

**Datasheet for #sbcw27612 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.

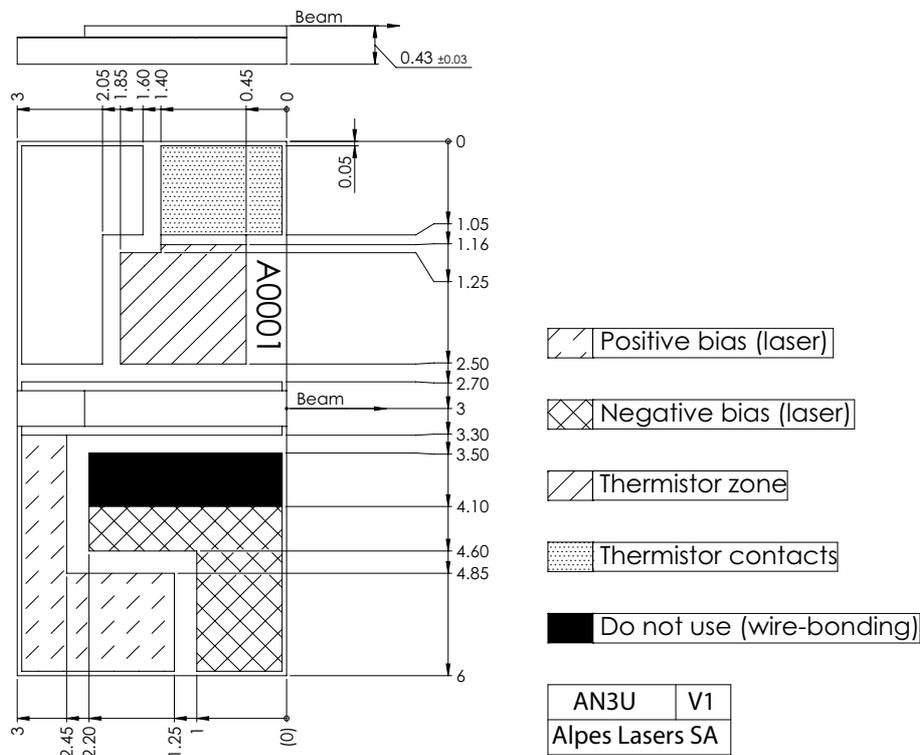


Figure 1: Mechanical and electrical interface for #sbcw27612 DN (please note that AlN submount numbering is A0X37)

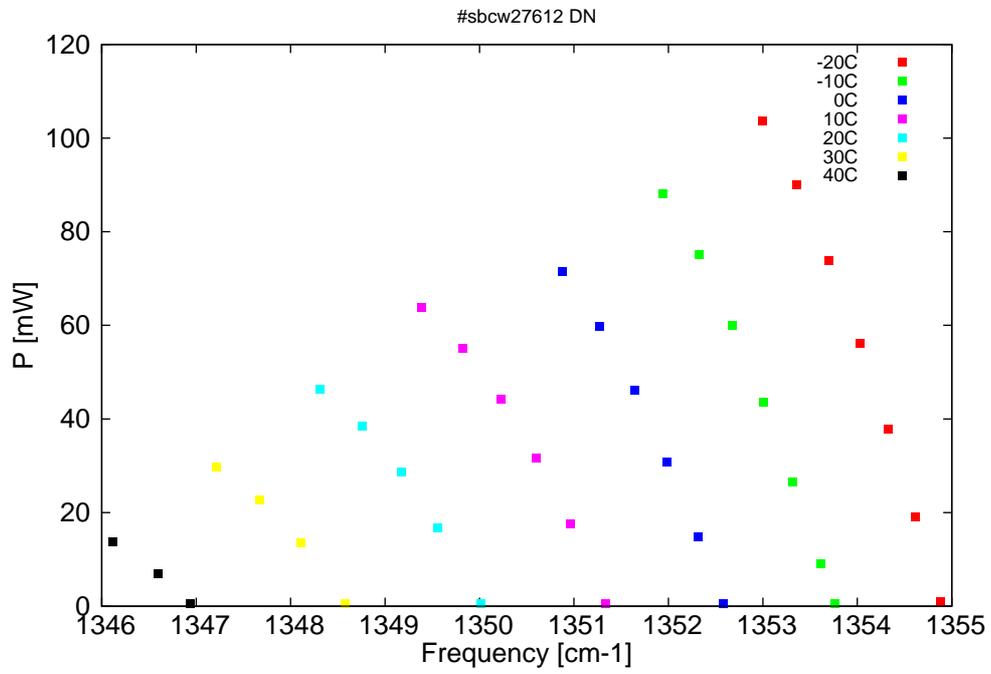


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

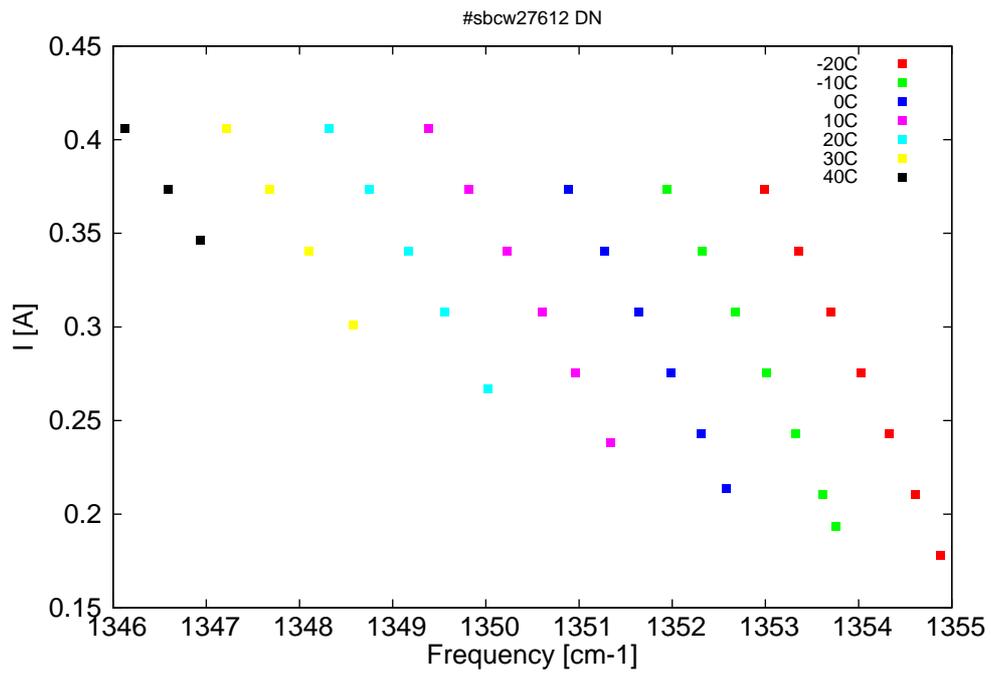


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7380.7	1354.9	1.1	-20	8.2	0.178
7382.2	1354.6	19.2	-20	8.44	0.211
7383.7	1354.3	37.8	-20	8.68	0.243
7385.4	1354	56.2	-20	8.9	0.276
7387.1	1353.7	73.8	-20	9.11	0.308
7389	1353.4	90	-20	9.32	0.341
7391	1353	103.8	-20	9.52	0.373
7386.8	1353.8	0.6	-10	8.22	0.194
7387.6	1353.6	9.2	-10	8.35	0.211
7389.2	1353.3	26.6	-10	8.59	0.243
7390.9	1353	43.6	-10	8.82	0.276
7392.7	1352.7	60.1	-10	9.04	0.308
7394.7	1352.3	75.1	-10	9.26	0.341
7396.7	1351.9	88.1	-10	9.46	0.373
7393.3	1352.6	0.6	0	8.27	0.214
7394.7	1352.3	14.8	0	8.49	0.243
7396.5	1352	30.8	0	8.73	0.276
7398.4	1351.6	46.1	0	8.95	0.308
7400.4	1351.3	59.8	0	9.18	0.341
7402.6	1350.9	71.5	0	9.4	0.373
7400.1	1351.3	0.6	10	8.37	0.238
7402.2	1351	17.7	10	8.65	0.276
7404.1	1350.6	31.6	10	8.88	0.308
7406.2	1350.2	44.2	10	9.1	0.341
7408.4	1349.8	55.2	10	9.34	0.373
7410.8	1349.4	63.9	10	9.53	0.406
7407.3	1350	0.6	20	8.5	0.267
7409.8	1349.6	16.8	20	8.78	0.308
7412	1349.2	28.6	20	9.01	0.341
7414.2	1348.8	38.4	20	9.21	0.373
7416.7	1348.3	46.4	20	9.43	0.406
7415.2	1348.6	0.5	30	8.66	0.301
7417.8	1348.1	13.5	30	8.93	0.341
7420.2	1347.7	22.7	30	9.16	0.373
7422.7	1347.2	29.8	30	9.37	0.406
7424.3	1346.9	0.5	40	8.87	0.346
7426.2	1346.6	6.9	40	9.06	0.373
7428.7	1346.1	13.7	40	9.29	0.406

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

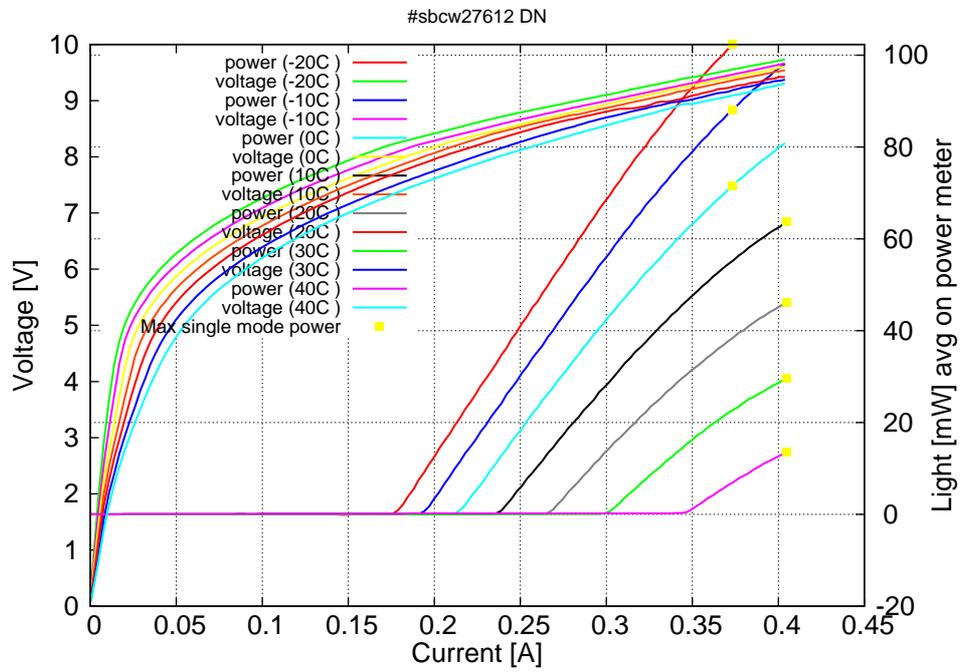


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.17A$  /  $V_{th}=8.2V$  (2-wires measurements). Maximum operation current: 0.375A between -20C and 0C, 0.405A between 10C and 40C.

Figure 3: spectra at different temperatures for various DC currents

