

Datasheet for #sbcw24271 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 #sbcw24271 DN (please note that AlN submount numbering is A0ZMP)

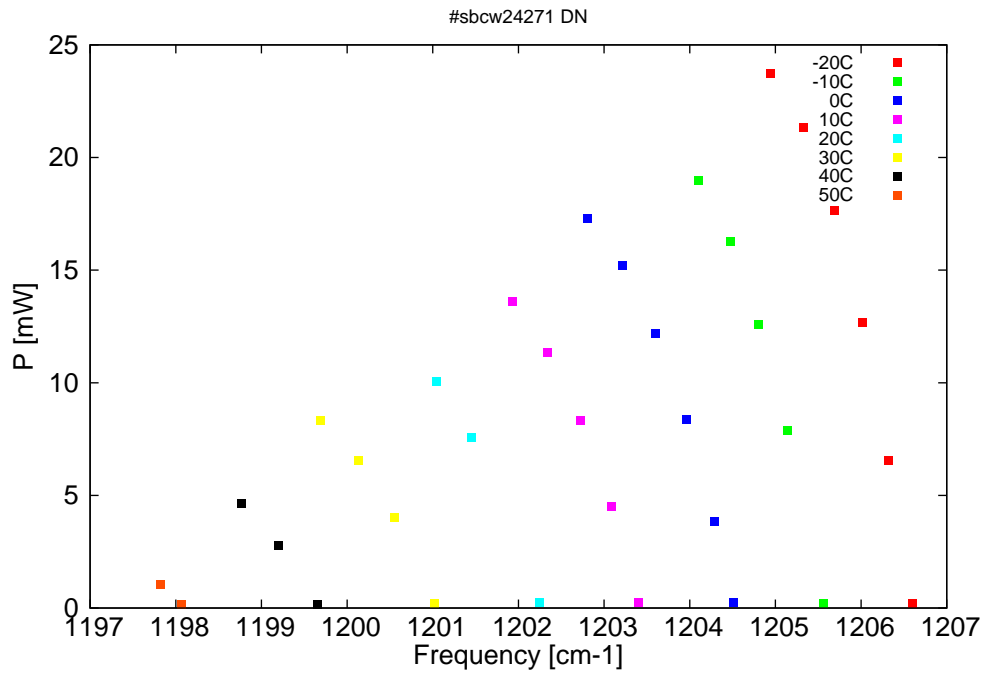


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

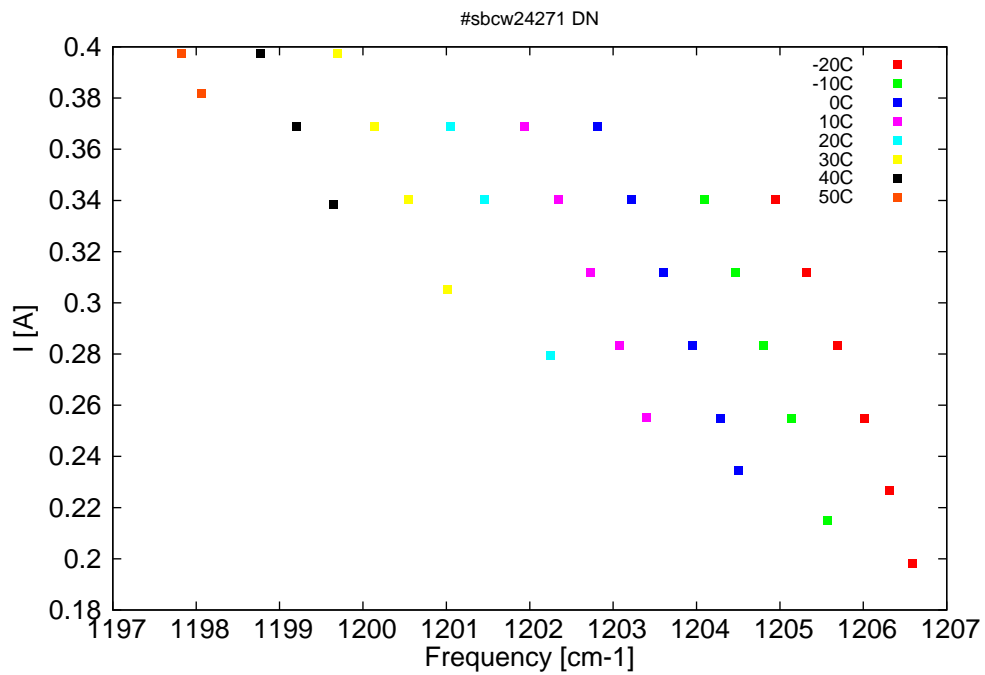


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8287.8	1206.6	0.2	-20	9.03	0.198
8289.7	1206.3	6.6	-20	9.46	0.227
8291.8	1206	12.7	-20	9.87	0.255
8294	1205.7	17.6	-20	10.28	0.284
8296.5	1205.3	21.3	-20	10.69	0.312
8299.1	1204.9	23.7	-20	11.07	0.34
8294.9	1205.6	0.2	-10	9.05	0.215
8297.8	1205.1	7.9	-10	9.61	0.255
8300.1	1204.8	12.6	-10	9.99	0.284
8302.4	1204.5	16.3	-10	10.36	0.312
8305	1204.1	19	-10	10.73	0.34
8302.2	1204.5	0.3	0	9.1	0.235
8303.7	1204.3	3.8	0	9.36	0.255
8305.9	1204	8.4	0	9.73	0.284
8308.4	1203.6	12.2	0	10.08	0.312
8311	1203.2	15.2	0	10.43	0.34
8313.9	1202.8	17.3	0	10.76	0.369
8309.7	1203.4	0.2	10	9.15	0.255
8312	1203.1	4.5	10	9.5	0.284
8314.4	1202.7	8.3	10	9.83	0.312
8317.1	1202.3	11.4	10	10.16	0.34
8319.9	1201.9	13.6	10	10.47	0.369
8317.8	1202.2	0.2	20	9.23	0.279
8323.2	1201.5	7.6	20	9.91	0.34
8326.1	1201	10	20	10.21	0.369
8326.3	1201	0.2	30	9.32	0.305
8329.5	1200.5	4	30	9.69	0.34
8332.4	1200.1	6.6	30	9.98	0.369
8335.5	1199.7	8.3	30	10.26	0.397
8335.8	1199.7	0.2	40	9.47	0.339
8338.9	1199.2	2.8	40	9.77	0.369
8341.9	1198.8	4.6	40	10.04	0.397
8346.8	1198.1	0.2	50	9.69	0.382
8348.4	1197.8	1	50	9.84	0.397

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

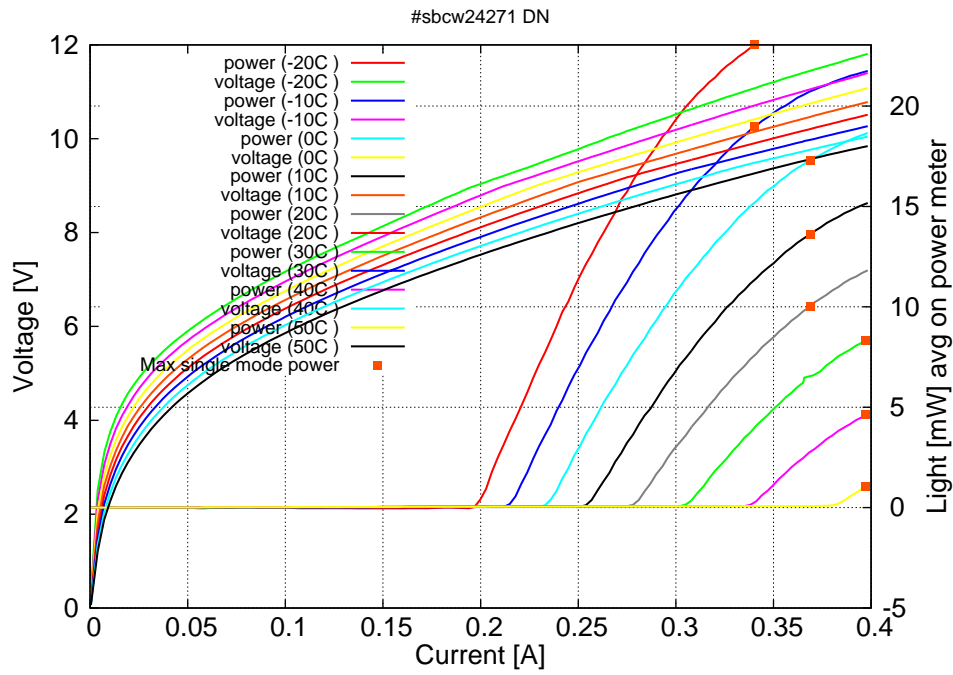


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.34A between -20C and -10C, 0.37A between 0C and 20C, 0.40A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

