

Datasheet for #sbcw23730 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 #sbcw23730 DN (please note that AlN submount numbering is S12PP)

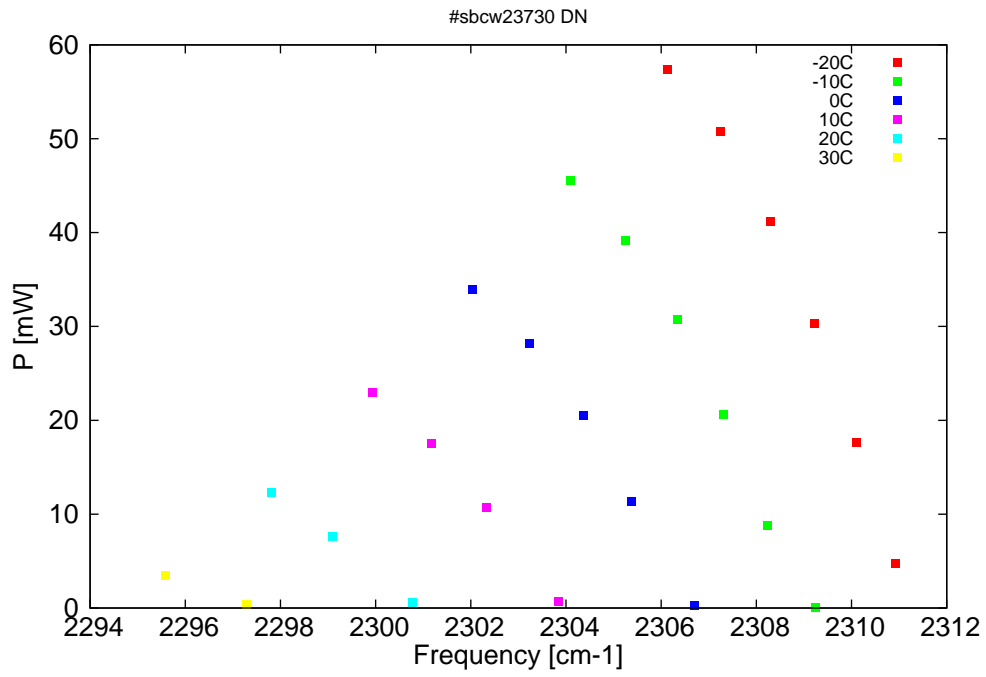


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

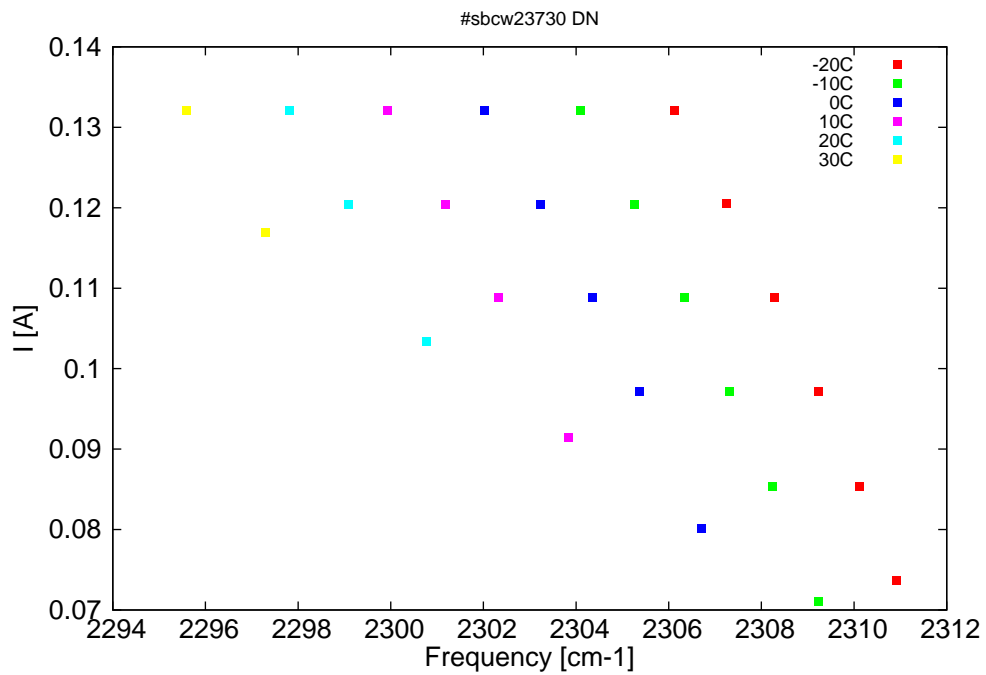


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4327.3	2310.9	4.7	-20	12.77	0.074
4328.8	2310.1	17.7	-20	13.03	0.085
4330.4	2309.2	30.4	-20	13.28	0.097
4332.2	2308.3	41.2	-20	13.54	0.109
4334.2	2307.2	50.8	-20	13.79	0.121
4336.3	2306.1	57.4	-20	14.04	0.132
4330.4	2309.2	0	-10	12.65	0.071
4332.3	2308.2	8.8	-10	12.94	0.085
4334	2307.3	20.6	-10	13.19	0.097
4335.9	2306.3	30.7	-10	13.44	0.109
4337.9	2305.3	39.1	-10	13.7	0.12
4340.1	2304.1	45.5	-10	13.95	0.132
4335.2	2306.7	0.2	0	12.76	0.08
4337.7	2305.4	11.3	0	13.1	0.097
4339.6	2304.4	20.5	0	13.36	0.109
4341.7	2303.2	28.2	0	13.61	0.12
4344	2302	34	0	13.87	0.132
4340.6	2303.8	0.7	10	12.93	0.092
4343.4	2302.3	10.7	10	13.28	0.109
4345.6	2301.2	17.5	10	13.54	0.12
4348	2299.9	22.9	10	13.79	0.132
4346.4	2300.8	0.6	20	13.13	0.103
4349.6	2299.1	7.7	20	13.47	0.12
4352	2297.8	12.3	20	13.72	0.132
4352.9	2297.3	0.4	30	13.38	0.117
4356.2	2295.6	3.5	30	13.69	0.132

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

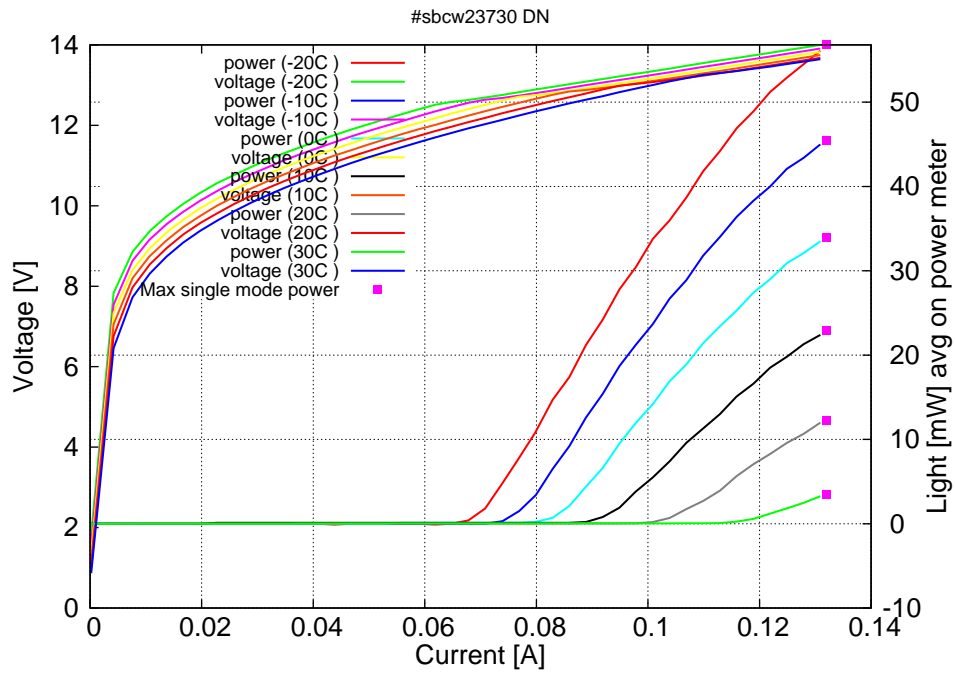


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=12.6V$ (2-wires measurements). Maximum operation current: 0.132A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

