

Datasheet for #sbcw27615 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.

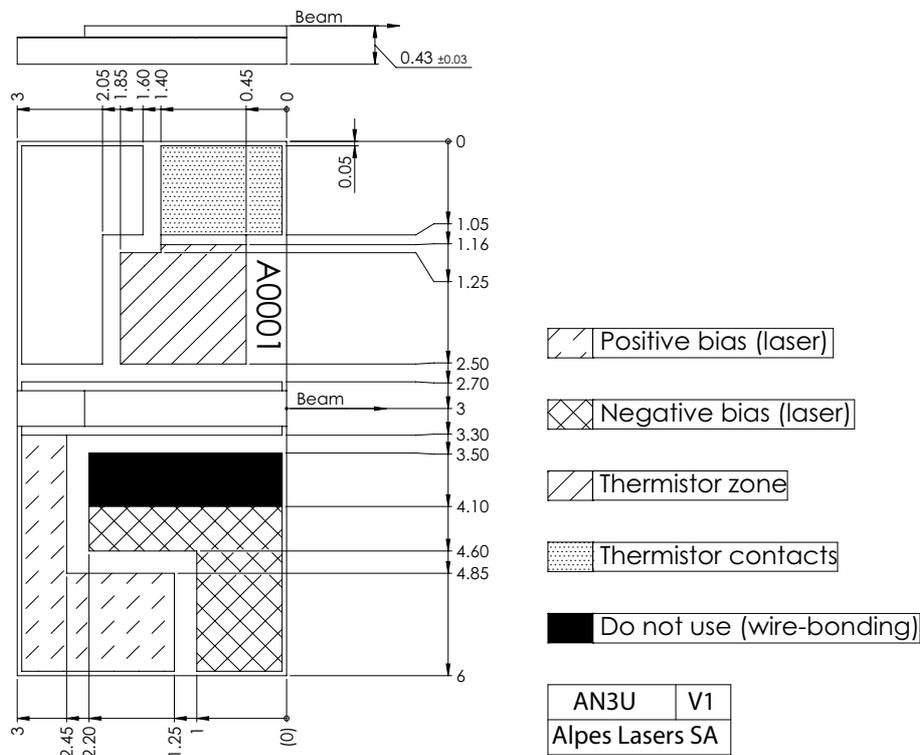


Figure 1: Mechanical and electrical interface for #sbcw27615 DN (please note that AlN submount numbering is A0X6A)

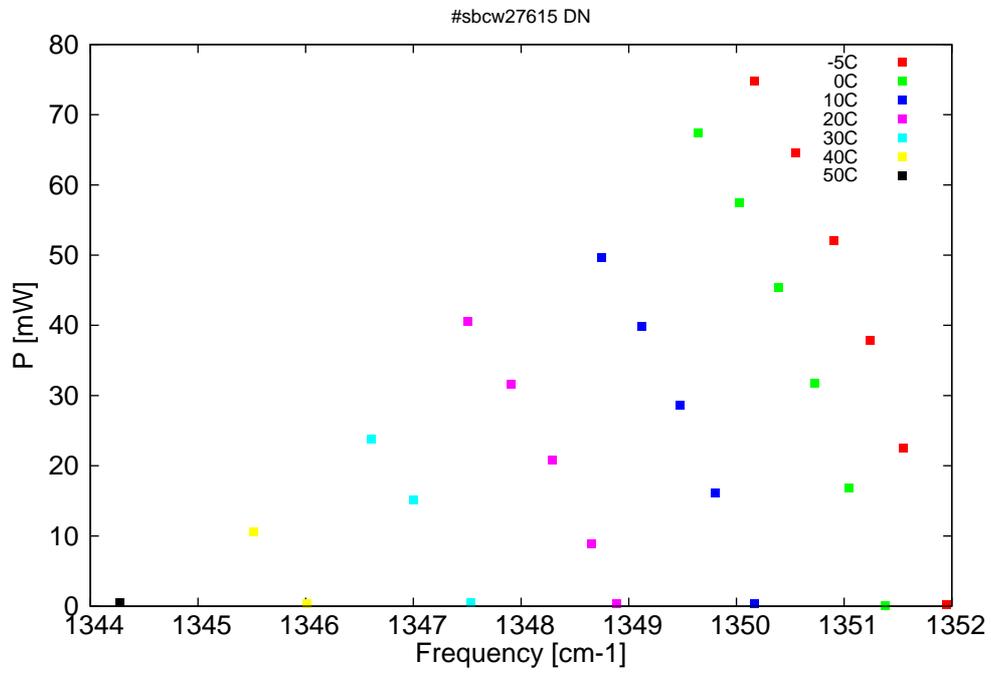


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

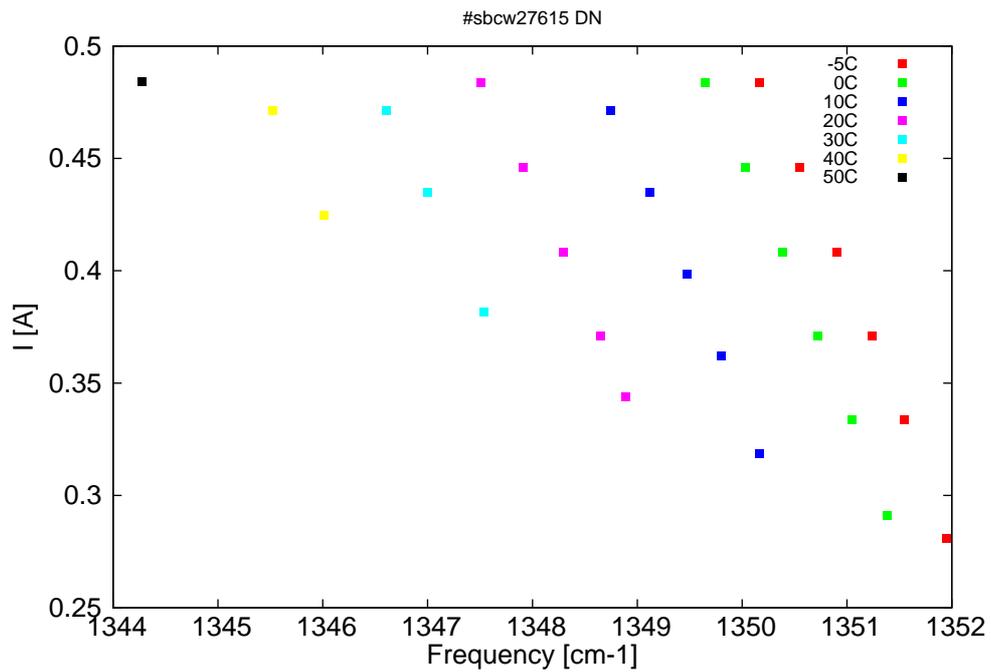


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7396.7	1352	0.2	-5	8.89	0.281
7398.9	1351.5	22.6	-5	9.2	0.334
7400.6	1351.2	37.8	-5	9.41	0.371
7402.4	1350.9	52.1	-5	9.61	0.409
7404.4	1350.5	64.6	-5	9.83	0.446
7406.5	1350.2	74.8	-5	10.04	0.484
7399.8	1351.4	0.1	0	8.9	0.291
7401.7	1351	16.9	0	9.14	0.334
7403.4	1350.7	31.7	0	9.36	0.371
7405.3	1350.4	45.4	0	9.57	0.409
7407.2	1350	57.5	0	9.78	0.446
7409.3	1349.6	67.5	0	10	0.484
7406.5	1350.2	0.4	10	9.01	0.319
7408.5	1349.8	16.1	10	9.27	0.362
7410.3	1349.5	28.6	10	9.48	0.398
7412.2	1349.1	39.9	10	9.68	0.435
7414.3	1348.8	49.7	10	9.9	0.471
7413.5	1348.9	0.3	20	9.04	0.344
7414.8	1348.7	8.9	20	9.2	0.371
7416.8	1348.3	20.8	20	9.41	0.409
7418.9	1347.9	31.6	20	9.63	0.446
7421.1	1347.5	40.6	20	9.84	0.484
7421	1347.5	0.5	30	9.25	0.382
7423.9	1347	15.2	30	9.56	0.435
7426	1346.6	23.8	30	9.77	0.471
7429.4	1346	0.4	40	9.42	0.425
7432.1	1345.5	10.7	40	9.68	0.471
7438.9	1344.3	0.4	50	9.66	0.484

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

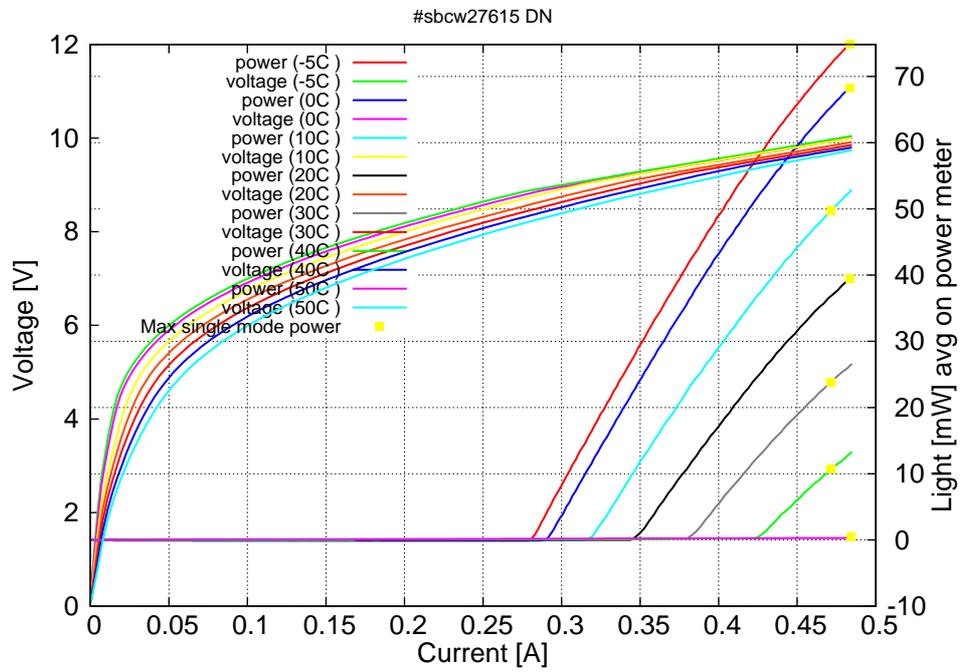


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -5C: $I_{th}=0.28A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.485A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

