Quantum Cascade Solutions
Avenue des Pâquiers 1
CH-2072 St-Blaise
T: +41 32 729 95 10
F: +41 32 729 95 19

Datasheet for #sbcw24877 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.

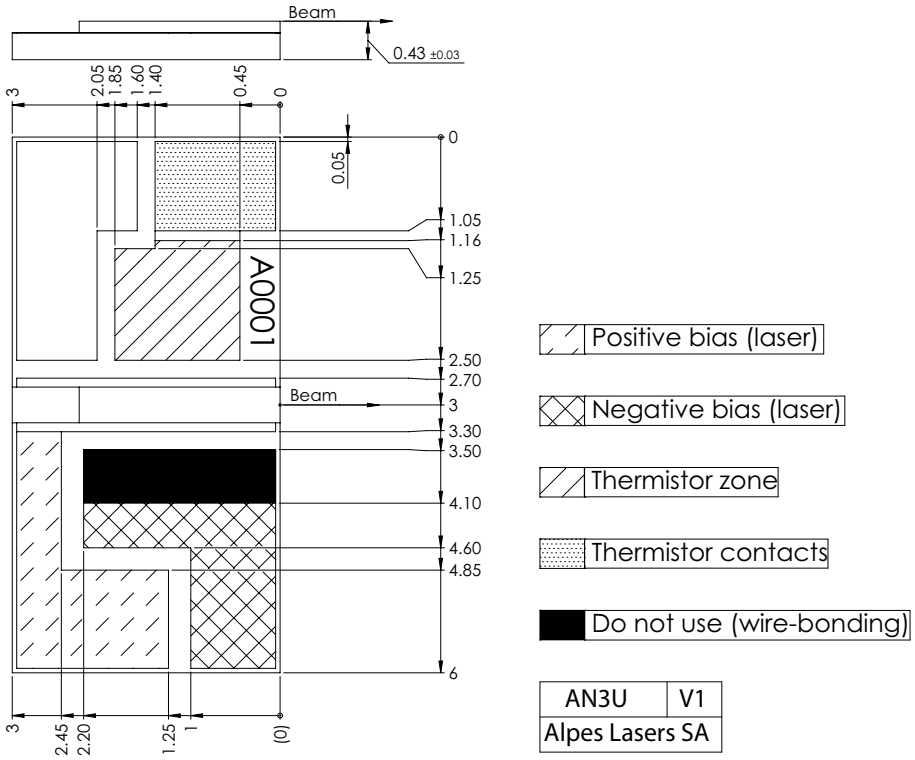

Figure 1: Mechanical and electrical interface for #sbcw24877 DN (please note that AlN submount numbering is A0ZWV)

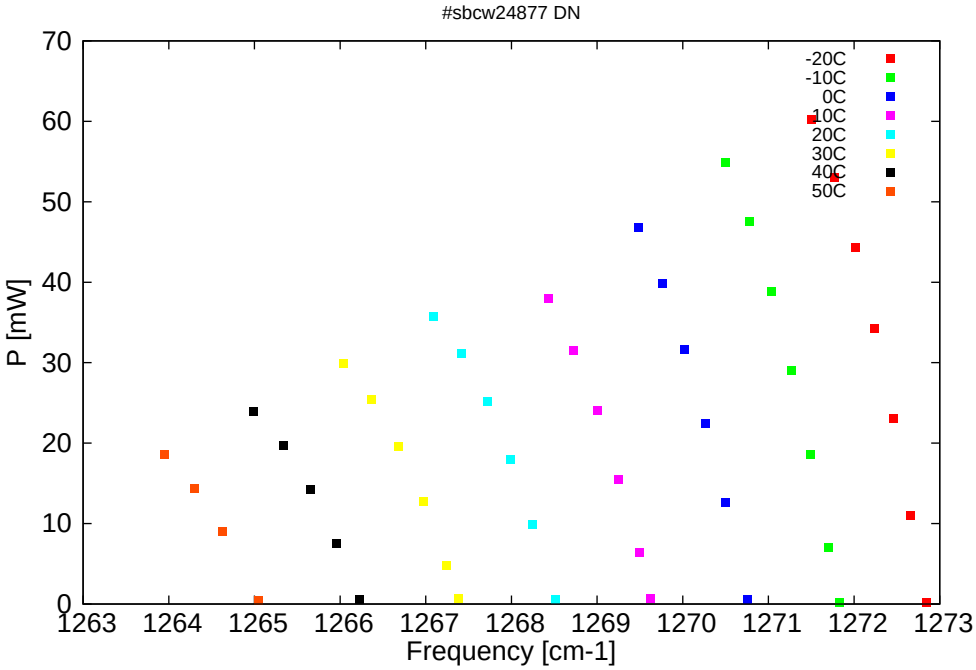

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

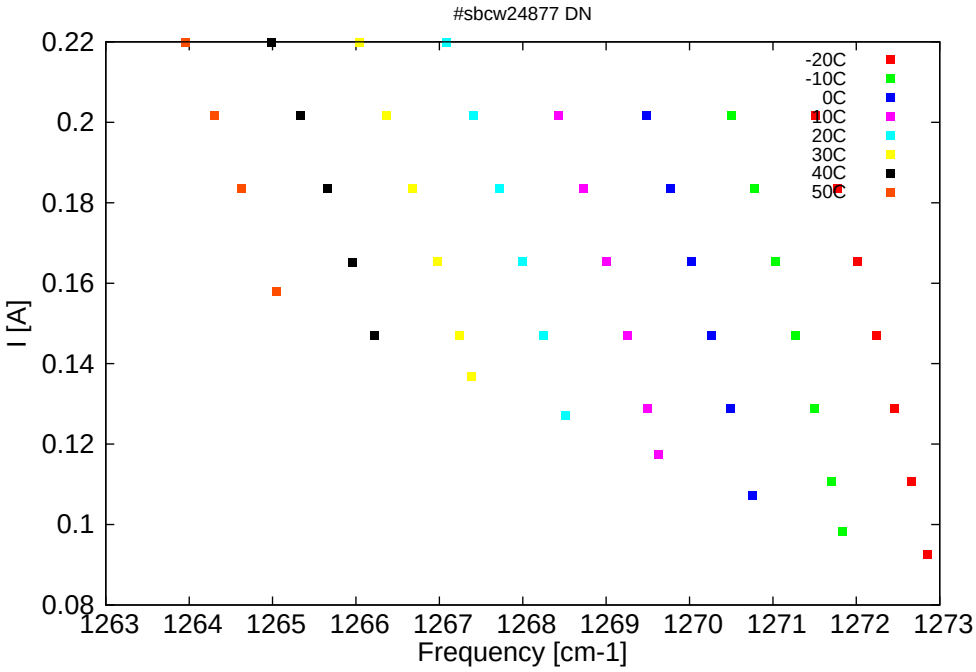

Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]
7856.4	1272.8	0.2	-20	8.04	0.093
7857.6	1272.7	10.9	-20	8.24	0.111
7858.8	1272.5	23	-20	8.44	0.129
7860.1	1272.2	34.3	-20	8.65	0.147
7861.5	1272	44.3	-20	8.85	0.165
7863	1271.8	53	-20	9.06	0.184
7864.7	1271.5	60.2	-20	9.29	0.202
7862.7	1271.8	0.3	-10	8.01	0.098
7863.5	1271.7	7	-10	8.15	0.111
7864.8	1271.5	18.5	-10	8.36	0.129
7866.1	1271.3	29.1	-10	8.56	0.147
7867.6	1271	38.8	-10	8.77	0.165
7869.2	1270.8	47.6	-10	8.97	0.184
7870.9	1270.5	54.9	-10	9.2	0.202
7869.4	1270.8	0.6	0	8.04	0.107
7870.9	1270.5	12.6	0	8.29	0.129
7872.4	1270.3	22.4	0	8.49	0.147
7873.9	1270	31.6	0	8.7	0.165
7875.5	1269.8	39.9	0	8.91	0.184
7877.2	1269.5	46.8	0	9.13	0.202
7876.3	1269.6	0.6	10	8.1	0.118
7877.2	1269.5	6.4	10	8.23	0.129
7878.6	1269.3	15.5	10	8.43	0.147
7880.2	1269	24	10	8.64	0.165
7881.9	1268.7	31.6	10	8.85	0.184
7883.7	1268.4	38	10	9.06	0.202
7883.2	1268.5	0.6	20	8.08	0.127
7884.9	1268.2	9.8	20	8.3	0.147
7886.5	1268	17.9	20	8.5	0.165
7888.2	1267.7	25.2	20	8.77	0.184
7890.1	1267.4	31.2	20	8.99	0.202
7892.1	1267.1	35.8	20	9.22	0.22
7890.3	1267.4	0.6	30	8.11	0.137
7891.1	1267.2	4.8	30	8.22	0.147
7892.8	1267	12.8	30	8.42	0.165
7894.7	1266.7	19.6	30	8.63	0.184
7896.6	1266.4	25.5	30	8.83	0.202
7898.6	1266	29.9	30	9.05	0.22
7897.5	1266.2	0.6	40	8.14	0.147
7899.2	1266	7.5	40	8.35	0.165
7901	1265.7	14.3	40	8.55	0.184
7903	1265.3	19.7	40	8.76	0.202
7905.2	1265	23.9	40	8.97	0.22
7904.8	1265	0.4	50	8.19	0.158
7907.5	1264.6	9	50	8.47	0.184
7909.5	1264.3	14.3	50	8.68	0.202
7911.7	1264	18.5	50	8.89	0.22

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#sbcw24877 DN

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{LASER}$[V]	I[A]

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

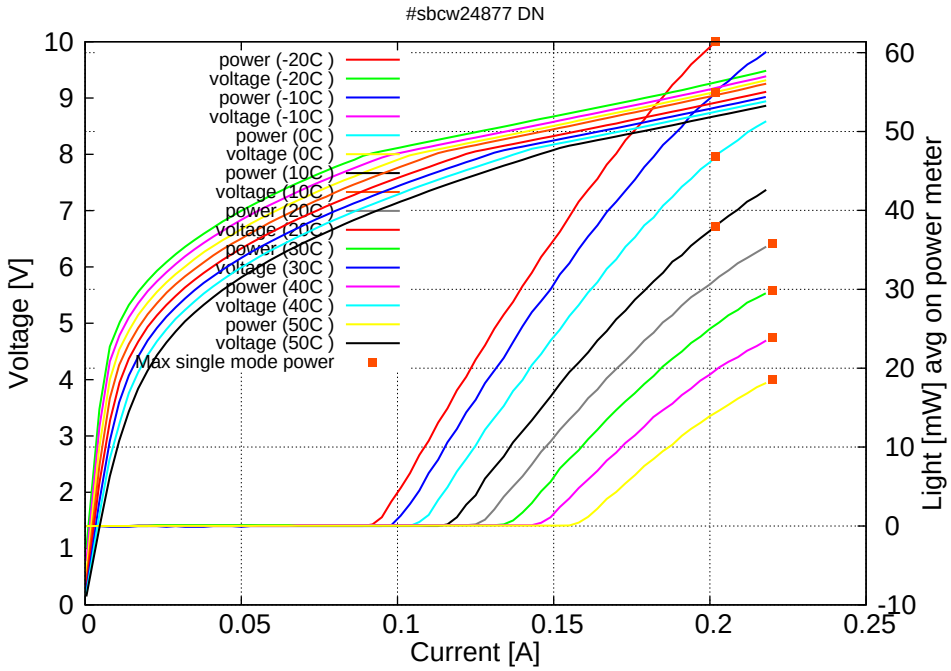

Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: Ith=0.09A / Vth=8.1V (2-wires measurements). Maximum operation current: 0.20A between -20C and 10C, 0.22A between 20C and 50C.

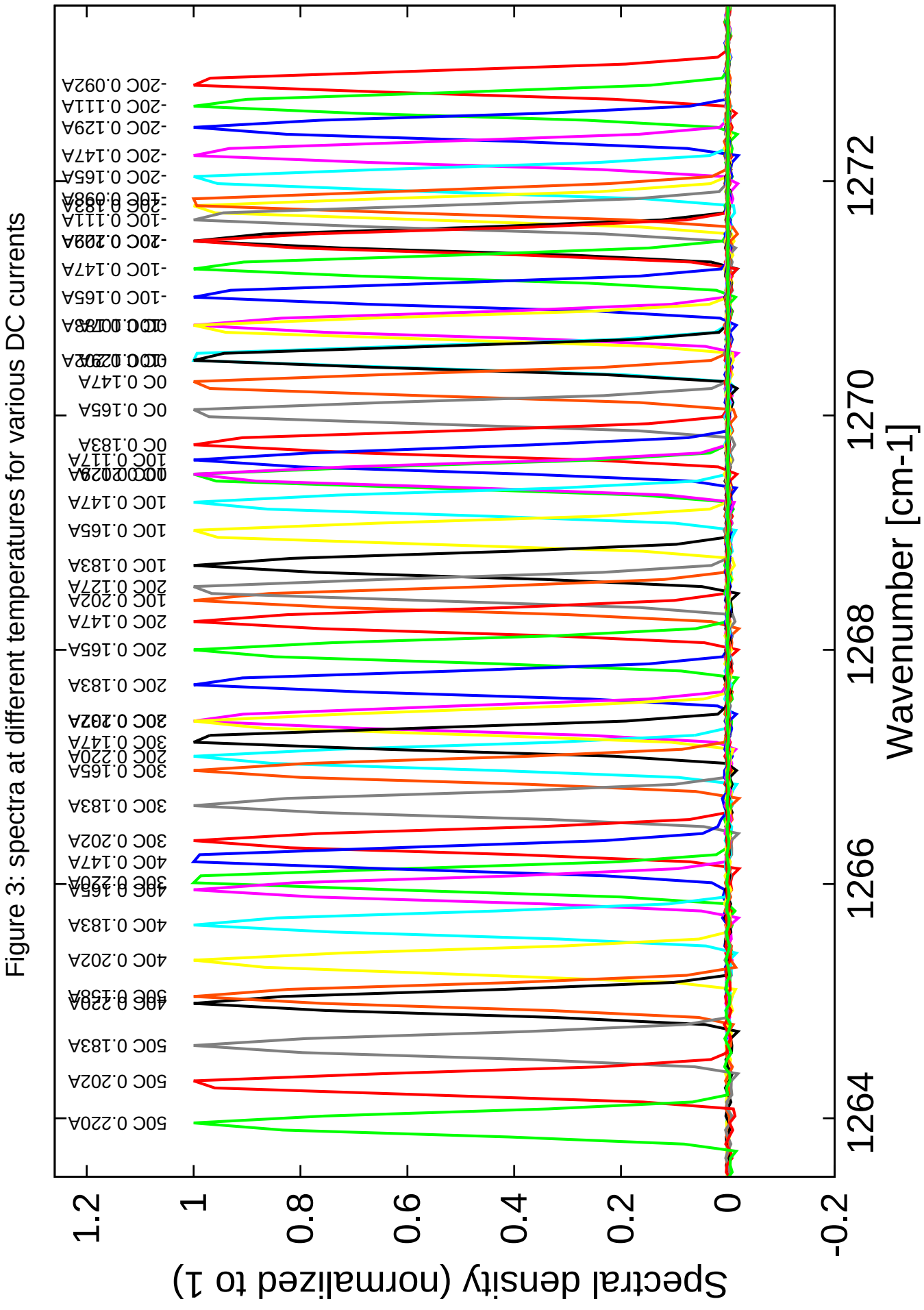

Figure 3: spectra at different temperatures for various DC currents