

Datasheet for #sbcw23775 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 #sbcw23775 DN (please note that AlN submount numbering is A111H)

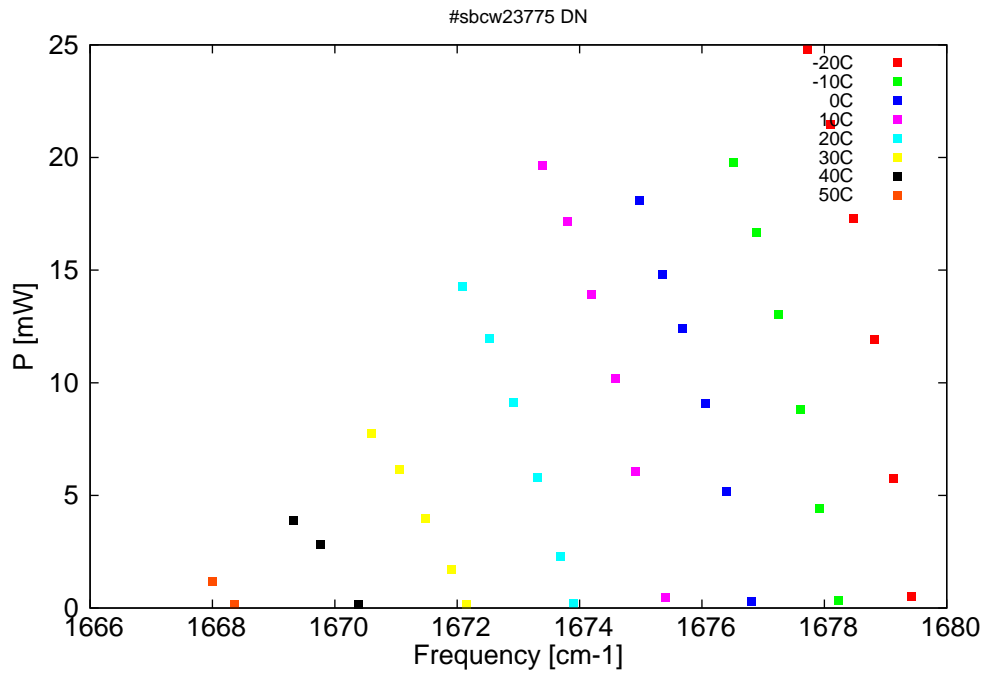


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

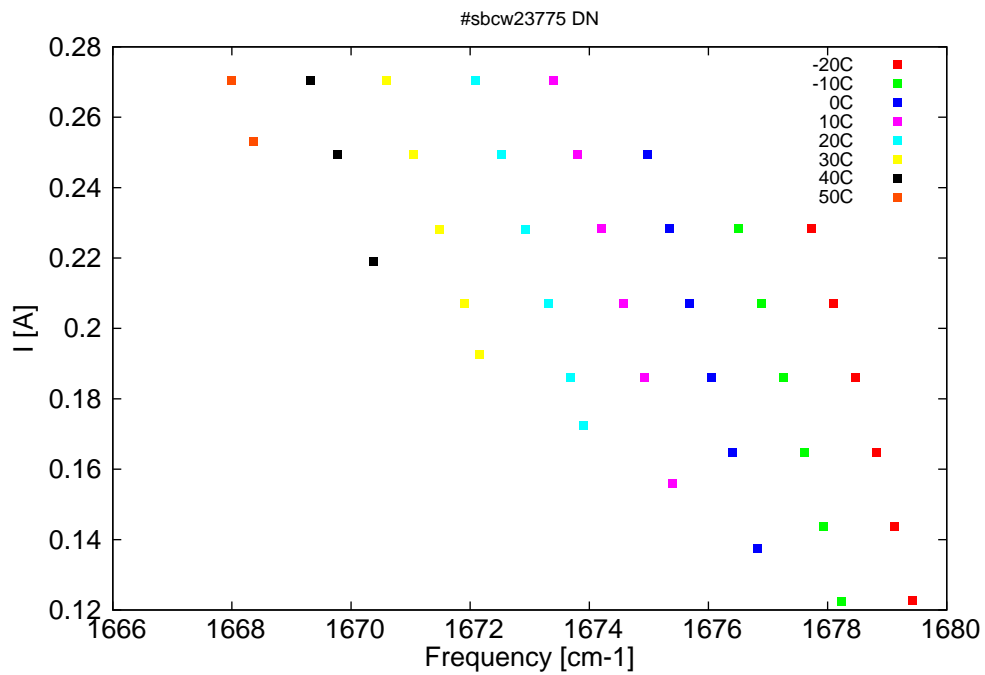


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5954.4	1679.4	0.5	-20	9.89	0.123
5955.5	1679.1	5.7	-20	10.2	0.144
5956.6	1678.8	11.9	-20	10.5	0.165
5957.8	1678.5	17.3	-20	10.79	0.186
5959.1	1678.1	21.4	-20	11.07	0.207
5960.4	1677.7	24.8	-20	11.35	0.228
5958.6	1678.2	0.3	-10	9.79	0.122
5959.7	1677.9	4.4	-10	10.1	0.144
5960.9	1677.6	8.8	-10	10.4	0.165
5962.1	1677.3	13	-10	10.69	0.186
5963.4	1676.9	16.7	-10	10.97	0.207
5964.8	1676.5	19.8	-10	11.25	0.228
5963.7	1676.8	0.3	0	9.9	0.138
5965.2	1676.4	5.2	0	10.29	0.165
5966.4	1676.1	9.1	0	10.59	0.186
5967.7	1675.7	12.4	0	10.87	0.207
5968.9	1675.3	14.8	0	11.16	0.228
5970.2	1675	18.1	0	11.43	0.249
5968.7	1675.4	0.5	10	9.97	0.156
5970.4	1674.9	6.1	10	10.37	0.186
5971.6	1674.6	10.2	10	10.64	0.207
5973	1674.2	13.9	10	10.9	0.228
5974.4	1673.8	17.1	10	11.17	0.249
5975.9	1673.4	19.6	10	11.42	0.271
5974.1	1673.9	0.2	20	10.09	0.173
5974.8	1673.7	2.3	20	10.27	0.186
5976.2	1673.3	5.8	20	10.54	0.207
5977.6	1672.9	9.1	20	10.8	0.228
5979	1672.5	12	20	11.06	0.249
5980.5	1672.1	14.3	20	11.32	0.271
5980.3	1672.2	0.2	30	10.25	0.193
5981.2	1671.9	1.7	30	10.43	0.207
5982.7	1671.5	4	30	10.69	0.228
5984.2	1671.1	6.2	30	10.95	0.249
5985.9	1670.6	7.8	30	11.21	0.271
5986.6	1670.4	0.2	40	10.48	0.219
5988.9	1669.8	2.8	40	10.85	0.249
5990.5	1669.3	3.9	40	11.1	0.271
5993.9	1668.4	0.2	50	10.79	0.253
5995.2	1668	1.2	50	11	0.271

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

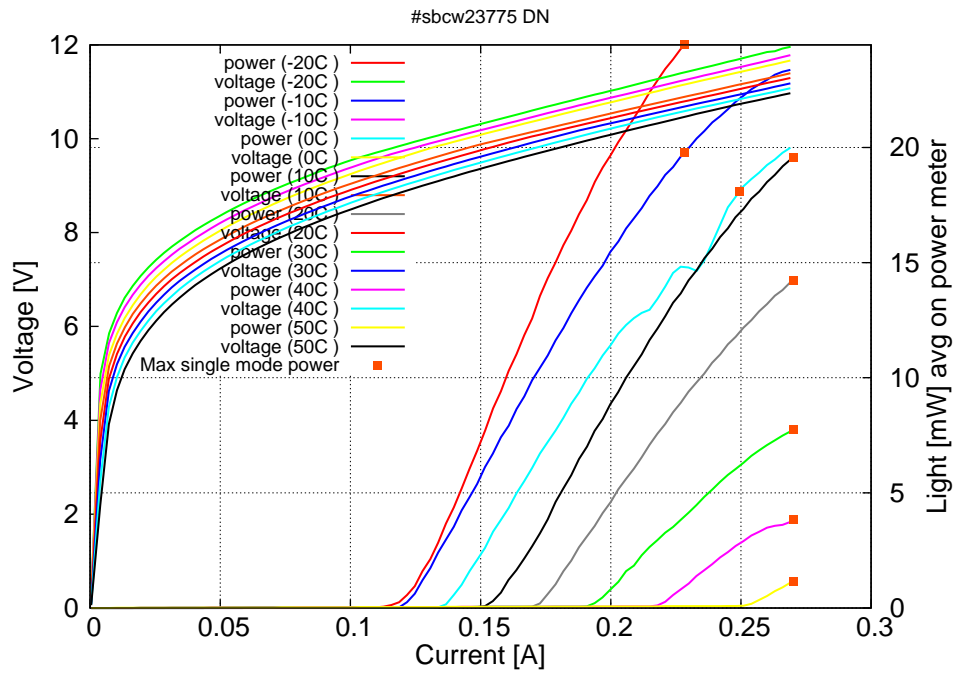


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=9.9V$ (2-wires measurements). Maximum operation current: 0.23A between -20C and -10C, 0.25A at 0C, 0.27A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

