

Datasheet for #sbcw23731 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 #sbcw23731 DN (please note that AlN submount numbering is A12R1)

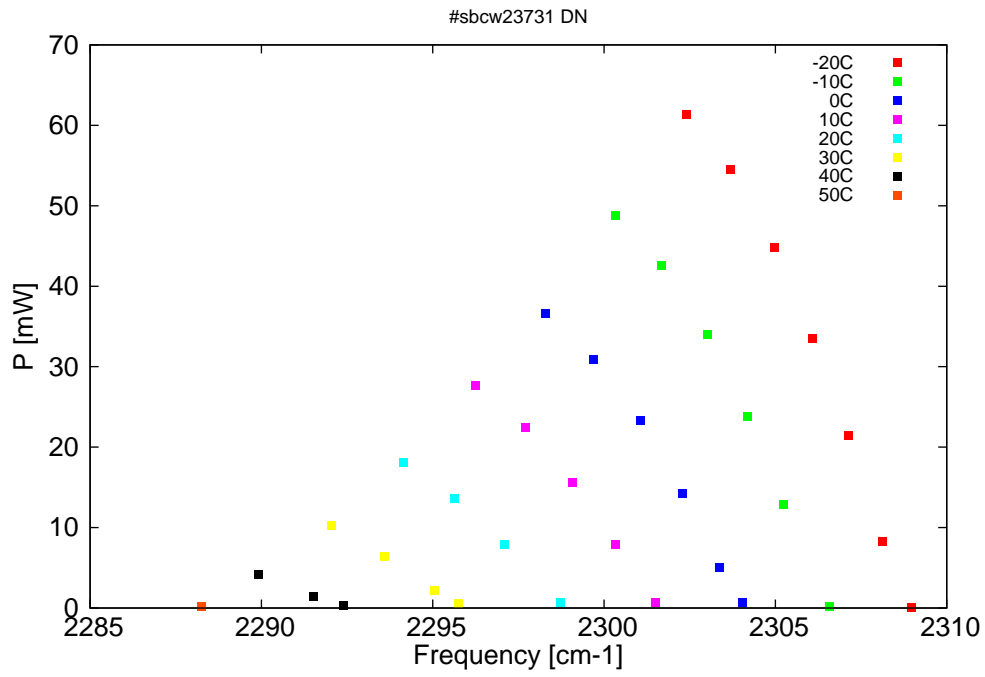


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

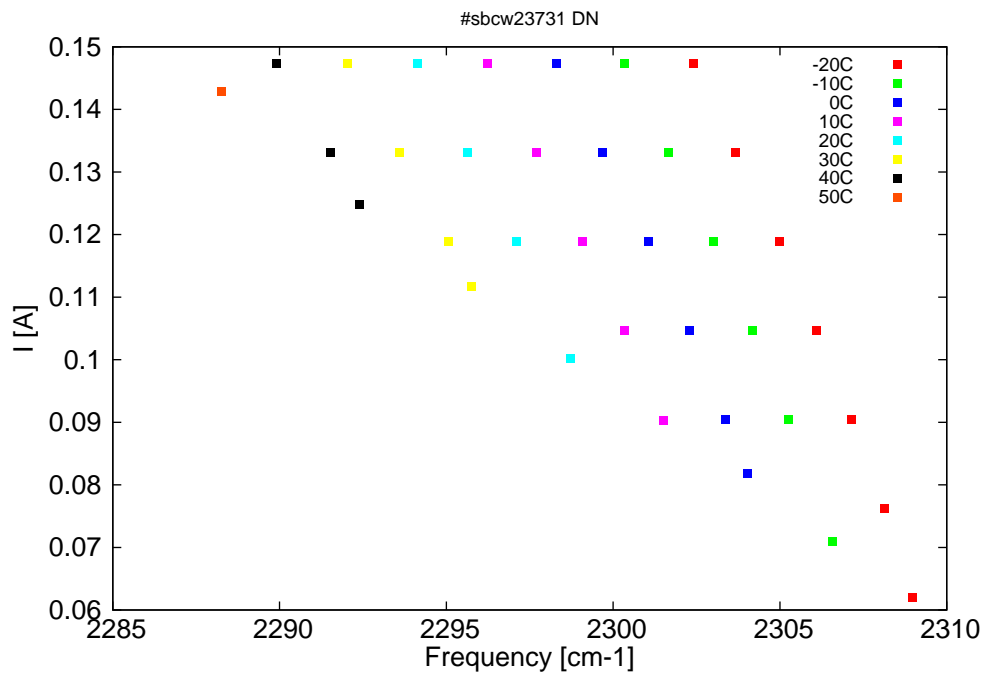


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4330.9	2309	0	-20	12.04	0.062
4332.5	2308.1	8.3	-20	12.31	0.076
4334.4	2307.1	21.5	-20	12.59	0.091
4336.4	2306.1	33.6	-20	12.86	0.105
4338.4	2305	44.8	-20	13.13	0.119
4340.9	2303.7	54.5	-20	13.4	0.133
4343.3	2302.4	61.4	-20	13.67	0.147
4335.4	2306.6	0.2	-10	12.13	0.071
4337.9	2305.2	12.9	-10	12.49	0.091
4339.9	2304.2	23.8	-10	12.76	0.105
4342.1	2303	34	-10	13.03	0.119
4344.7	2301.7	42.5	-10	13.3	0.133
4347.2	2300.3	48.8	-10	13.57	0.147
4340.2	2304	0.7	0	12.25	0.082
4341.5	2303.4	5	0	12.4	0.091
4343.5	2302.3	14.3	0	12.67	0.105
4345.8	2301.1	23.4	0	12.94	0.119
4348.4	2299.7	30.9	0	13.2	0.133
4351	2298.3	36.6	0	13.47	0.147
4345	2301.5	0.7	10	12.33	0.09
4347.2	2300.3	7.9	10	12.59	0.105
4349.6	2299.1	15.6	10	12.85	0.119
4352.2	2297.7	22.5	10	13.12	0.133
4355	2296.2	27.7	10	13.38	0.147
4350.2	2298.7	0.7	20	12.45	0.1
4353.3	2297.1	7.9	20	12.77	0.119
4356.1	2295.6	13.7	20	13.04	0.133
4358.9	2294.1	18	20	13.3	0.147
4355.9	2295.8	0.5	30	12.6	0.112
4357.2	2295.1	2.2	30	12.71	0.119
4360	2293.6	6.4	30	12.97	0.133
4362.9	2292	10.3	30	13.23	0.147
4362.3	2292.4	0.3	40	12.79	0.125
4363.9	2291.5	1.5	40	12.92	0.133
4367	2289.9	4.1	40	13.17	0.147
4370.2	2288.2	0.1	50	13.08	0.143

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

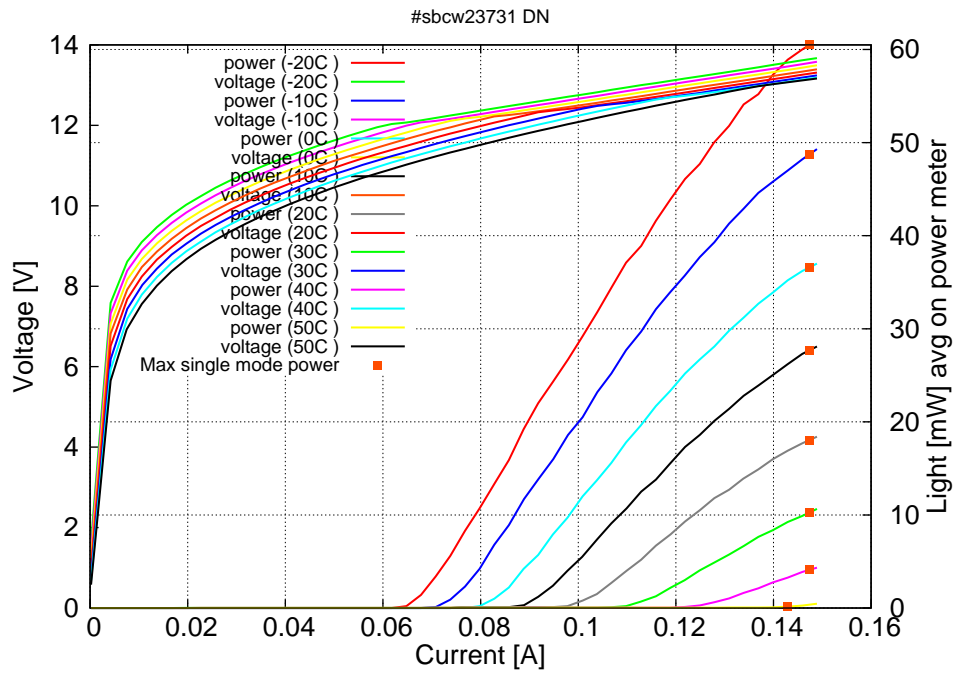


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=12.1V$ (2-wires measurements). Maximum operation current: 0.15A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

