

Datasheet for #sbcw24077 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 #sbcw24077 DN (please note that AlN submount numbering is A0WVX)

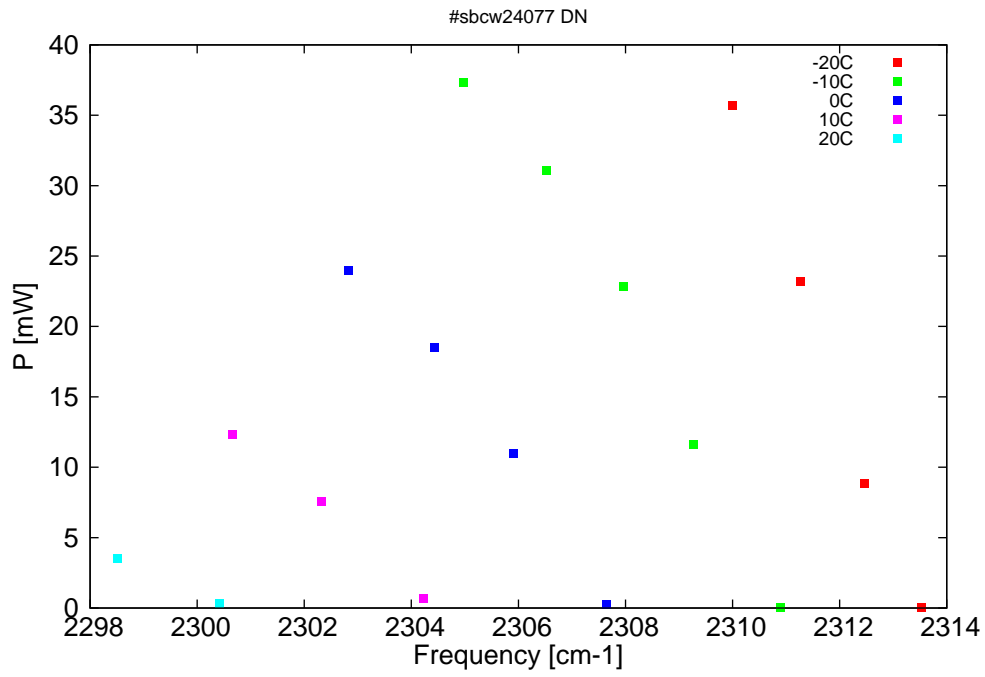


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

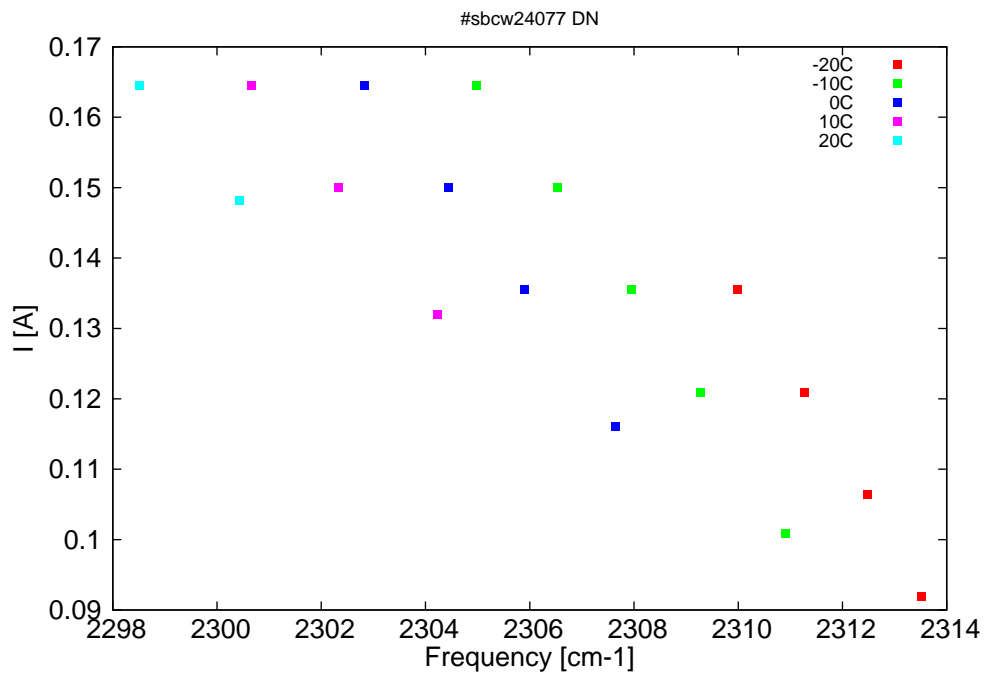


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4322.4	2313.5	0	-20	12.49	0.092
4324.4	2312.5	8.8	-20	12.73	0.106
4326.6	2311.3	23.2	-20	12.99	0.121
4329	2310	35.7	-20	13.25	0.136
4327.3	2310.9	0	-10	12.55	0.101
4330.4	2309.3	11.6	-10	12.88	0.121
4332.8	2308	22.8	-10	13.14	0.136
4335.5	2306.5	31.1	-10	13.39	0.15
4338.4	2305	37.3	-10	13.65	0.165
4333.4	2307.7	0.3	0	12.7	0.116
4336.7	2305.9	11	0	13.04	0.136
4339.5	2304.4	18.5	0	13.29	0.15
4342.5	2302.8	24	0	13.54	0.165
4339.9	2304.2	0.7	10	12.88	0.132
4343.4	2302.3	7.6	10	13.19	0.15
4346.6	2300.7	12.3	10	13.44	0.165
4347	2300.4	0.3	20	13.08	0.148
4350.6	2298.5	3.5	20	13.35	0.165

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

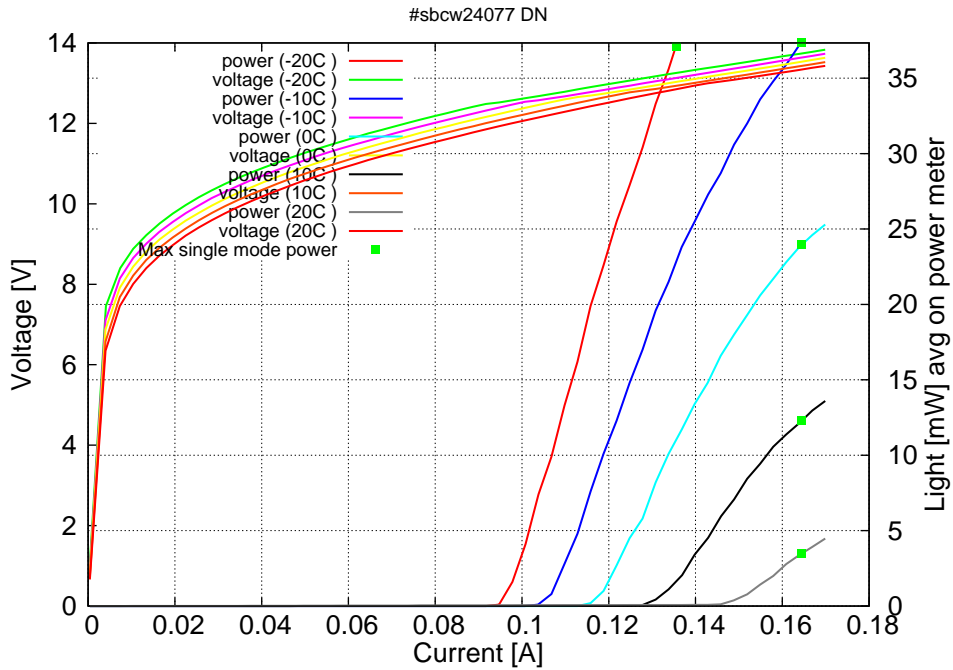


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=12.5V$ (2-wires measurements). Maximum operation current: 0.135A at -20C, 0.17A between -10C and 20C.

Figure 3: spectra at different temperatures for various DC currents

