

Datasheet for #sbcw18523 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 #sbcw18523 DN (please note that AlN submount numbering is A03F1)

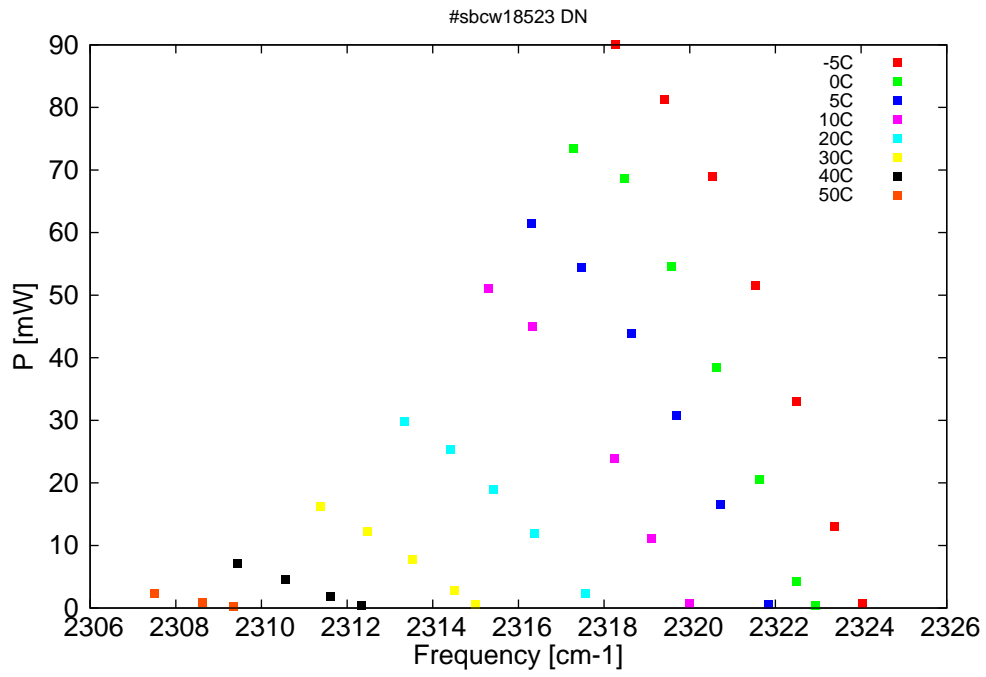


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

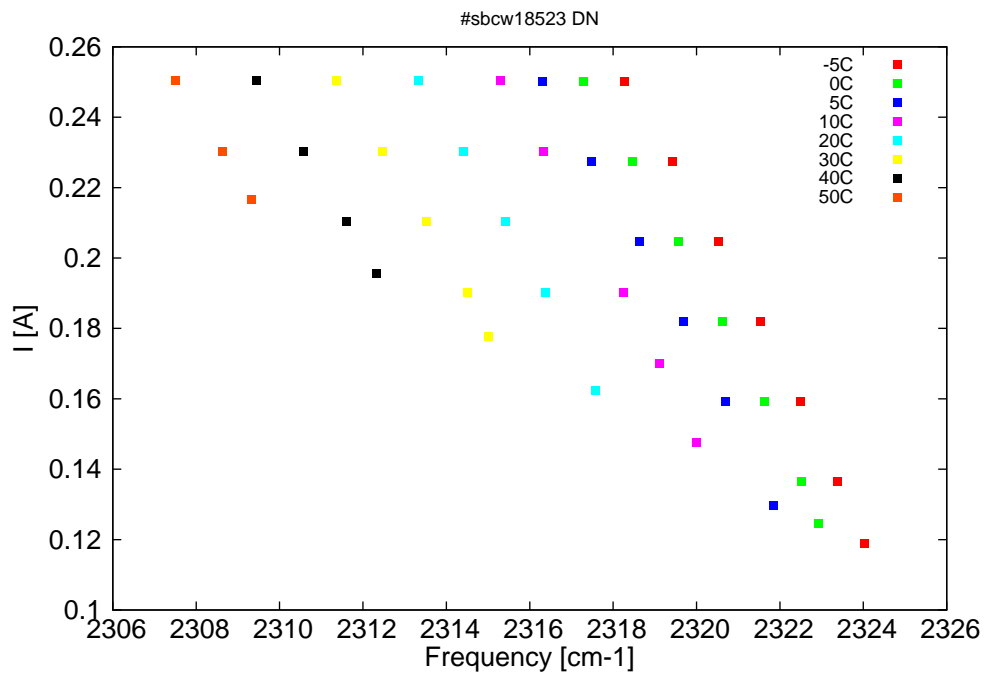


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4302.9	2324	0.6	-5	11.96	0.119
4304.1	2323.4	13	-5	12.12	0.136
4305.7	2322.5	33	-5	12.35	0.159
4307.5	2321.5	51.5	-5	12.58	0.182
4309.4	2320.5	68.9	-5	12.81	0.205
4311.4	2319.4	81.3	-5	13.04	0.228
4313.6	2318.3	90	-5	13.27	0.25
4304.9	2322.9	0.4	0	11.98	0.125
4305.7	2322.5	4.2	0	12.08	0.136
4307.3	2321.6	20.5	0	12.3	0.159
4309.2	2320.6	38.5	0	12.54	0.182
4311.1	2319.6	54.5	0	12.77	0.205
4313.2	2318.5	68.6	0	13	0.228
4315.4	2317.3	73.5	0	13.22	0.25
4306.9	2321.8	0.5	5	11.99	0.13
4309	2320.7	16.6	5	12.26	0.159
4310.9	2319.7	30.8	5	12.49	0.182
4312.9	2318.6	43.9	5	12.72	0.205
4315	2317.5	54.4	5	12.95	0.228
4317.2	2316.3	61.5	5	13.18	0.25
4310.4	2320	0.7	10	12.11	0.148
4312	2319.1	11.1	10	12.3	0.17
4313.6	2318.2	23.8	10	12.49	0.19
4317.2	2316.3	45	10	12.87	0.23
4319.1	2315.3	51	10	13.06	0.25
4314.9	2317.6	2.3	20	12.17	0.163
4317.1	2316.4	11.9	20	12.41	0.19
4318.9	2315.4	19	20	12.59	0.21
4320.8	2314.4	25.3	20	12.78	0.23
4322.8	2313.3	29.9	20	12.97	0.25
4319.6	2315	0.6	30	12.24	0.178
4320.6	2314.5	2.8	30	12.34	0.19
4322.4	2313.5	7.7	30	12.52	0.21
4324.4	2312.5	12.2	30	12.7	0.23
4326.4	2311.4	16.2	30	12.89	0.25
4324.6	2312.3	0.4	40	12.34	0.196
4326	2311.6	1.9	40	12.46	0.21
4327.9	2310.6	4.5	40	12.63	0.23
4330.1	2309.4	7.1	40	12.82	0.25
4330.2	2309.3	0.3	50	12.49	0.217
4331.6	2308.6	1	50	12.59	0.23
4333.7	2307.5	2.3	50	12.76	0.25

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

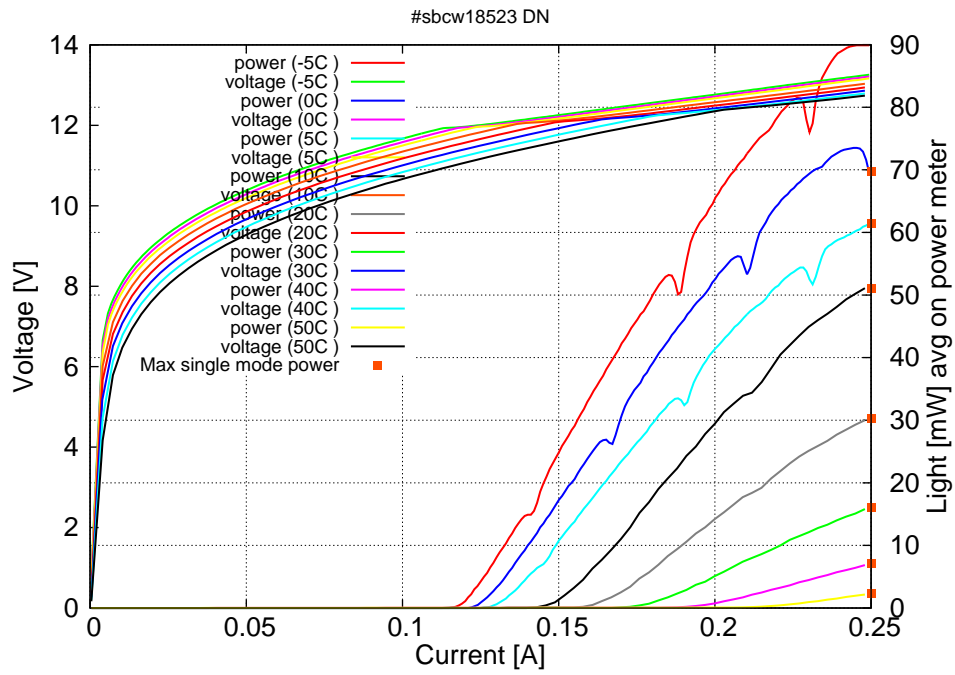


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -5C: $I_{th}=0.12A$ / $V_{th}=11.9V$ (2-wires measurements). Maximum operation current: 0.25A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

