

Datasheet for #sbcw24874 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 #sbcw24874 DN (please note that AlN submount numbering is A0ZYG)

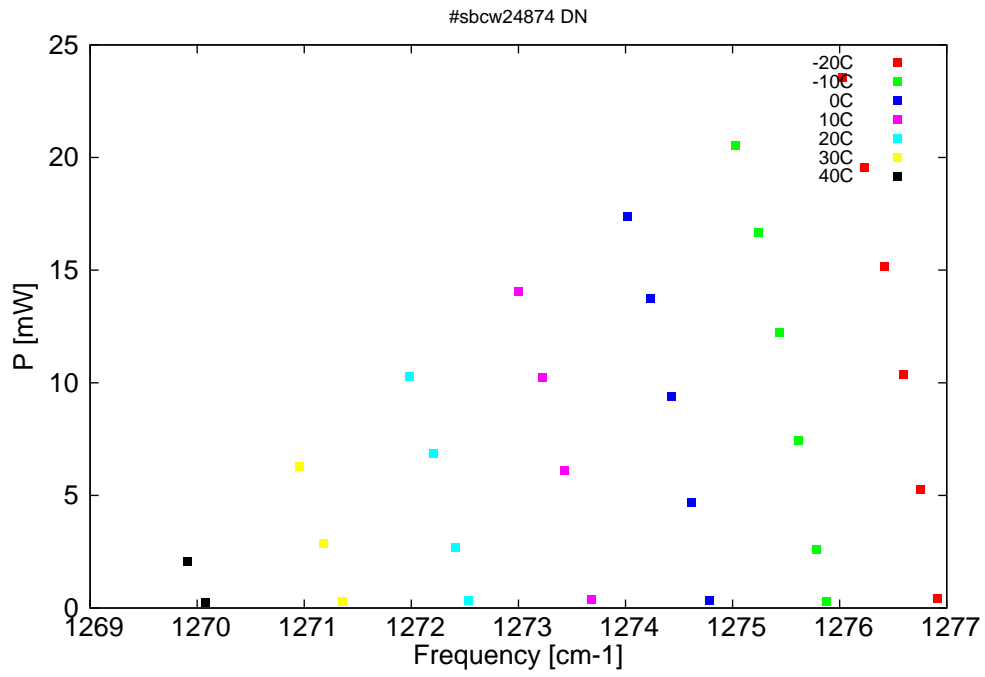


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

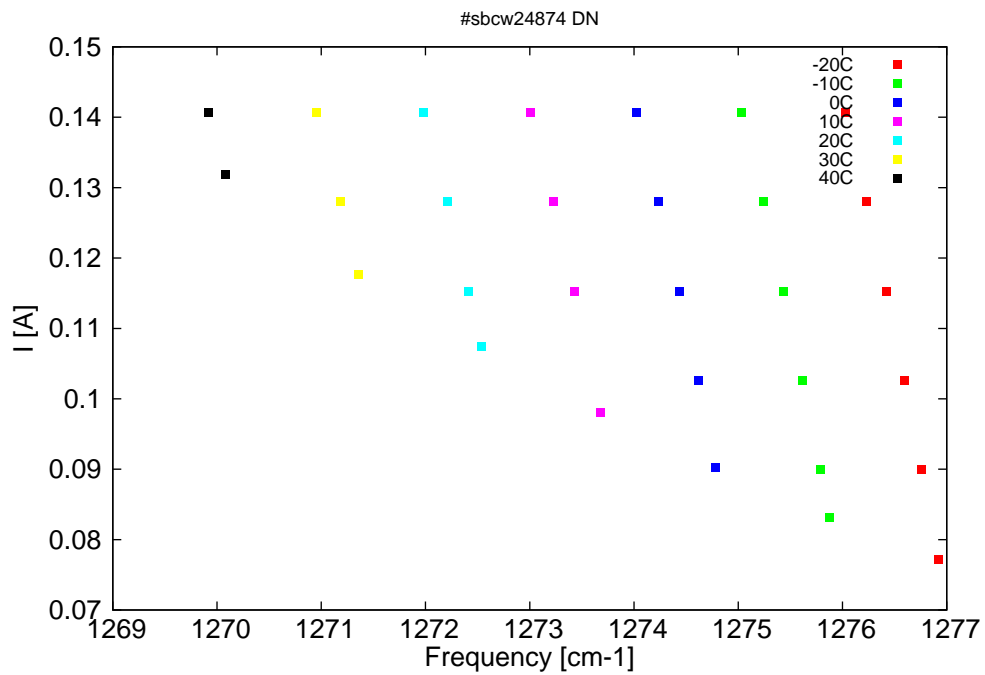


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7831.4	1276.9	0.4	-20	8.6	0.077
7832.3	1276.8	5.2	-20	8.83	0.09
7833.3	1276.6	10.4	-20	9.07	0.103
7834.4	1276.4	15.2	-20	9.31	0.115
7835.5	1276.2	19.5	-20	9.56	0.128
7836.8	1276	23.5	-20	9.83	0.141
7837.8	1275.9	0.3	-10	8.61	0.083
7838.3	1275.8	2.6	-10	8.74	0.09
7839.3	1275.6	7.5	-10	8.97	0.103
7840.5	1275.4	12.2	-10	9.21	0.115
7841.6	1275.2	16.7	-10	9.46	0.128
7842.9	1275	20.5	-10	9.72	0.141
7844.5	1274.8	0.3	0	8.66	0.09
7845.5	1274.6	4.7	0	8.89	0.103
7846.6	1274.4	9.4	0	9.13	0.115
7847.9	1274.2	13.8	0	9.37	0.128
7849.2	1274	17.4	0	9.63	0.141
7851.3	1273.7	0.4	10	8.73	0.098
7852.8	1273.4	6.1	10	9.05	0.115
7854.1	1273.2	10.2	10	9.3	0.128
7855.4	1273	14.1	10	9.55	0.141
7858.3	1272.5	0.4	20	8.84	0.107
7859.1	1272.4	2.7	20	8.99	0.115
7860.3	1272.2	6.8	20	9.23	0.128
7861.8	1272	10.3	20	9.48	0.141
7865.6	1271.4	0.3	30	8.97	0.118
7866.7	1271.2	2.9	30	9.16	0.128
7868.1	1271	6.3	30	9.42	0.141
7873.5	1270.1	0.2	40	9.17	0.132
7874.5	1269.9	2.1	40	9.35	0.141

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

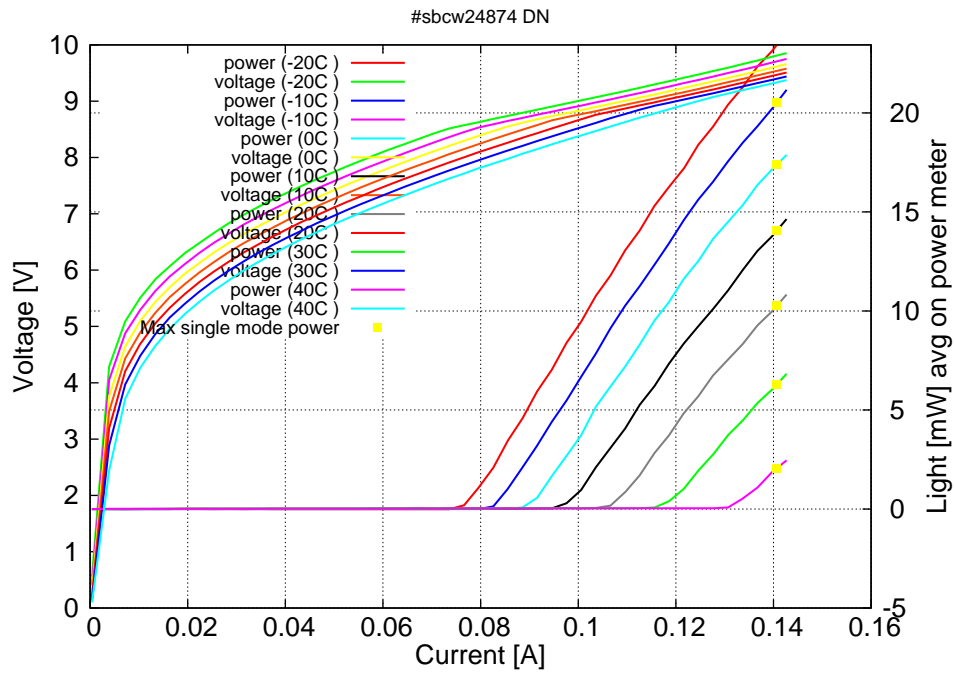


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.075A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.145A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

