

Datasheet for #sbcw24475 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 #sbcw24475 DN (please note that AlN submount numbering is A0ZV2)

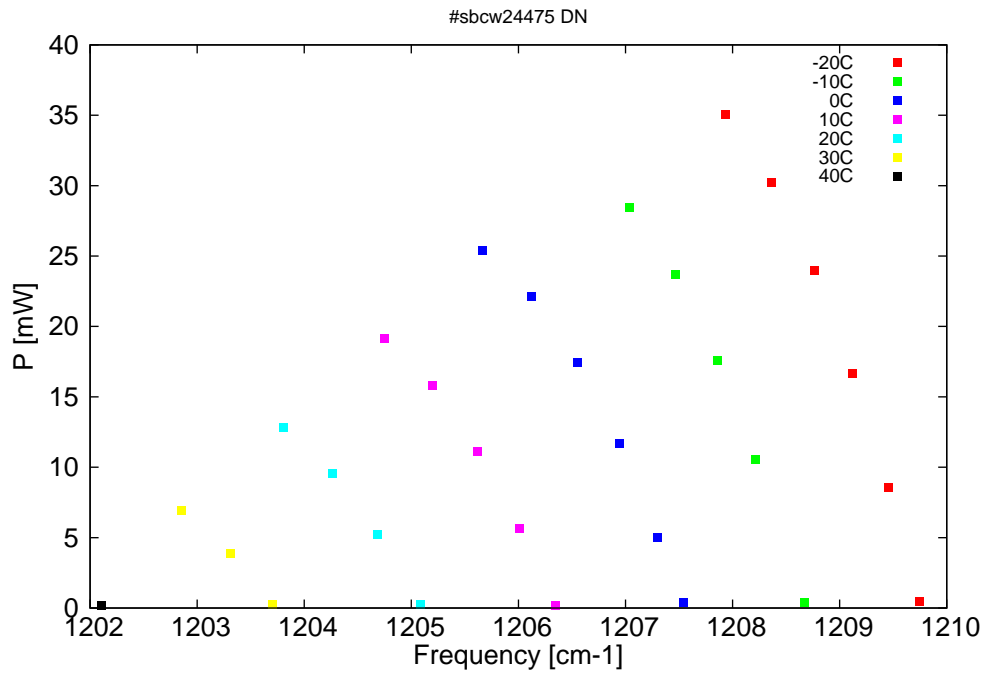


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

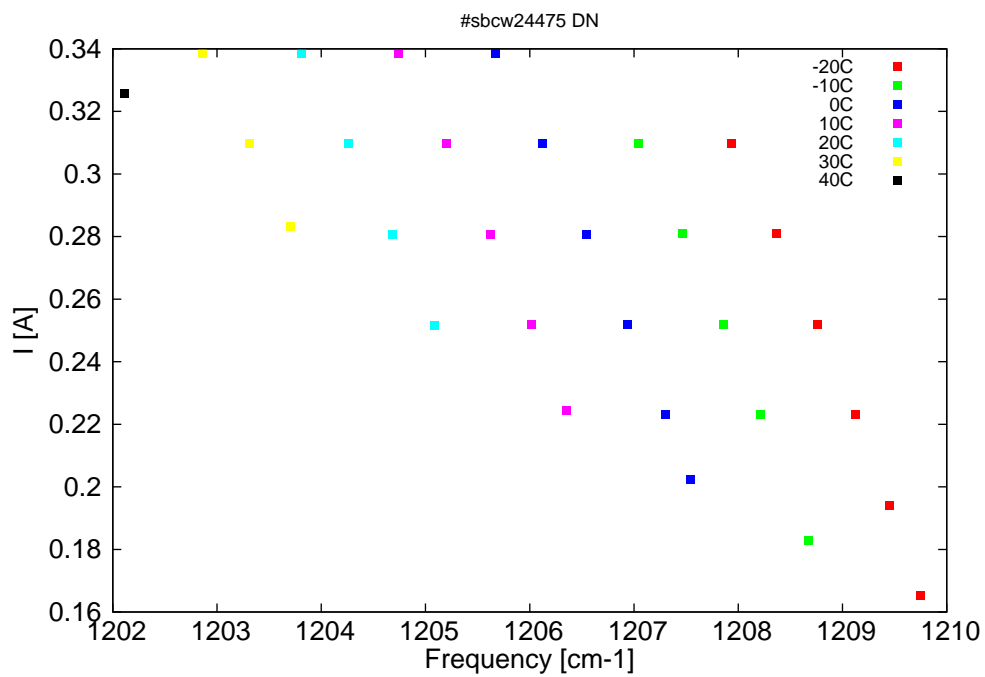


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8266.2	1209.8	0.4	-20	9.72	0.165
8268.2	1209.5	8.6	-20	10.3	0.194
8270.5	1209.1	16.7	-20	10.88	0.223
8272.9	1208.8	24	-20	11.46	0.252
8275.6	1208.4	30.3	-20	12.03	0.281
8278.6	1207.9	35	-20	12.59	0.31
8273.6	1208.7	0.4	-10	9.82	0.183
8276.7	1208.2	10.6	-10	10.57	0.223
8279.1	1207.9	17.6	-10	11.12	0.252
8281.8	1207.5	23.7	-10	11.65	0.281
8284.7	1207	28.5	-10	12.17	0.31
8281.3	1207.5	0.4	0	9.94	0.203
8282.9	1207.3	5	0	10.3	0.223
8285.4	1206.9	11.7	0	10.81	0.252
8288.1	1206.5	17.4	0	11.31	0.281
8291	1206.1	22.1	0	11.81	0.31
8294.2	1205.7	25.4	0	12.28	0.339
8289.5	1206.3	0.2	10	10.01	0.225
8291.8	1206	5.6	10	10.47	0.252
8294.5	1205.6	11.1	10	10.93	0.281
8297.4	1205.2	15.8	10	11.39	0.31
8300.5	1204.7	19.1	10	11.85	0.339
8298.2	1205.1	0.2	20	10.14	0.252
8300.9	1204.7	5.2	20	10.59	0.281
8303.8	1204.3	9.5	20	11.01	0.31
8307	1203.8	12.8	20	11.42	0.339
8307.7	1203.7	0.2	30	10.36	0.283
8310.4	1203.3	3.8	30	10.73	0.31
8313.5	1202.9	7	30	11.12	0.339
8318.7	1202.1	0.2	40	10.68	0.326

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

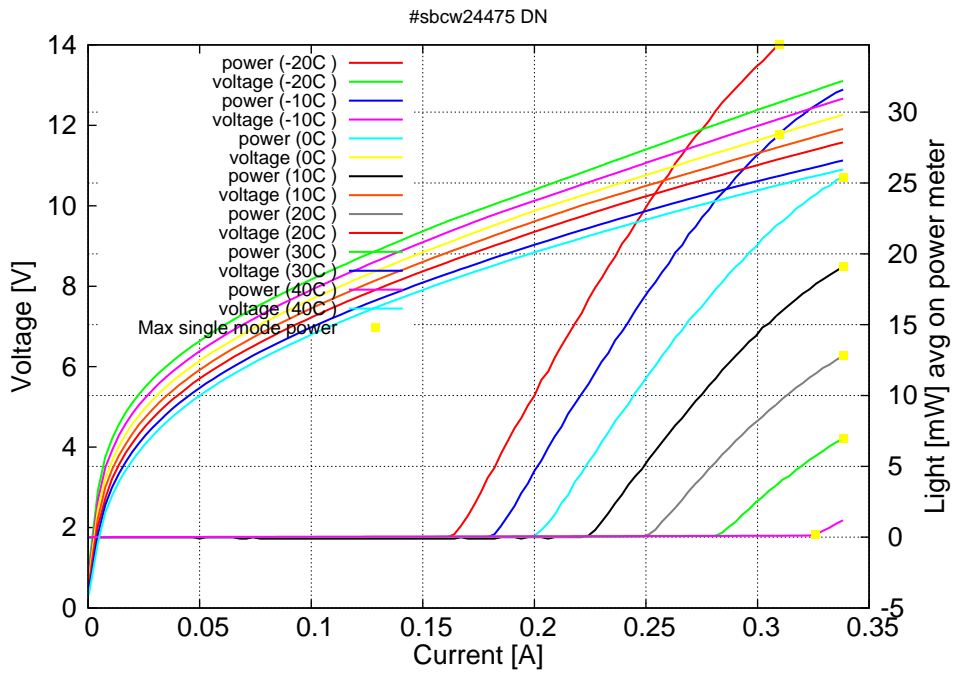


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.16A$ / $V_{th}=9.5V$ (2-wires measurements). Maximum operation current: 0.31A between -20C and -10C, 0.34A between 0C and 40C.

Figure 3: spectra at different temperatures for various DC currents

