

Datasheet for #sbcw23914 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.

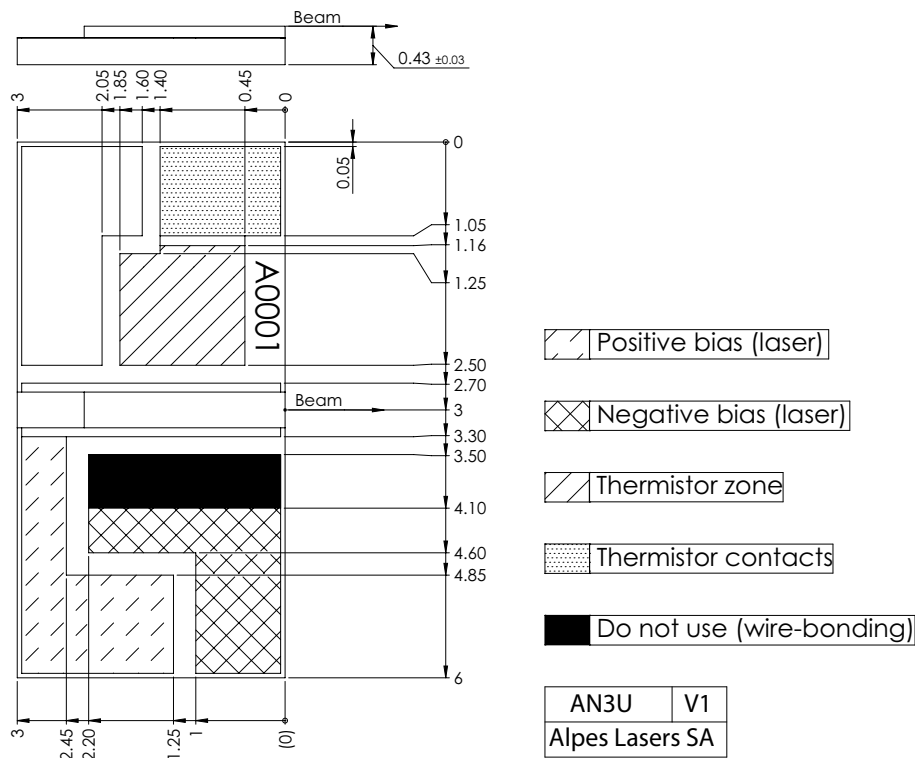


Figure 1: Mechanical and electrical interface for #sbcw23914 DN (please note that AlN submount numbering is A0WW7)

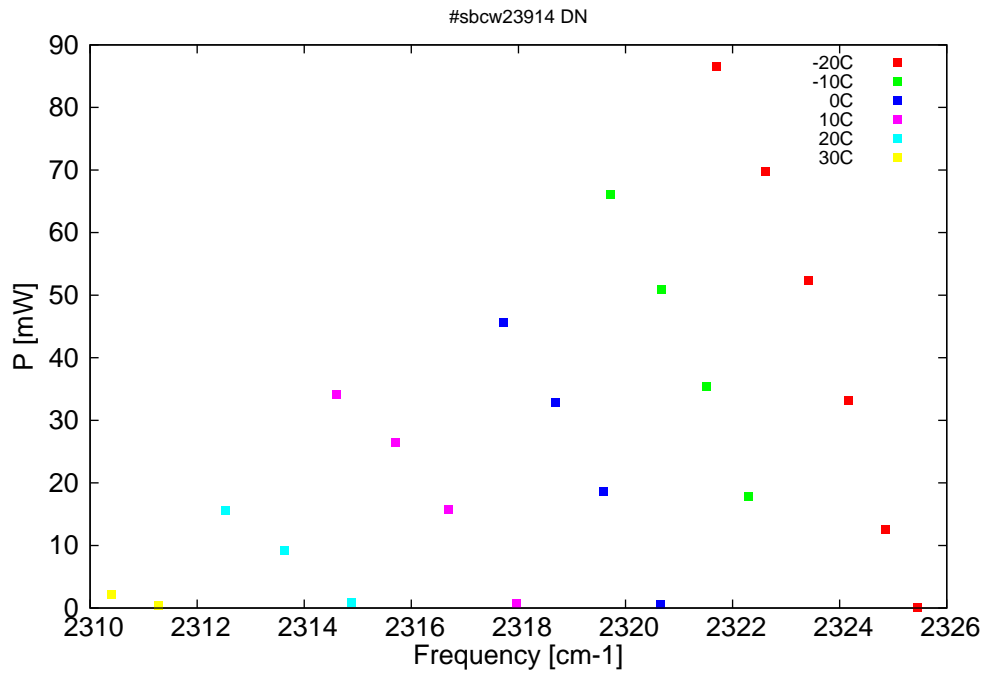


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

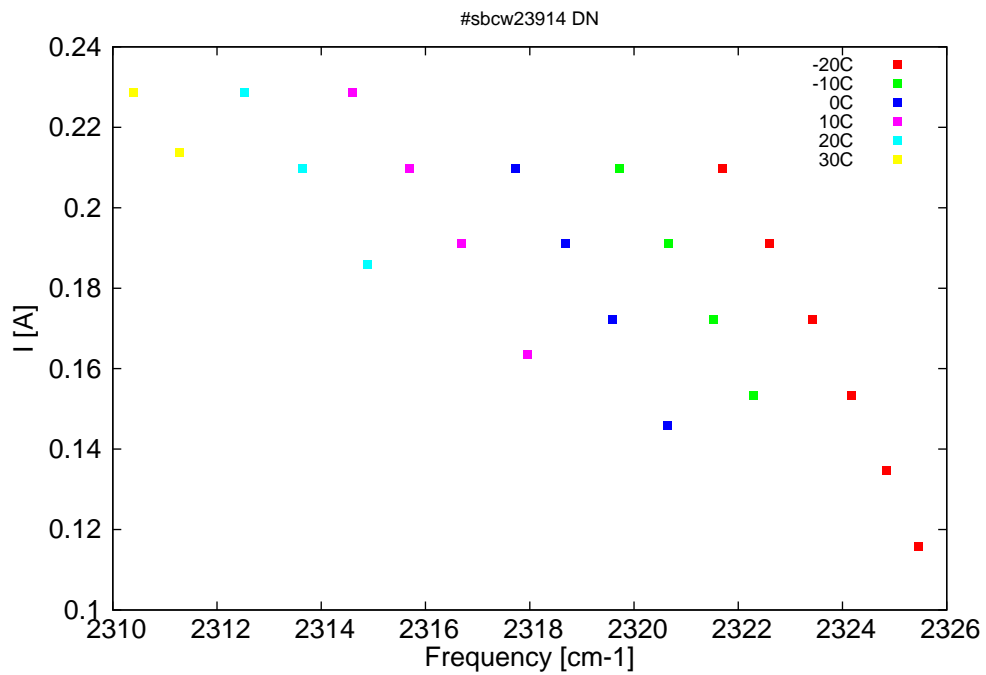


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4300.2	2325.5	0	-20	12.52	0.116
4301.4	2324.8	12.5	-20	12.74	0.135
4302.6	2324.2	33.2	-20	12.98	0.153
4304	2323.4	52.3	-20	13.22	0.172
4305.5	2322.6	69.7	-20	13.47	0.191
4307.2	2321.7	86.5	-20	13.72	0.21
4306.1	2322.3	17.9	-10	12.88	0.153
4307.5	2321.5	35.4	-10	13.12	0.172
4309.1	2320.7	50.9	-10	13.37	0.191
4310.9	2319.7	66	-10	13.62	0.21
4309.1	2320.6	0.5	0	12.71	0.146
4311.1	2319.6	18.6	0	13.03	0.172
4312.8	2318.7	32.8	0	13.27	0.191
4314.6	2317.7	45.6	0	13.52	0.21
4314.1	2318	0.7	10	12.86	0.164
4316.5	2316.7	15.8	10	13.19	0.191
4318.4	2315.7	26.4	10	13.43	0.21
4320.4	2314.6	34.2	10	13.69	0.229
4319.9	2314.9	0.9	20	13.08	0.186
4322.2	2313.6	9.3	20	13.36	0.21
4324.3	2312.5	15.5	20	13.61	0.229
4326.6	2311.3	0.3	30	13.39	0.214
4328.3	2310.4	2.1	30	13.56	0.229

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

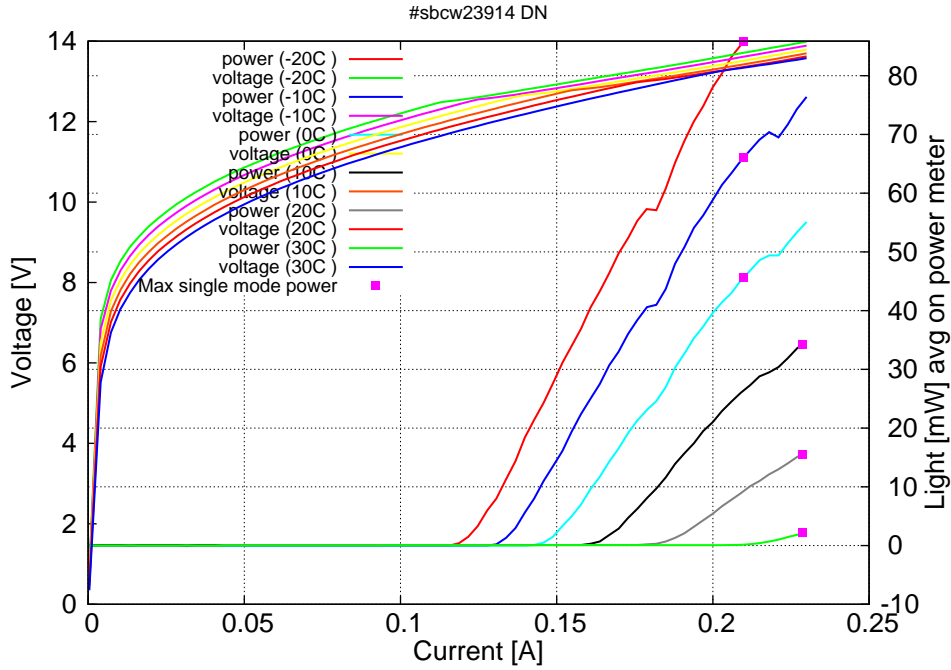


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=12.5V$ (2-wires measurements). Maximum operation current: 0.21A between -20C and 0C, 0.23A between 10C and 30C.

Figure 3: spectra at different temperatures for various DC currents

