

Datasheet for #sbcw24474 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 #sbcw24474 DN (please note that AlN submount numbering is A0ZRZ)

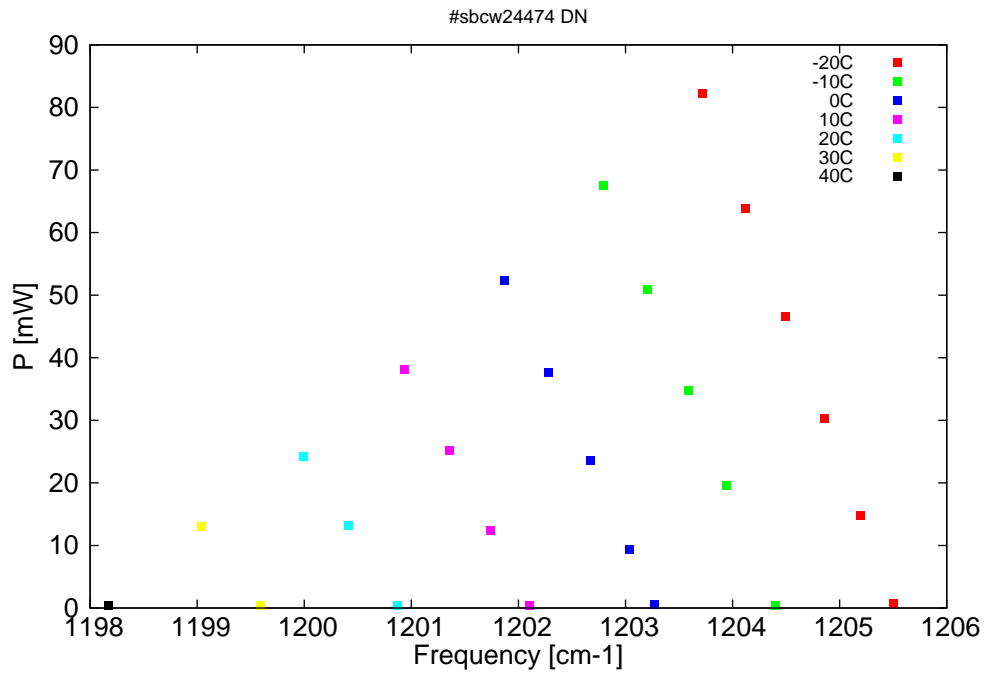


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

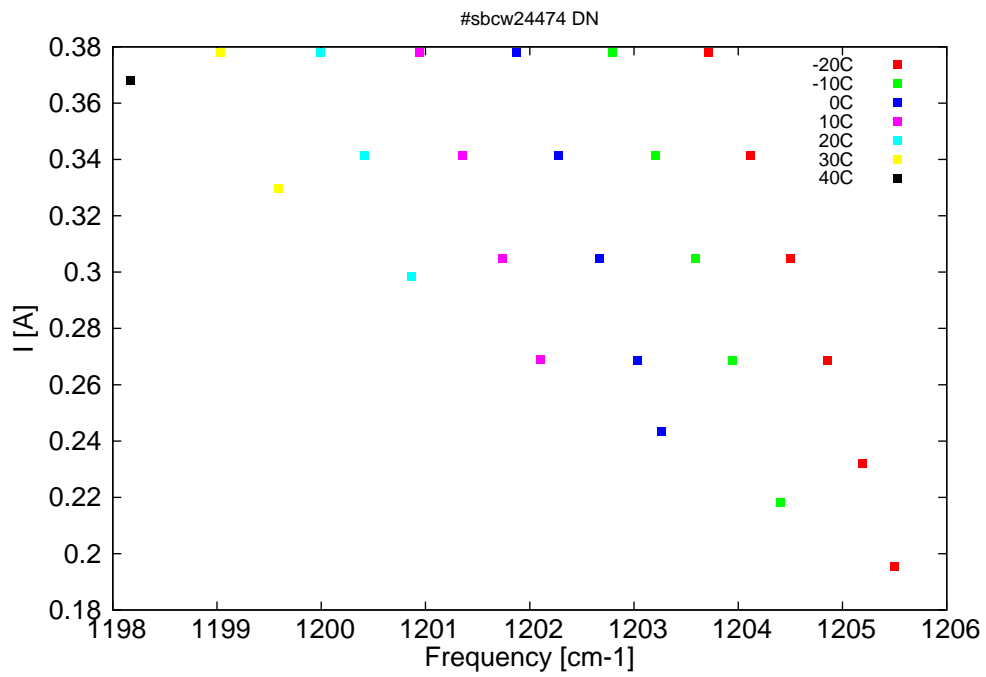


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8295.3	1205.5	0.8	-20	8.79	0.196
8297.4	1205.2	14.8	-20	9.37	0.232
8299.7	1204.9	30.3	-20	9.93	0.269
8302.2	1204.5	46.6	-20	10.46	0.305
8304.8	1204.1	63.8	-20	10.95	0.342
8307.6	1203.7	82.2	-20	11.43	0.378
8302.9	1204.4	0.4	-10	8.86	0.218
8306	1203.9	19.6	-10	9.58	0.269
8308.5	1203.6	34.8	-10	10.08	0.305
8311.1	1203.2	50.9	-10	10.55	0.342
8314	1202.8	67.5	-10	10.99	0.378
8310.7	1203.3	0.6	0	8.95	0.243
8312.3	1203	9.4	0	9.28	0.269
8314.8	1202.7	23.5	0	9.74	0.305
8317.5	1202.3	37.6	0	10.18	0.342
8320.4	1201.9	52.4	0	10.6	0.378
8318.8	1202.1	0.4	10	9.02	0.269
8321.3	1201.7	12.4	10	9.44	0.305
8324	1201.4	25.1	10	9.85	0.342
8326.8	1200.9	38.1	10	10.24	0.378
8327.3	1200.9	0.4	20	9.1	0.299
8330.5	1200.4	13.2	20	9.55	0.342
8333.4	1200	24.2	20	9.92	0.378
8336.2	1199.6	0.4	30	9.17	0.33
8340	1199	13.1	30	9.63	0.378
8346.1	1198.2	0.5	40	9.29	0.368

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

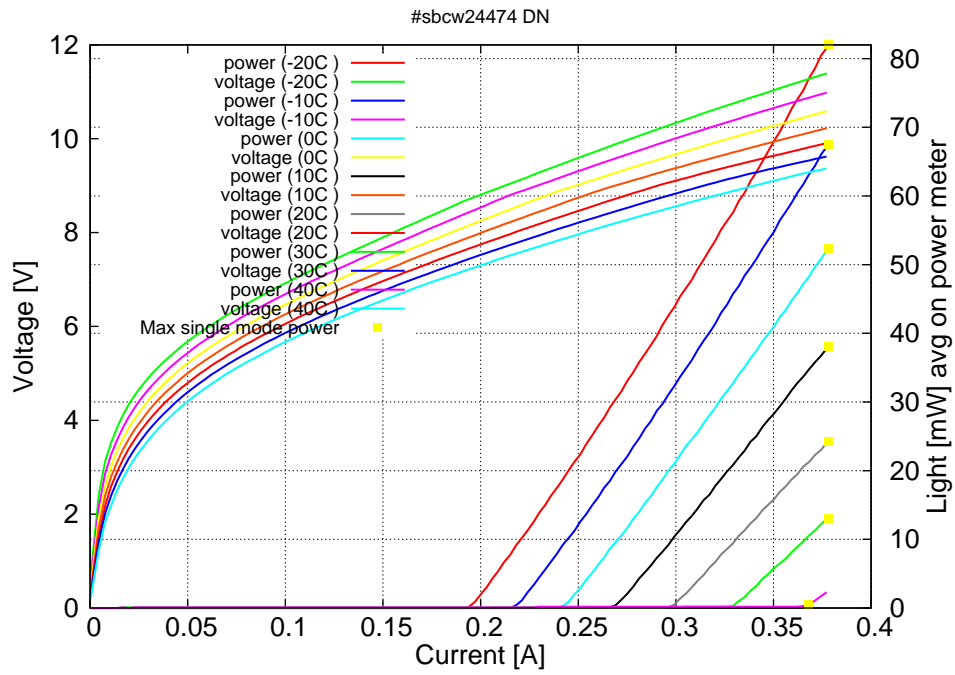


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.38A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

