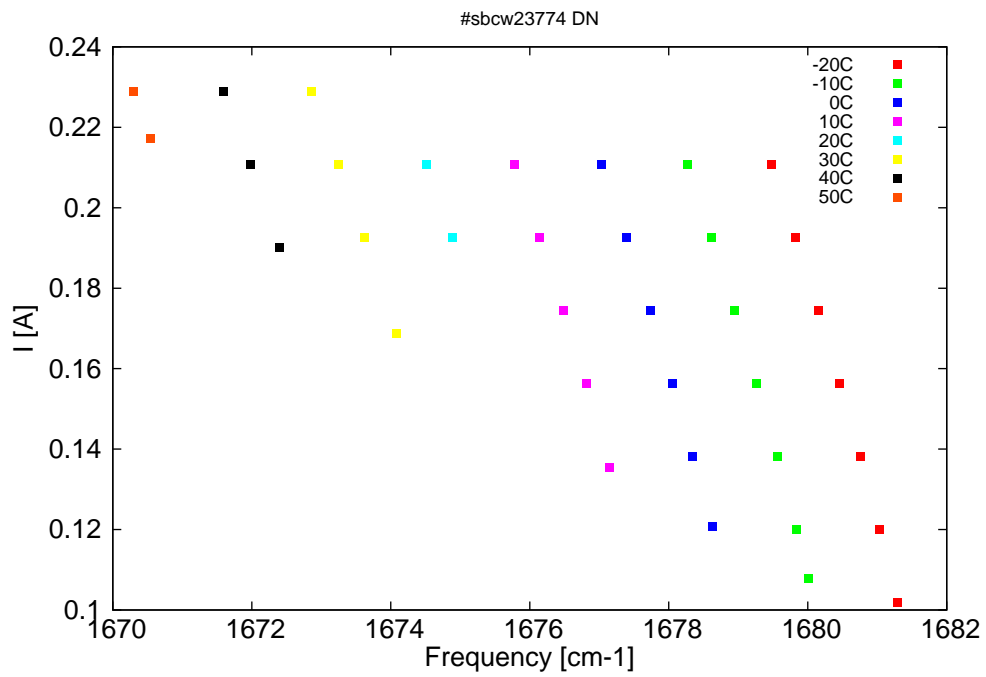


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5947.8	1681.3	0.1	-20	9.88	0.102
5948.7	1681	1.9	-20	10.19	0.12
5949.7	1680.8	5.4	-20	10.5	0.138
5950.8	1680.5	9.1	-20	10.79	0.156
5951.9	1680.1	12.5	-20	11.08	0.175
5953	1679.8	14.9	-20	11.27	0.193
5954.2	1679.5	16.8	-20	11.54	0.211
5952.3	1680	0.2	-10	9.83	0.108
5952.9	1679.8	1.8	-10	10.03	0.12
5953.9	1679.6	4.5	-10	10.32	0.138
5955	1679.3	7	-10	10.6	0.156
5956.1	1678.9	9.2	-10	10.88	0.175
5957.3	1678.6	11.2	-10	11.15	0.193
5958.5	1678.3	12.8	-10	11.41	0.211
5957.3	1678.6	0.2	0	9.86	0.121
5958.2	1678.3	2.3	0	10.13	0.138
5959.3	1678	4.7	0	10.4	0.156
5960.4	1677.7	6.9	0	10.67	0.175
5961.6	1677.4	8.7	0	10.92	0.193
5962.9	1677	10.3	0	11.18	0.211
5962.5	1677.1	0.2	10	9.98	0.135
5963.7	1676.8	2.5	10	10.29	0.156
5964.9	1676.5	4.4	10	10.56	0.175
5966.1	1676.1	6.2	10	10.81	0.193
5967.4	1675.8	7.7	10	11.07	0.211
5970.6	1674.9	3.7	20	10.71	0.193
5971.9	1674.5	5.2	20	10.97	0.211
5973.4	1674.1	0.1	30	10.28	0.169
5975.1	1673.6	1.9	30	10.62	0.193
5976.4	1673.2	3.1	30	10.87	0.211
5977.8	1672.9	4.1	30	11.12	0.229
5979.5	1672.4	0.1	40	10.49	0.19
5980.9	1672	1.2	40	10.78	0.211
5982.3	1671.6	2.1	40	11.02	0.229
5986.1	1670.5	0.1	50	10.76	0.217
5986.9	1670.3	0.6	50	10.92	0.229

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

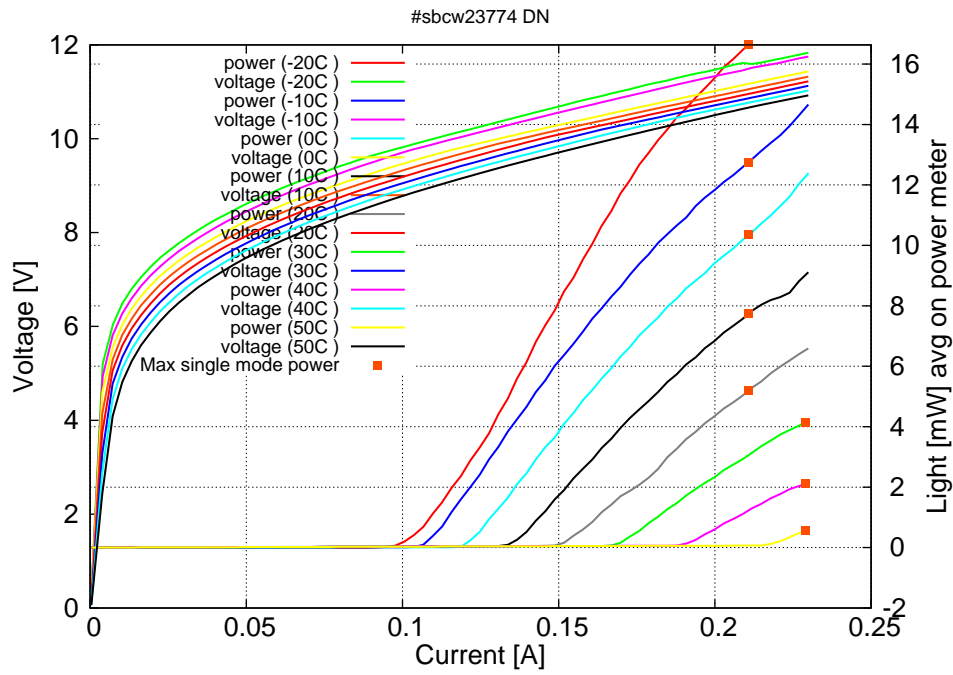


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=10.0V$ (2-wires measurements). Maximum operation current: 0.21A between -20C and 20C, 0.23A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

