

Datasheet for #sbcw27093 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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.

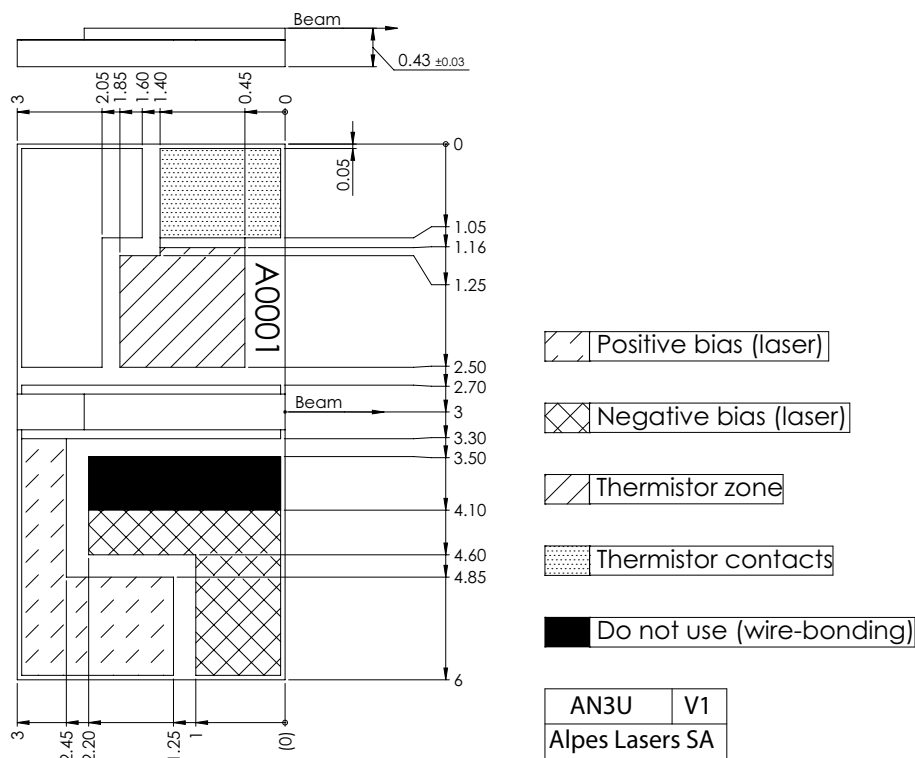


Figure 1: Mechanical and electrical interface for #sbcw27093 DN (please note that AlN submount numbering is A0XD7)

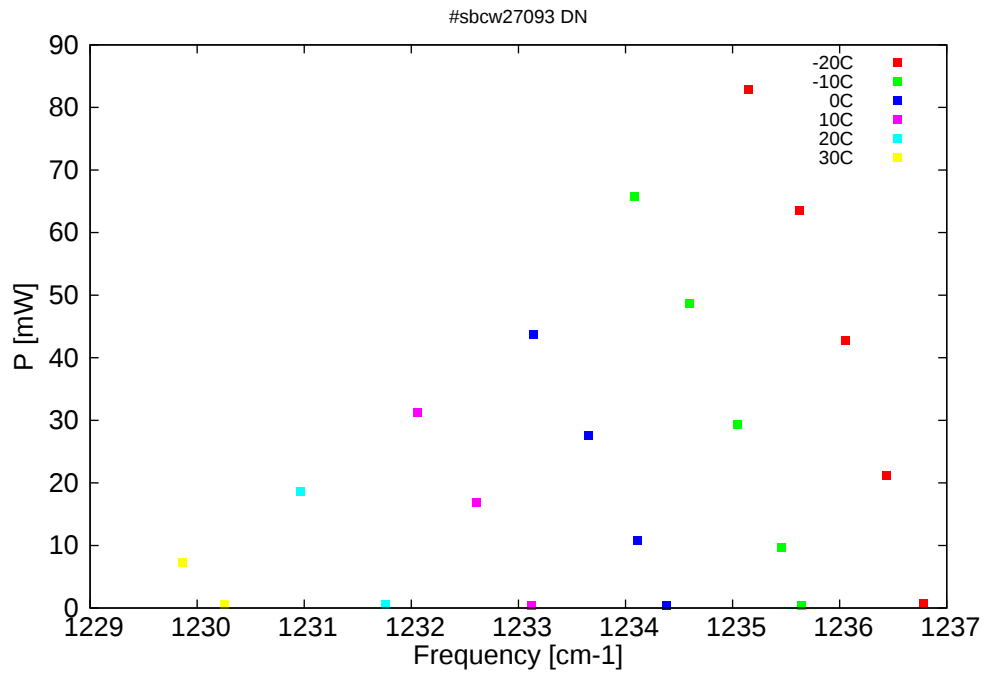


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

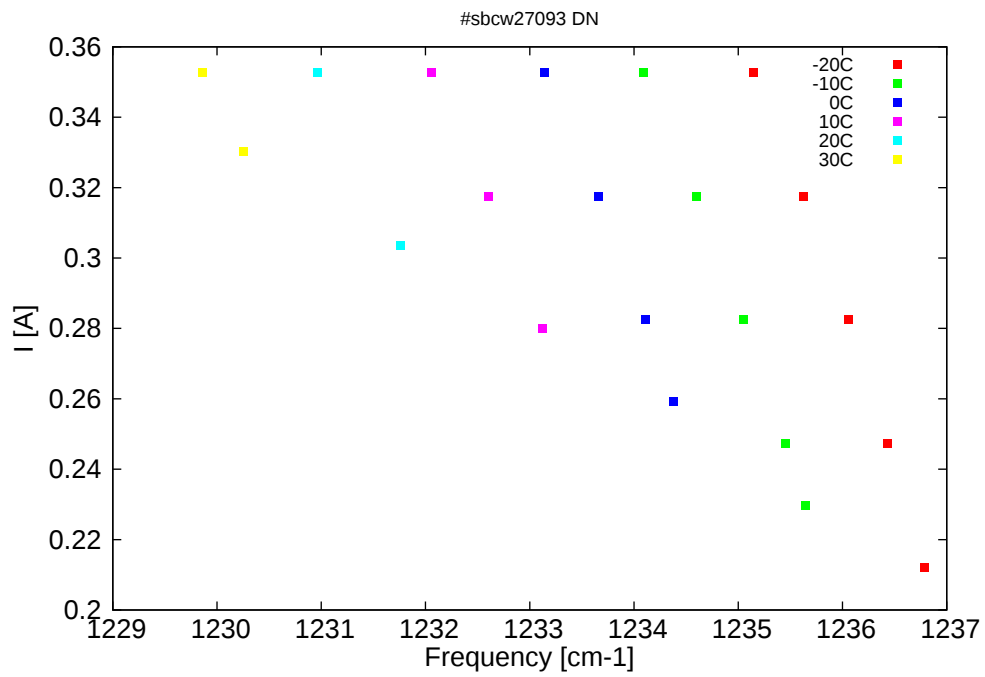


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8085.5	1236.8	0.7	-20	6.68	0.212
8087.8	1236.4	21.1	-20	7.01	0.247
8090.3	1236.1	42.8	-20	7.33	0.282
8093	1235.6	63.6	-20	7.67	0.318
8096.2	1235.2	82.8	-20	8.02	0.353
8093	1235.6	0.4	-10	6.83	0.23
8094.2	1235.5	9.6	-10	6.99	0.247
8096.9	1235	29.3	-10	7.33	0.282
8099.8	1234.6	48.6	-10	7.67	0.318
8103.1	1234.1	65.8	-10	8.03	0.353
8101.2	1234.4	0.4	0	7.03	0.259
8103	1234.1	10.8	0	7.24	0.282
8106	1233.7	27.5	0	7.59	0.318
8109.4	1233.1	43.7	0	7.94	0.353
8109.5	1233.1	0.4	10	7.22	0.28
8112.9	1232.6	16.9	10	7.59	0.318
8116.5	1232.1	31.3	10	7.96	0.353
8118.5	1231.8	0.6	20	7.46	0.304
8123.7	1231	18.6	20	7.99	0.353
8128.4	1230.3	0.5	30	7.76	0.33
8131	1229.9	7.2	30	8.01	0.353

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

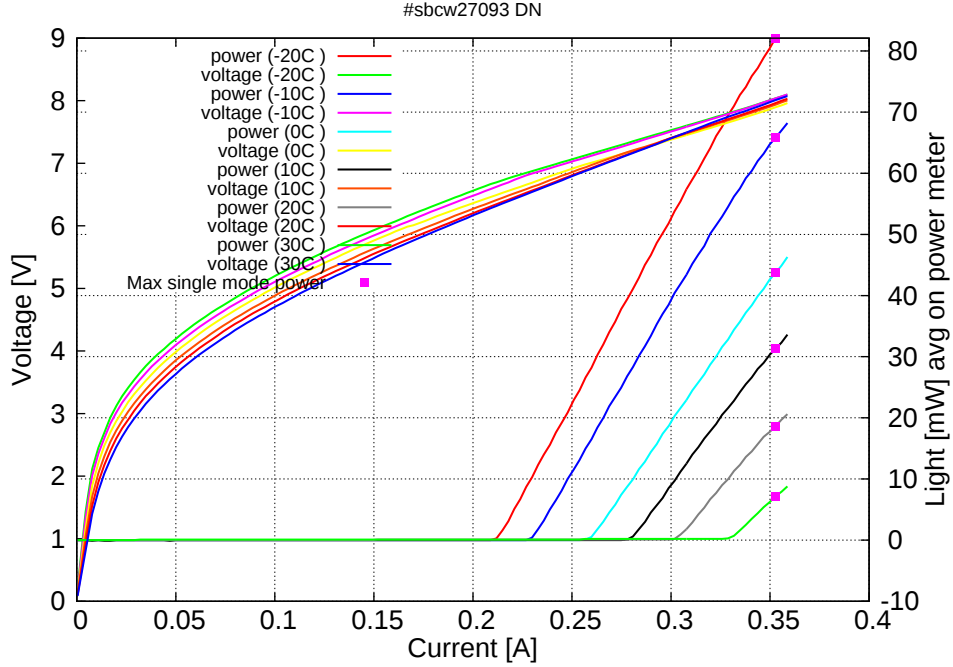


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20°C: $I_{th}=0.21A$ / $V_{th}=6.6V$ (2-wires measurements). Maximum operation

current: 0.36A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

