

Datasheet for #sbcw23910 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.

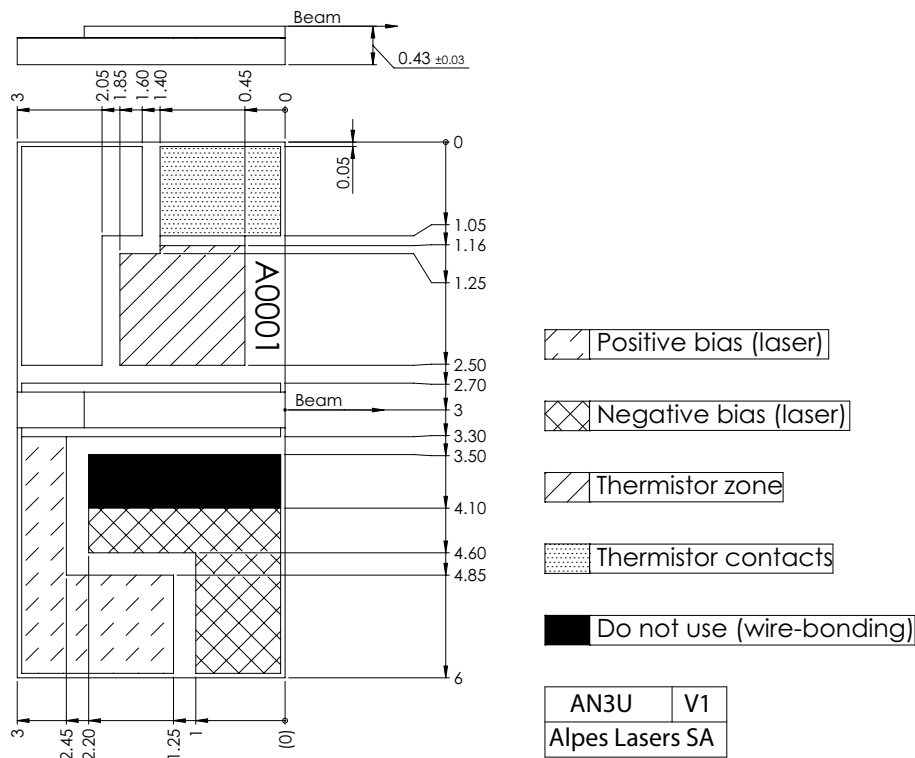


Figure 1: Mechanical and electrical interface for #sbcw23910 DN (please note that AlN submount numbering is A0YEC)

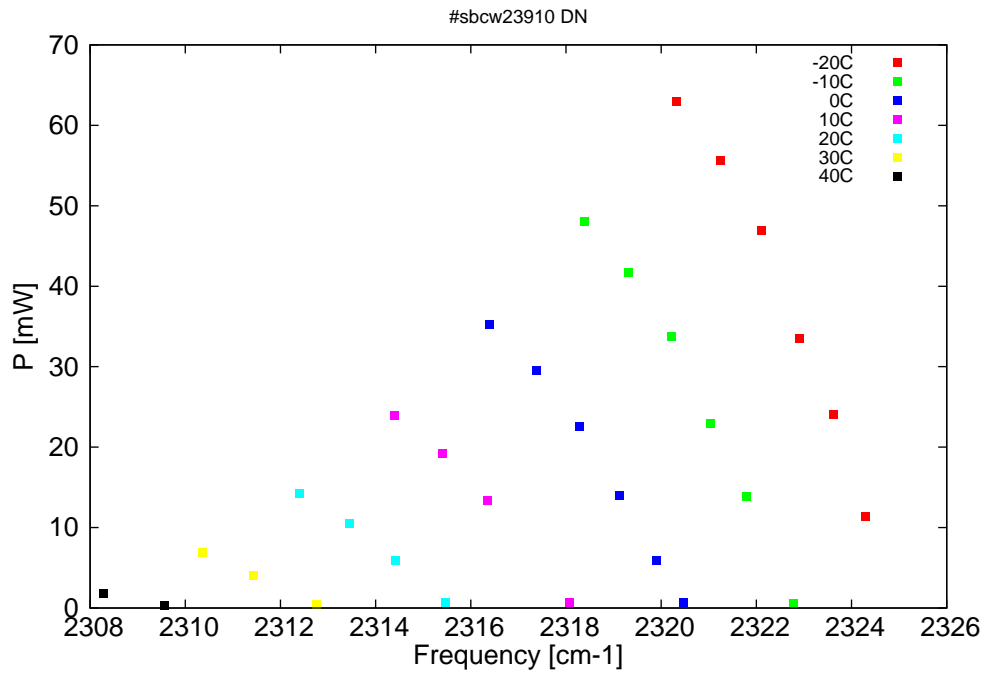


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

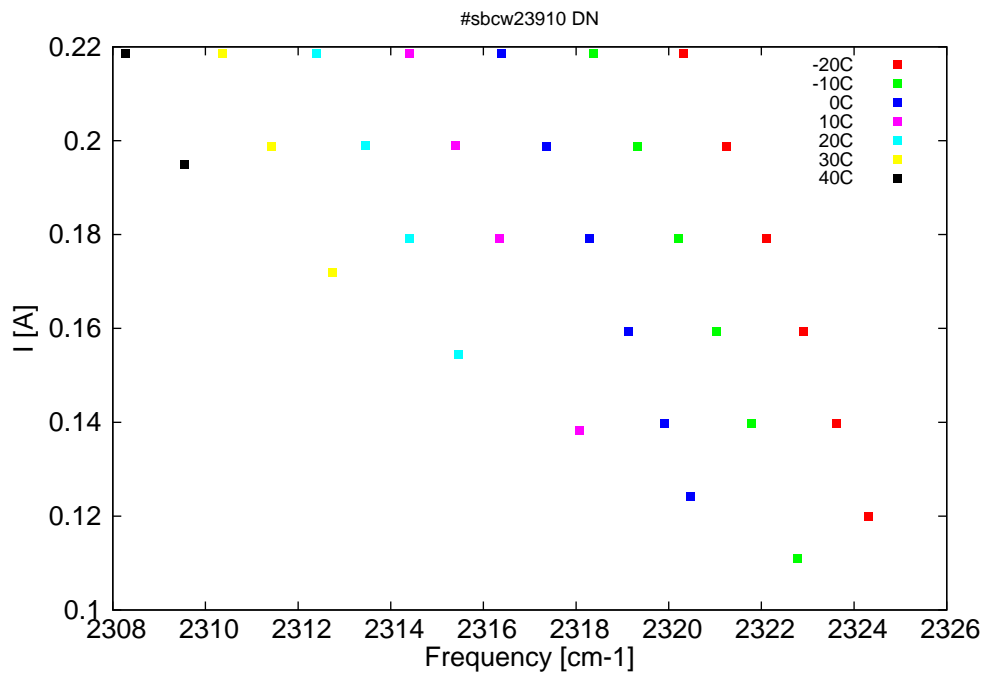


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4302.4	2324.3	11.4	-20	12.29	0.12
4303.6	2323.6	24	-20	12.54	0.14
4305	2322.9	33.5	-20	12.78	0.159
4306.4	2322.1	47	-20	13.02	0.179
4308	2321.2	55.6	-20	13.27	0.199
4309.7	2320.3	63	-20	13.51	0.219
4305.2	2322.8	0.6	-10	12.11	0.111
4307	2321.8	13.9	-10	12.46	0.14
4308.4	2321	22.9	-10	12.7	0.159
4310	2320.2	33.8	-10	12.94	0.179
4311.6	2319.3	41.7	-10	13.18	0.199
4313.4	2318.4	48.1	-10	13.42	0.219
4309.5	2320.5	0.6	0	12.2	0.124
4310.5	2319.9	5.9	0	12.38	0.14
4312	2319.1	14	0	12.62	0.159
4313.5	2318.3	22.6	0	12.85	0.179
4315.2	2317.4	29.5	0	13.09	0.199
4317.1	2316.4	35.3	0	13.33	0.219
4313.9	2318.1	0.7	10	12.31	0.138
4317.1	2316.4	13.4	10	12.78	0.179
4318.9	2315.4	19.2	10	13.02	0.199
4320.8	2314.4	23.9	10	13.25	0.219
4318.8	2315.5	0.7	20	12.45	0.155
4320.7	2314.4	5.9	20	12.71	0.179
4322.6	2313.4	10.5	20	12.94	0.199
4324.5	2312.4	14.3	20	13.18	0.219
4323.9	2312.8	0.4	30	12.61	0.172
4326.3	2311.4	4	30	12.89	0.199
4328.3	2310.4	6.9	30	13.12	0.219
4329.8	2309.6	0.3	40	12.85	0.195
4332.2	2308.3	1.8	40	13.09	0.219

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

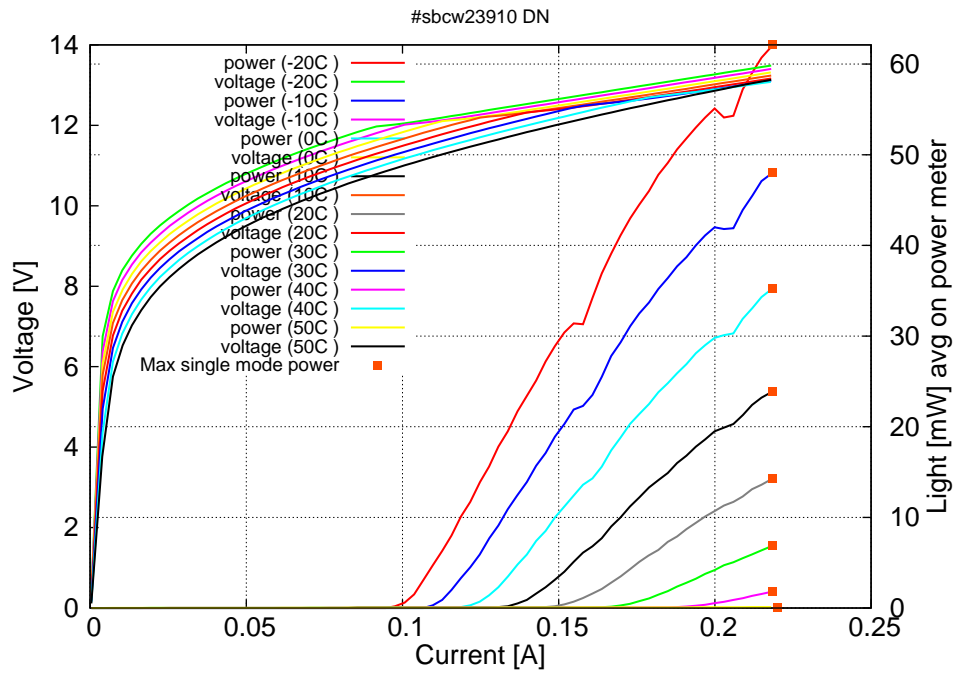


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=12.0V$ (2-wires measurements). Maximum operation current: 0.220A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

