

Datasheet for #sbcw22418 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.

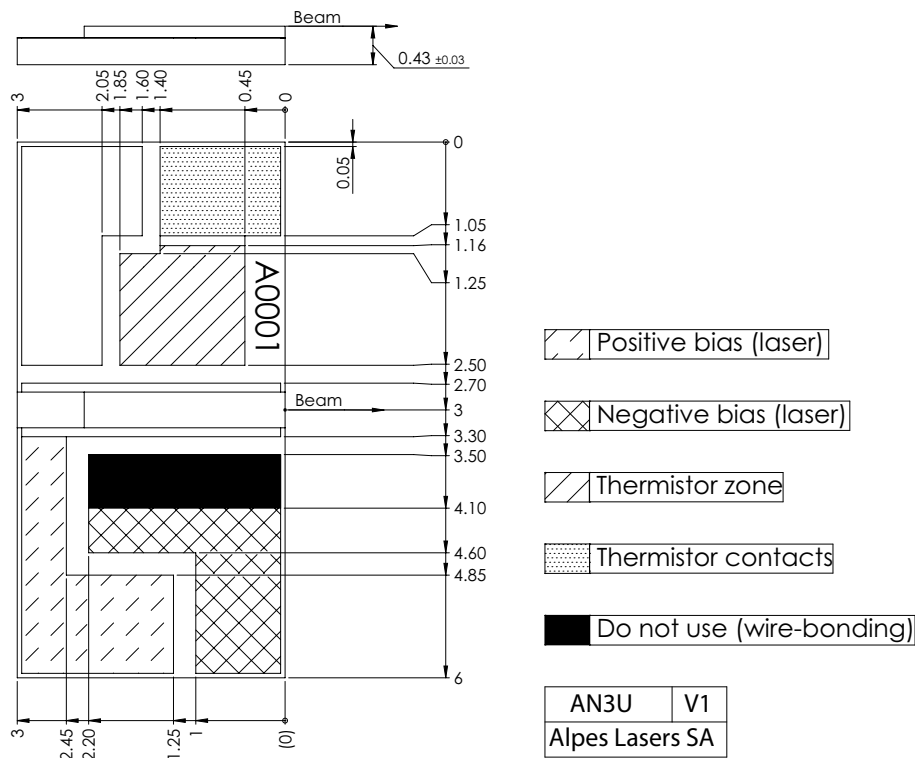


Figure 1: Mechanical and electrical interface for #sbcw22418 DN (please note that AlN submount numbering is A0YJ6)

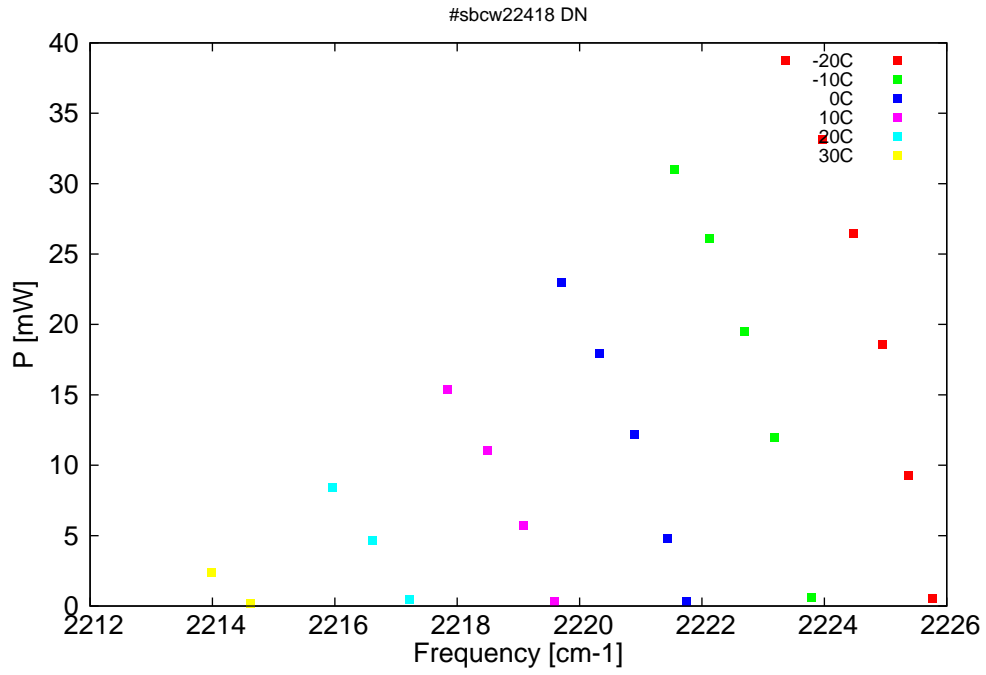


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

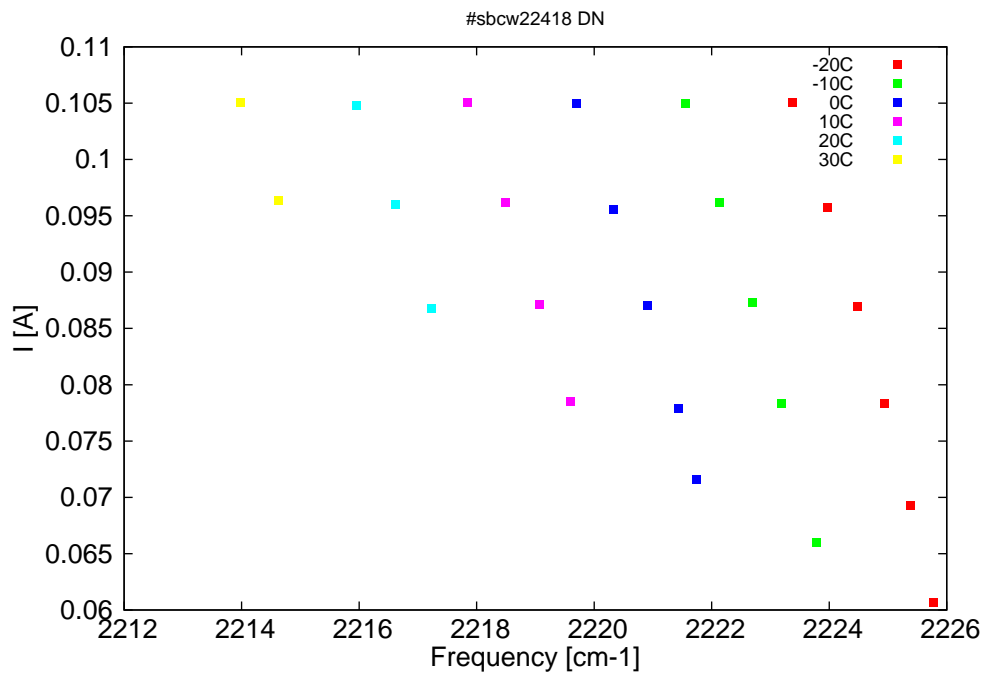


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4492.8	2225.8	0.5	-20	9.17	0.061
4493.6	2225.4	9.3	-20	9.38	0.069
4494.5	2224.9	18.6	-20	9.6	0.078
4495.4	2224.5	26.5	-20	9.83	0.087
4496.5	2224	33.1	-20	10.06	0.096
4497.7	2223.4	38.7	-20	10.32	0.105
4496.8	2223.8	0.6	-10	9.26	0.066
4498	2223.2	11.9	-10	9.57	0.078
4499	2222.7	19.5	-10	9.8	0.087
4500.2	2222.1	26.1	-10	10.04	0.096
4501.4	2221.5	31	-10	10.29	0.105
4501	2221.7	0.3	0	9.39	0.072
4501.6	2221.4	4.8	0	9.53	0.078
4502.7	2220.9	12.2	0	9.77	0.087
4503.8	2220.3	18	0	10.02	0.096
4505.1	2219.7	23	0	10.27	0.105
4505.3	2219.6	0.4	10	9.54	0.079
4506.4	2219.1	5.8	10	9.76	0.087
4507.6	2218.5	11.1	10	10	0.096
4508.9	2217.8	15.4	10	10.25	0.105
4510.1	2217.2	0.5	20	9.76	0.087
4511.4	2216.6	4.6	20	9.98	0.096
4512.7	2216	8.4	20	10.23	0.105
4515.4	2214.6	0.2	30	10.04	0.096
4516.8	2214	2.4	30	10.26	0.105

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

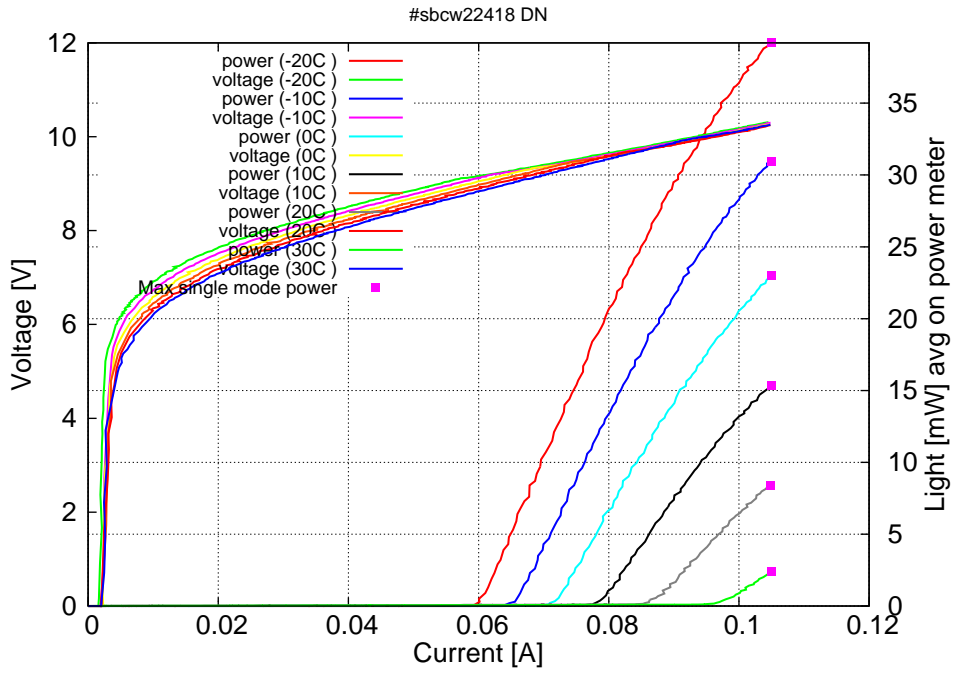


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.06A$ / $V_{th}=9.15V$ (2-wires measurements). Maximum operation current: 0.105A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

