

**Datasheet for #sbcw27607 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.

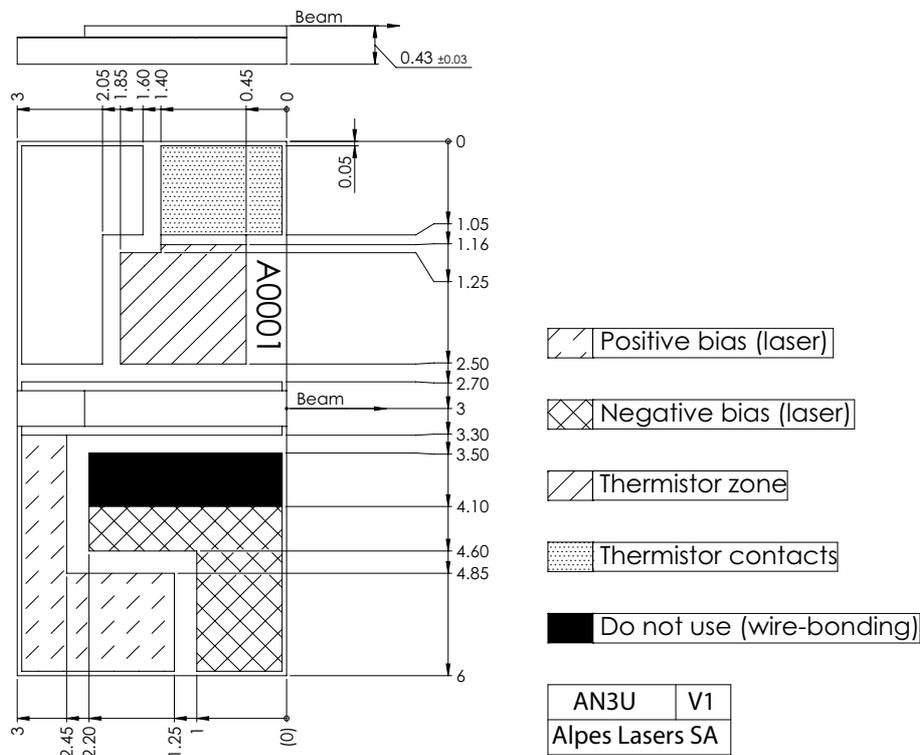


Figure 1: Mechanical and electrical interface for #sbcw27607 DN (please note that AlN submount numbering is A0Y4R)

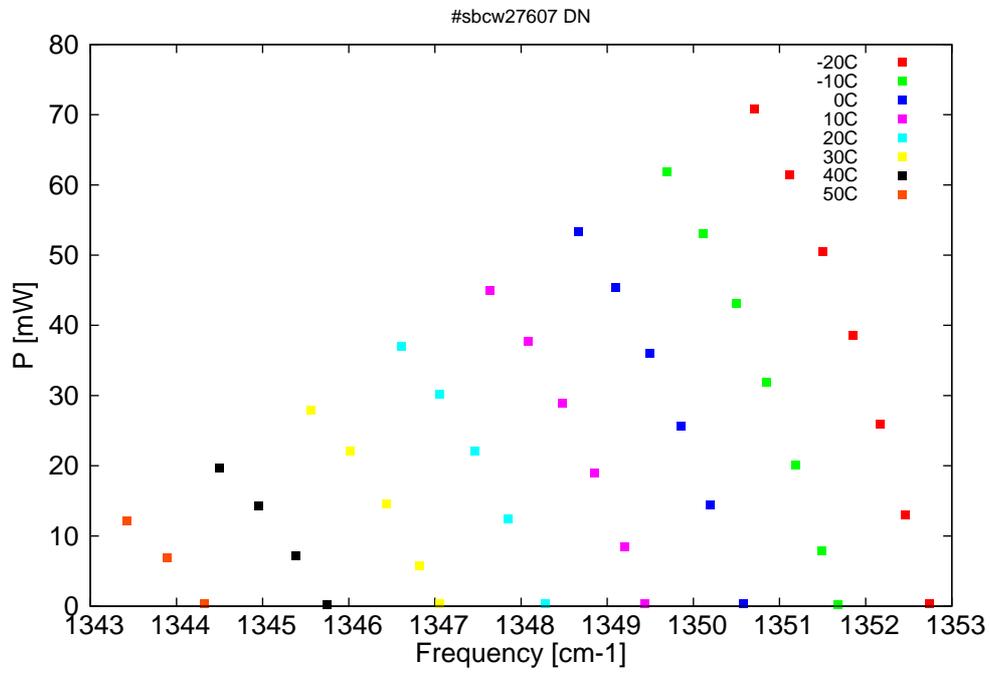


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

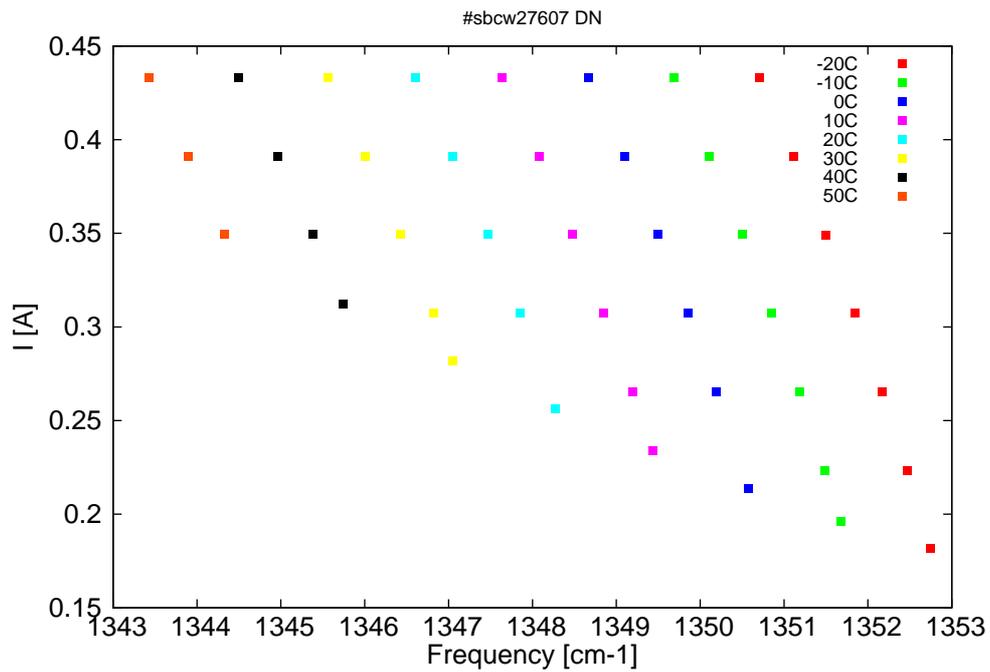


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7392.4	1352.7	0.4	-20	8.28	0.181
7393.9	1352.5	13	-20	8.58	0.223
7395.5	1352.2	25.9	-20	8.86	0.265
7397.3	1351.8	38.6	-20	9.13	0.307
7399.2	1351.5	50.4	-20	9.4	0.349
7401.3	1351.1	61.4	-20	9.67	0.391
7403.5	1350.7	70.9	-20	9.95	0.433
7398.2	1351.7	0.3	-10	8.35	0.196
7399.2	1351.5	7.9	-10	8.56	0.223
7400.9	1351.2	20	-10	8.86	0.265
7402.7	1350.9	31.9	-10	9.11	0.307
7404.7	1350.5	43.1	-10	9.37	0.349
7406.8	1350.1	53.1	-10	9.64	0.391
7409.1	1349.7	61.8	-10	9.9	0.433
7404.2	1350.6	0.4	0	8.37	0.214
7406.3	1350.2	14.4	0	8.73	0.265
7408.2	1349.9	25.7	0	9.02	0.307
7410.2	1349.5	36	0	9.3	0.349
7412.4	1349.1	45.5	0	9.55	0.391
7414.7	1348.7	53.4	0	9.82	0.433
7410.5	1349.4	0.4	10	8.44	0.234
7411.8	1349.2	8.4	10	8.67	0.265
7413.7	1348.9	19	10	8.96	0.307
7415.8	1348.5	29	10	9.22	0.349
7418	1348.1	37.7	10	9.48	0.391
7420.4	1347.6	44.9	10	9.75	0.433
7416.9	1348.3	0.3	20	8.52	0.256
7419.2	1347.8	12.5	20	8.87	0.307
7421.3	1347.5	22.1	20	9.15	0.349
7423.6	1347.1	30.2	20	9.42	0.391
7426.1	1346.6	36.9	20	9.67	0.433
7423.6	1347.1	0.4	30	8.63	0.282
7424.9	1346.8	5.8	30	8.8	0.307
7427	1346.4	14.5	30	9.08	0.349
7429.4	1346	22.1	30	9.36	0.391
7431.9	1345.6	27.8	30	9.63	0.433
7430.8	1345.7	0.3	40	8.76	0.312
7432.8	1345.4	7.2	40	9.01	0.349
7435.2	1345	14.2	40	9.29	0.391
7437.7	1344.5	19.7	40	9.58	0.433
7438.7	1344.3	0.4	50	9.03	0.349
7441.1	1343.9	6.9	50	9.27	0.391
7443.7	1343.4	12.2	50	9.54	0.433

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

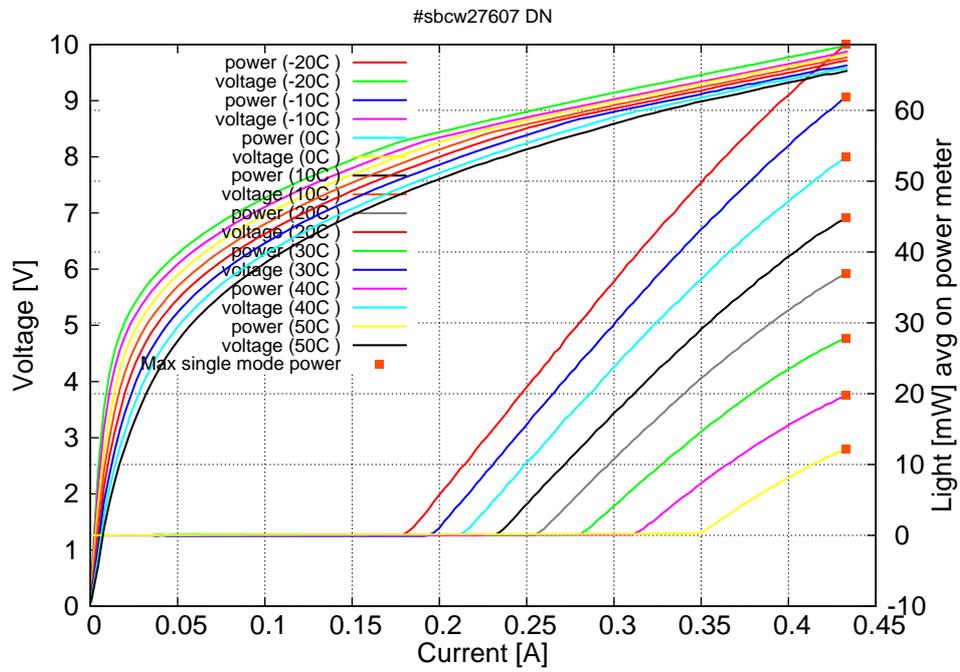


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.18A$  /  $V_{th}=8.3V$  (2-wires measurements). Maximum operation current: 0.435A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

