

Datasheet for #sbcw27613 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.

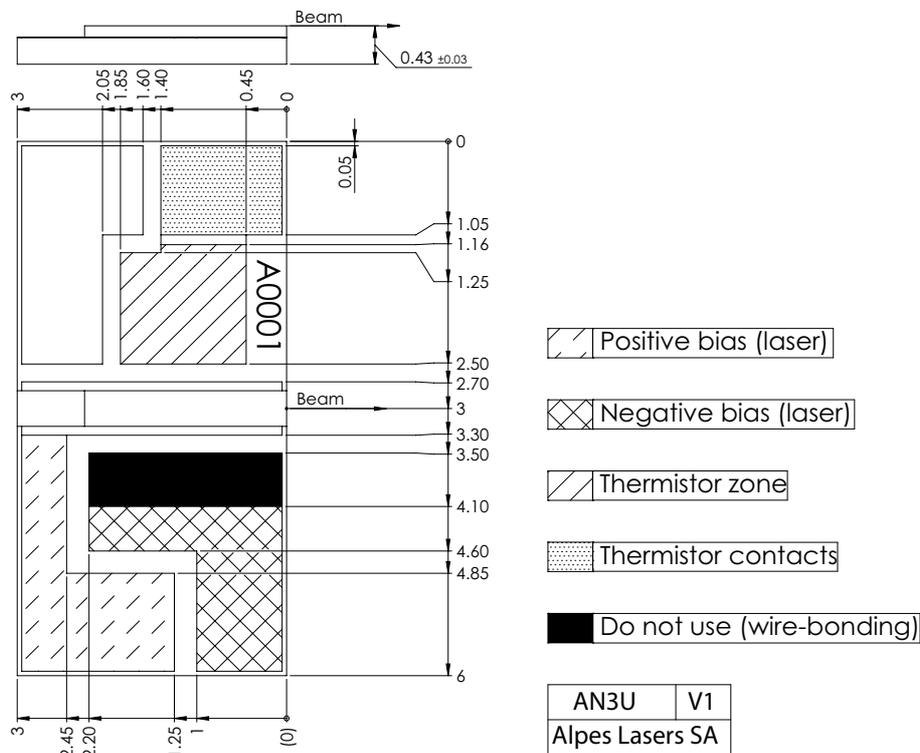


Figure 1: Mechanical and electrical interface for #sbcw27613 DN (please note that AlN submount numbering is A0UY6)

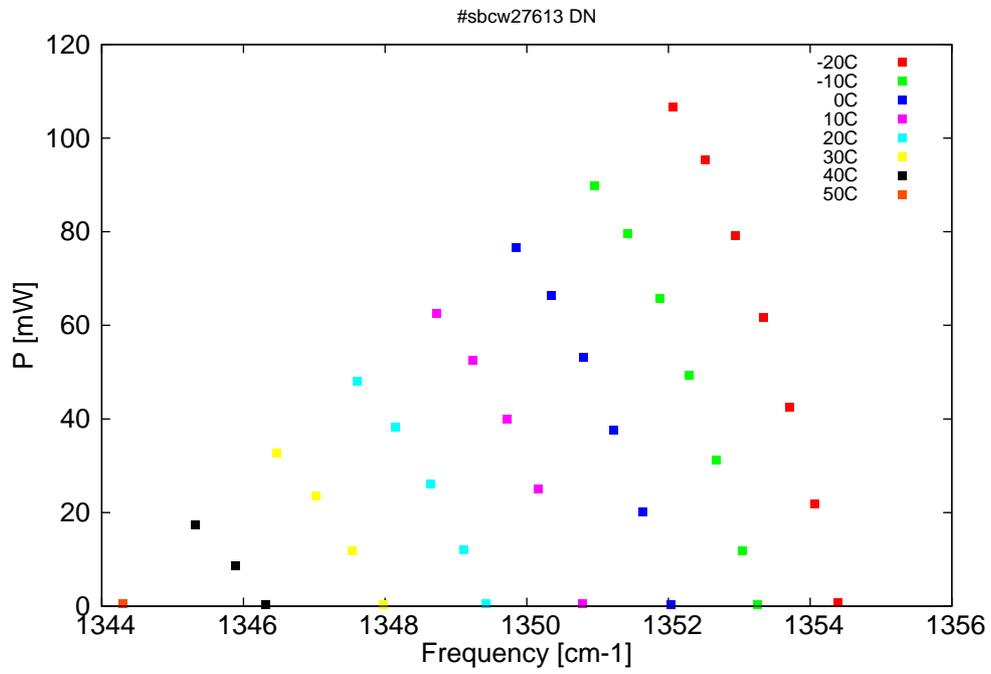


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

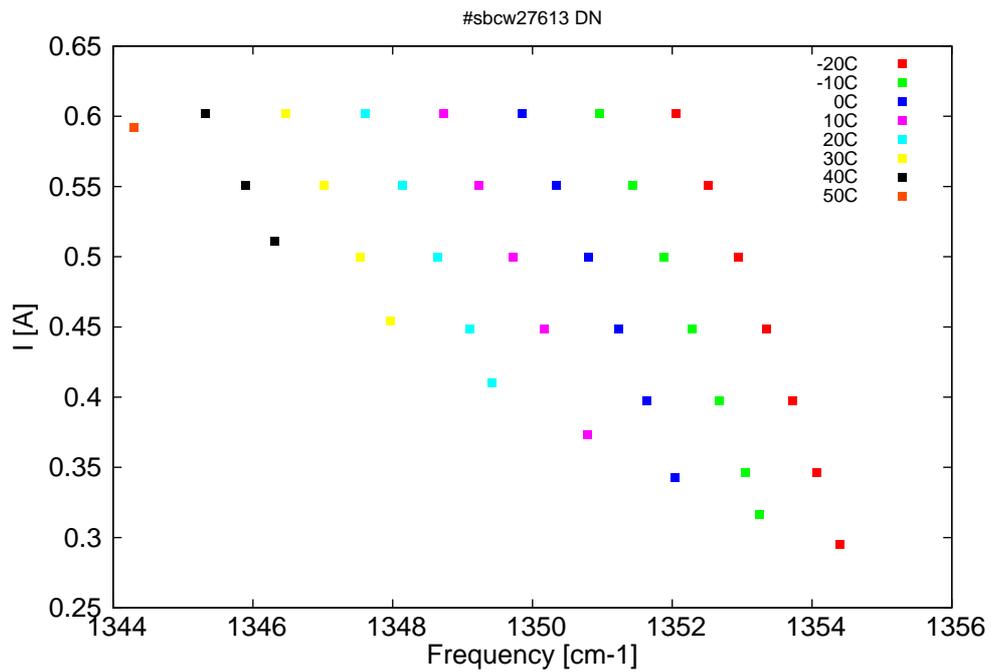


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7383.4	1354.4	0.8	-20	8.66	0.296
7385.2	1354.1	21.8	-20	8.89	0.347
7387.1	1353.7	42.5	-20	9.12	0.398
7389.1	1353.3	61.8	-20	9.35	0.449
7391.3	1352.9	79.2	-20	9.57	0.5
7393.6	1352.5	95.3	-20	9.79	0.551
7396.1	1352.1	106.6	-20	10	0.602
7389.6	1353.3	0.3	-10	8.66	0.317
7390.7	1353	11.8	-10	8.81	0.347
7392.7	1352.7	31.2	-10	9.04	0.398
7394.9	1352.3	49.3	-10	9.28	0.449
7397.1	1351.9	65.8	-10	9.51	0.5
7399.6	1351.4	79.7	-10	9.73	0.551
7402.2	1351	89.9	-10	9.95	0.602
7396.2	1352	0.4	0	8.71	0.343
7398.4	1351.6	20.1	0	8.97	0.398
7400.6	1351.2	37.6	0	9.21	0.449
7403	1350.8	53.2	0	9.44	0.5
7405.5	1350.3	66.4	0	9.67	0.551
7408.3	1349.8	76.7	0	9.9	0.602
7403.1	1350.8	0.4	10	8.79	0.373
7406.5	1350.2	25.1	10	9.14	0.449
7409	1349.7	40	10	9.38	0.5
7411.6	1349.2	52.5	10	9.62	0.551
7414.4	1348.7	62.5	10	9.85	0.602
7410.6	1349.4	0.5	20	8.9	0.41
7412.3	1349.1	11.9	20	9.09	0.449
7414.9	1348.6	26.2	20	9.33	0.5
7417.6	1348.1	38.3	20	9.57	0.551
7420.6	1347.6	48.1	20	9.81	0.602
7418.6	1348	0.4	30	9.06	0.455
7421	1347.5	11.9	30	9.29	0.5
7423.8	1347	23.6	30	9.52	0.551
7426.8	1346.5	32.8	30	9.76	0.602
7427.7	1346.3	0.4	40	9.26	0.511
7430	1345.9	8.6	40	9.45	0.551
7433.2	1345.3	17.3	40	9.69	0.602
7438.8	1344.3	0.5	50	9.58	0.592

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

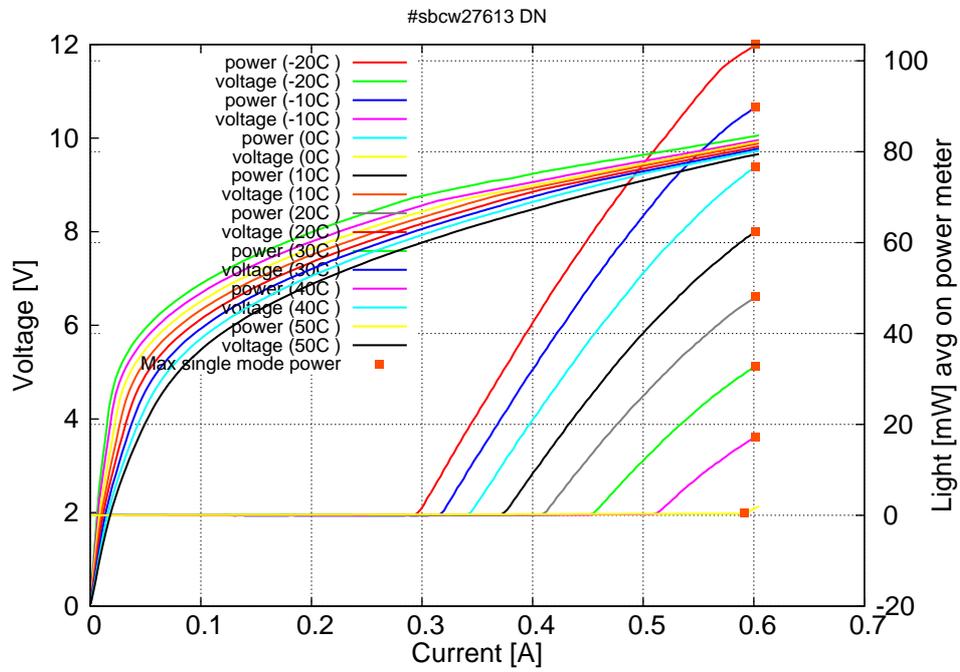


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.29A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.605A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

