

Datasheet for #sbcw23723 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 #sbcw23723 DN (please note that AlN submount numbering is A0Z33)

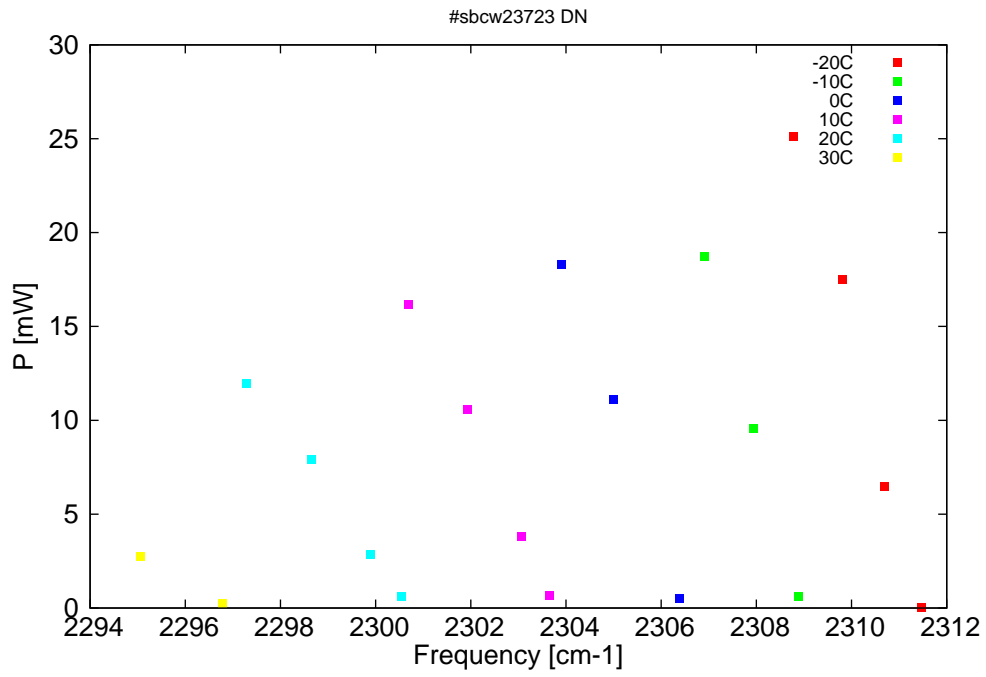


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

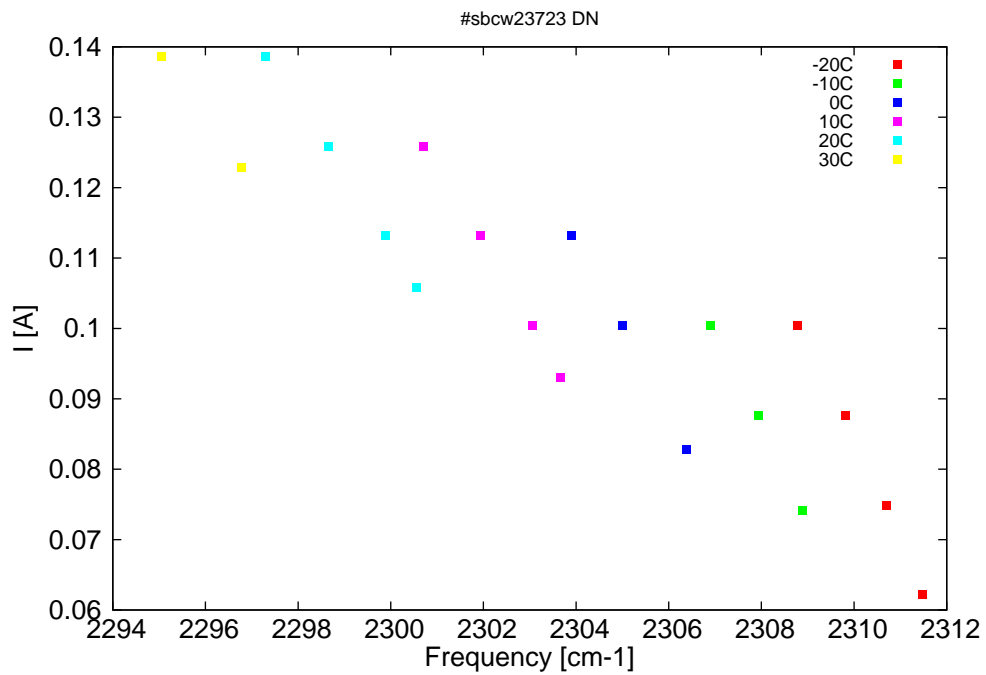


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
4326.2	2311.5	0	-20	12.15	0.062
4327.7	2310.7	6.5	-20	12.4	0.075
4329.4	2309.8	17.5	-20	12.65	0.088
4331.3	2308.8	25.1	-20	12.9	0.1
4331.1	2308.9	0.6	-10	12.31	0.074
4332.9	2307.9	9.6	-10	12.57	0.088
4334.8	2306.9	18.7	-10	12.81	0.1
4335.8	2306.4	0.5	0	12.42	0.083
4338.4	2305	11.1	0	12.75	0.1
4340.5	2303.9	18.3	0	12.99	0.113
4340.9	2303.7	0.7	10	12.56	0.093
4342	2303.1	3.8	10	12.7	0.1
4344.2	2301.9	10.6	10	12.94	0.113
4346.5	2300.7	16.2	10	13.18	0.126
4346.8	2300.5	0.6	20	12.77	0.106
4348	2299.9	2.9	20	12.91	0.113
4350.4	2298.6	7.9	20	13.14	0.126
4353	2297.3	12	20	13.39	0.139
4353.9	2296.8	0.3	30	13.11	0.123
4357.2	2295.1	2.8	30	13.41	0.139

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

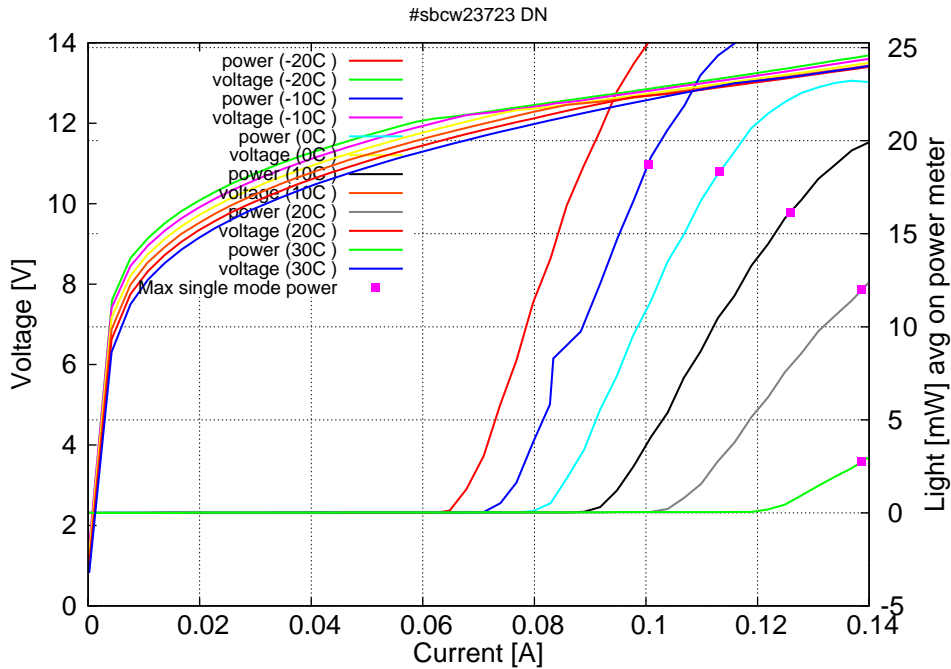


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07\text{A}$ / $V_{th}=12.2\text{V}$ (2-wires measurements). Maximum operation current: 0.10A between -20C and -10C, 0.115A at 0C, 0.125A at 10C, 0.14A between 20C

and 30C.

Figure 3: spectra at different temperatures for various DC currents

