

Datasheet for #sbcw27319 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.

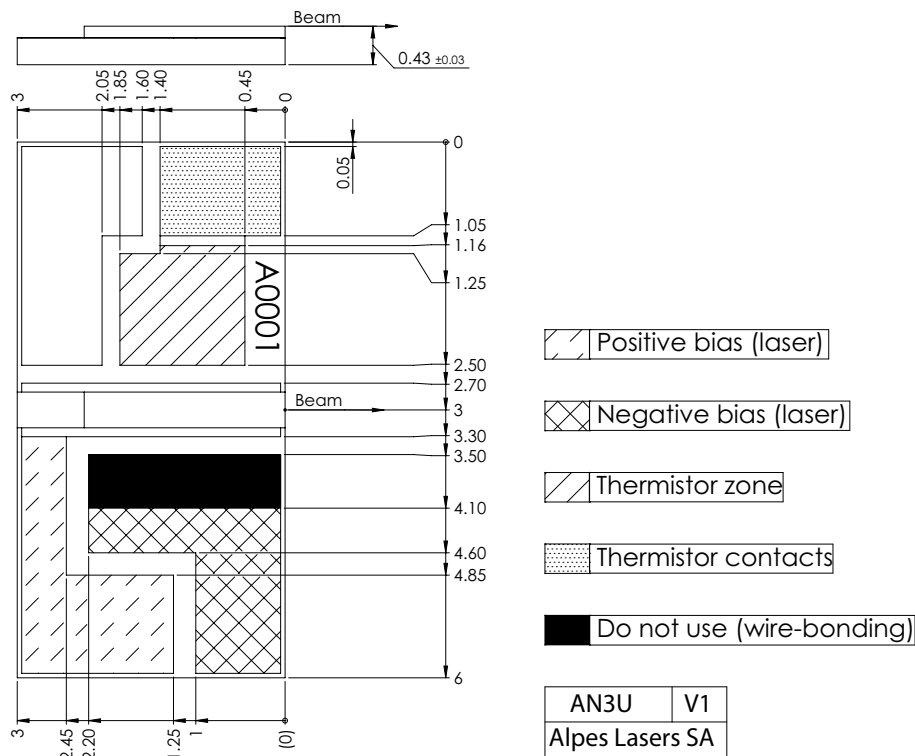


Figure 1: Mechanical and electrical interface for #sbcw27319 DN (please note that AlN submount numbering is A0YNM)

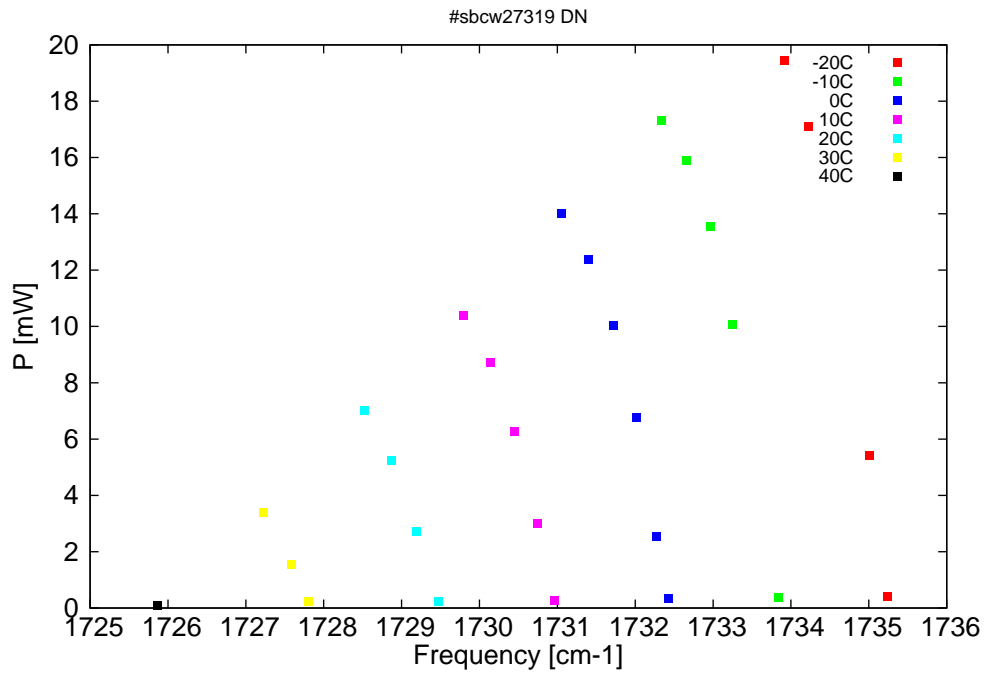


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

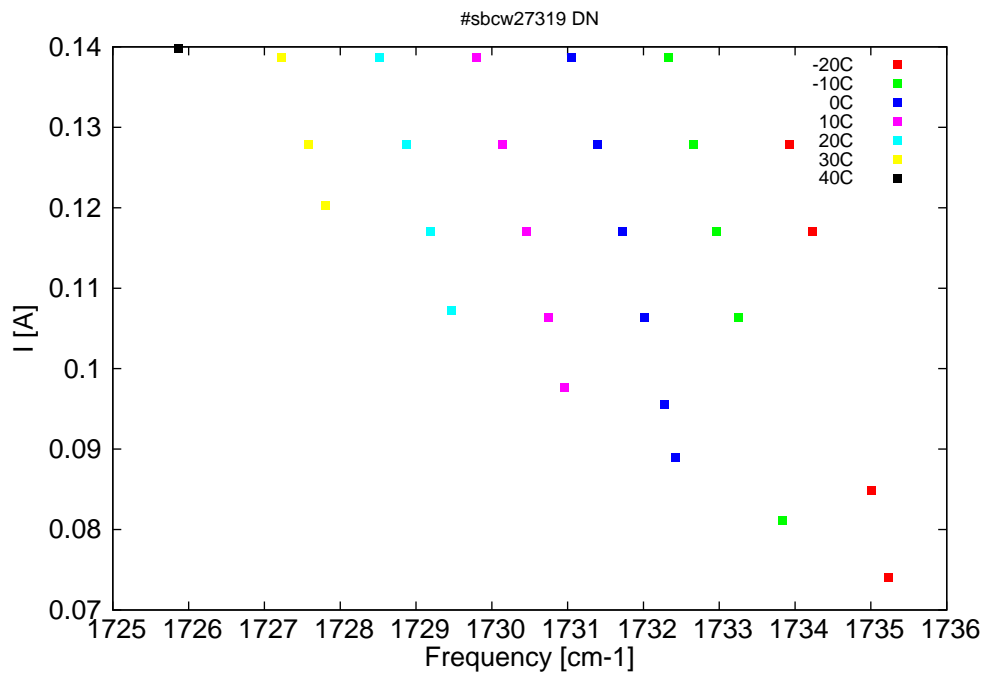


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5762.9	1735.2	0.4	-20	9.07	0.074
5763.7	1735	5.4	-20	9.4	0.085
5766.3	1734.2	17.1	-20	10.35	0.117
5767.3	1733.9	19.4	-20	10.68	0.128
5767.5	1733.8	0.4	-10	9.15	0.081
5769.5	1733.3	10.1	-10	9.88	0.106
5770.5	1733	13.6	-10	10.19	0.117
5771.5	1732.7	15.9	-10	10.51	0.128
5772.6	1732.3	17.3	-10	10.83	0.139
5772.2	1732.4	0.3	0	9.27	0.089
5772.8	1732.3	2.5	0	9.45	0.096
5773.6	1732	6.8	0	9.76	0.106
5774.6	1731.7	10	0	10.07	0.117
5775.7	1731.4	12.4	0	10.38	0.128
5776.8	1731.1	14	0	10.7	0.139
5777.1	1731	0.3	10	9.39	0.098
5777.9	1730.7	3	10	9.63	0.106
5778.8	1730.5	6.3	10	9.94	0.117
5779.9	1730.1	8.7	10	10.24	0.128
5781	1729.8	10.4	10	10.55	0.139
5782.1	1729.5	0.2	20	9.56	0.107
5783	1729.2	2.7	20	9.84	0.117
5784.1	1728.9	5.2	20	10.14	0.128
5785.3	1728.5	7	20	10.45	0.139
5787.7	1727.8	0.2	30	9.83	0.12
5788.4	1727.6	1.5	30	10.04	0.128
5789.6	1727.2	3.4	30	10.34	0.139
5794.2	1725.9	0.1	40	10.25	0.14

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

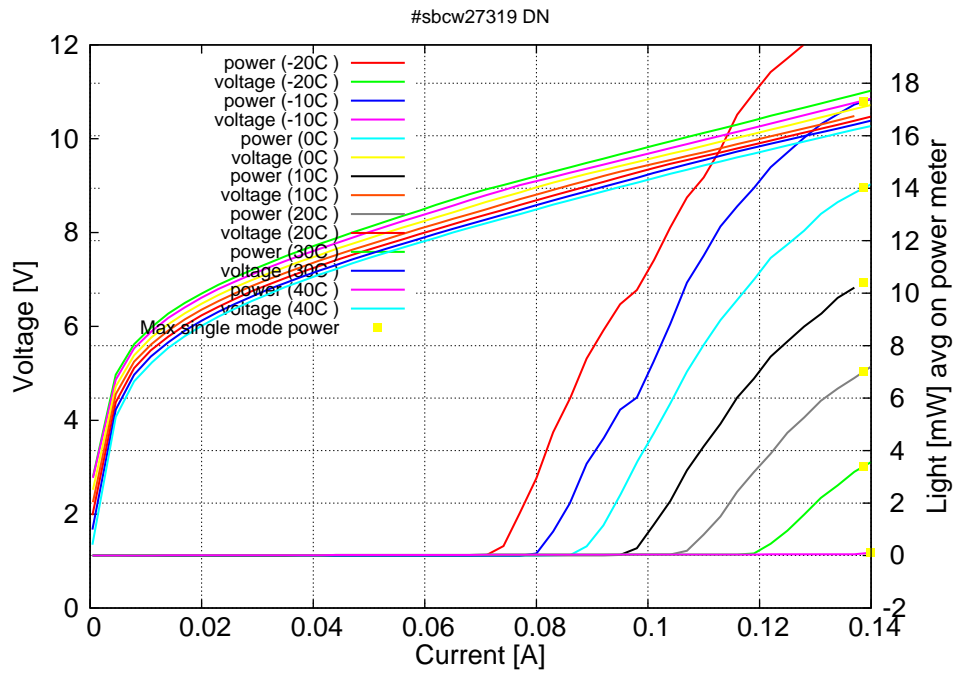


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.07A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.13A at -20C, 0.14A between -10C and 40C.

Figure 3: spectra at different temperatures for various DC currents

