

Datasheet for #sbcw18522 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 #sbcw18522 DN (please note that AlN submount numbering is A03F9)

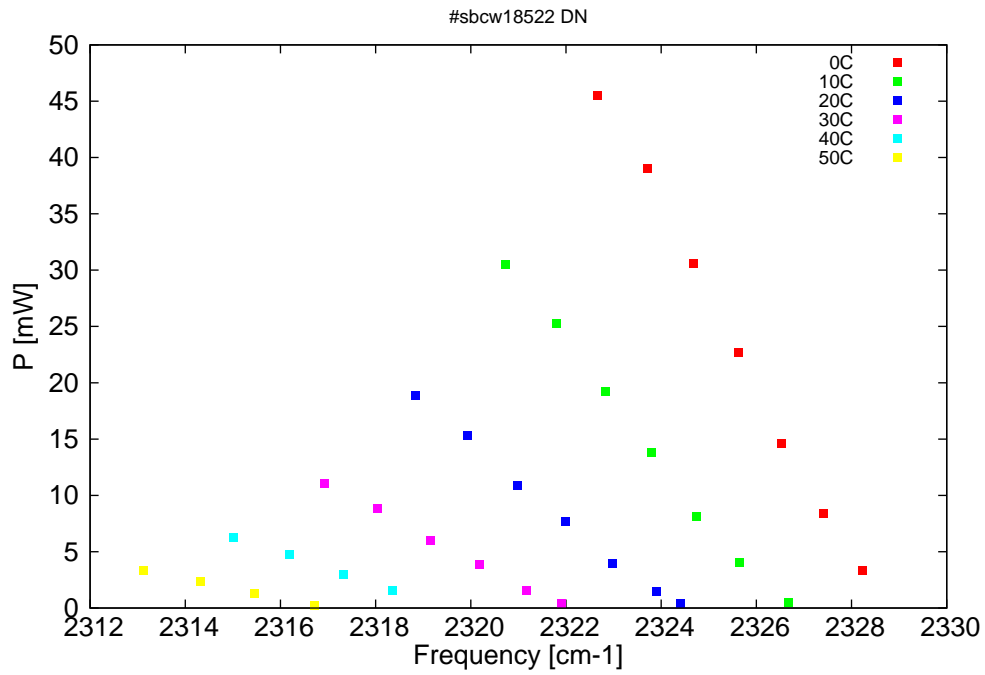


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

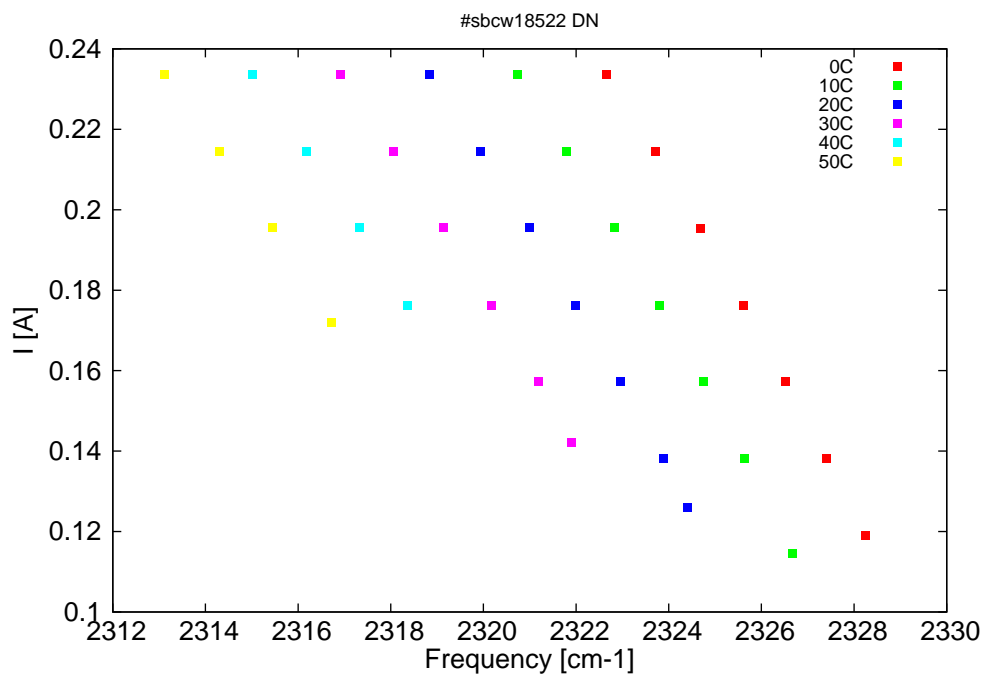


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4295.1	2328.2	3.4	0	12.19	0.119
4296.6	2327.4	8.4	0	12.42	0.138
4298.3	2326.5	14.6	0	12.64	0.157
4299.9	2325.6	22.7	0	12.86	0.176
4301.7	2324.7	30.6	0	13.08	0.195
4303.5	2323.7	39	0	13.31	0.215
4305.4	2322.7	45.5	0	13.53	0.234
4298	2326.7	0.5	10	12.09	0.115
4299.9	2325.6	4.1	10	12.35	0.138
4301.6	2324.7	8.2	10	12.57	0.157
4303.3	2323.8	13.8	10	12.79	0.176
4305.1	2322.8	19.2	10	13.01	0.196
4307	2321.8	25.3	10	13.23	0.215
4309	2320.7	30.5	10	13.45	0.234
4302.2	2324.4	0.4	20	12.17	0.126
4303.1	2323.9	1.5	20	12.3	0.138
4304.8	2323	4	20	12.51	0.157
4306.6	2322	7.7	20	12.73	0.176
4308.5	2321	10.9	20	12.95	0.196
4310.5	2319.9	15.3	20	13.17	0.215
4312.5	2318.8	18.9	20	13.38	0.234
4306.8	2321.9	0.4	30	12.3	0.142
4308.2	2321.2	1.6	30	12.47	0.157
4310	2320.2	3.8	30	12.67	0.176
4311.9	2319.1	6	30	12.89	0.196
4314	2318	8.8	30	13.1	0.215
4316.1	2316.9	11.1	30	13.32	0.234
4313.4	2318.4	1.6	40	12.62	0.176
4315.3	2317.3	3	40	12.83	0.196
4317.5	2316.2	4.8	40	13.05	0.215
4319.6	2315	6.2	40	13.26	0.234
4316.5	2316.7	0.2	50	12.56	0.172
4318.8	2315.5	1.3	50	12.79	0.196
4320.9	2314.3	2.4	50	12.99	0.215
4323.2	2313.1	3.3	50	13.2	0.234

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

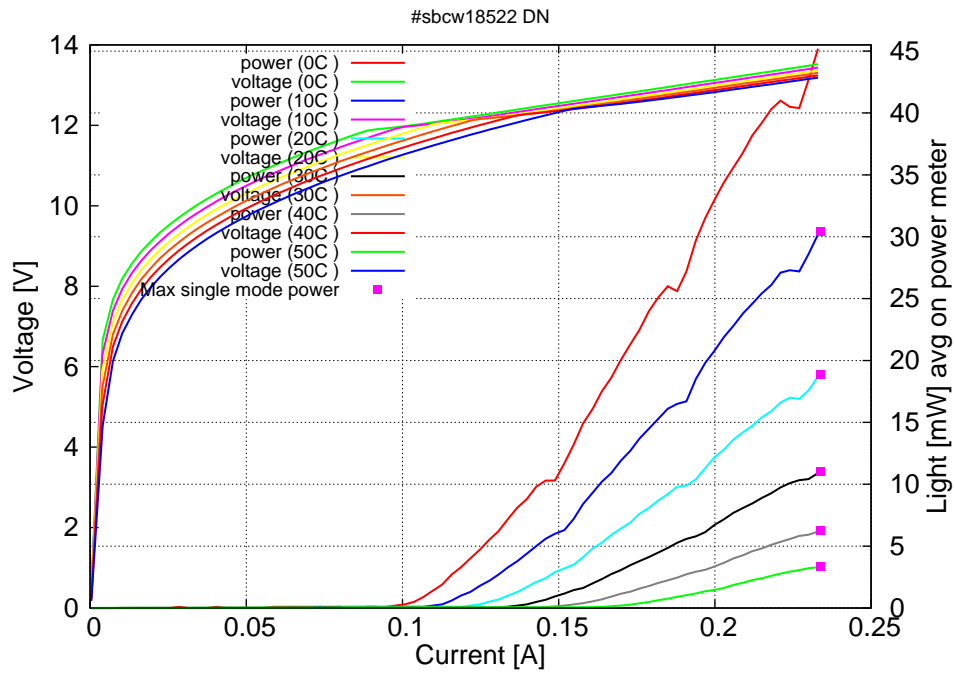


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.10A$ / $V_{th}=12.0V$ (2-wires measurements). Maximum operation current: 0.235A for all temperatures.

