

Datasheet for #sbcw25625 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.

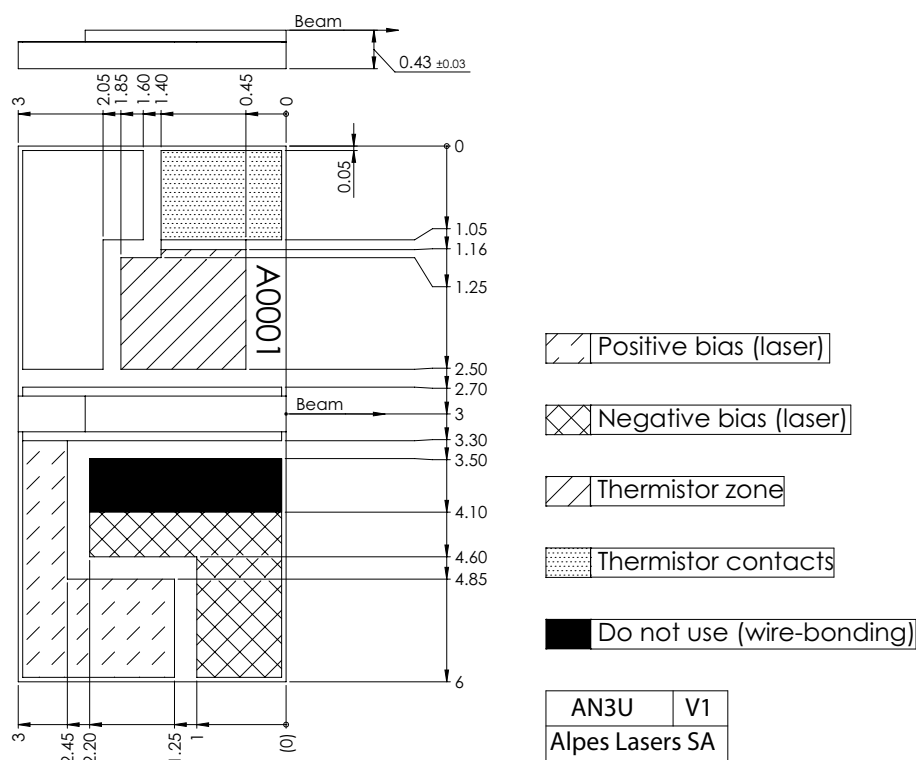


Figure 1: Mechanical and electrical interface for #sbcw25625 DN (please note that AlN submount numbering is A116P)

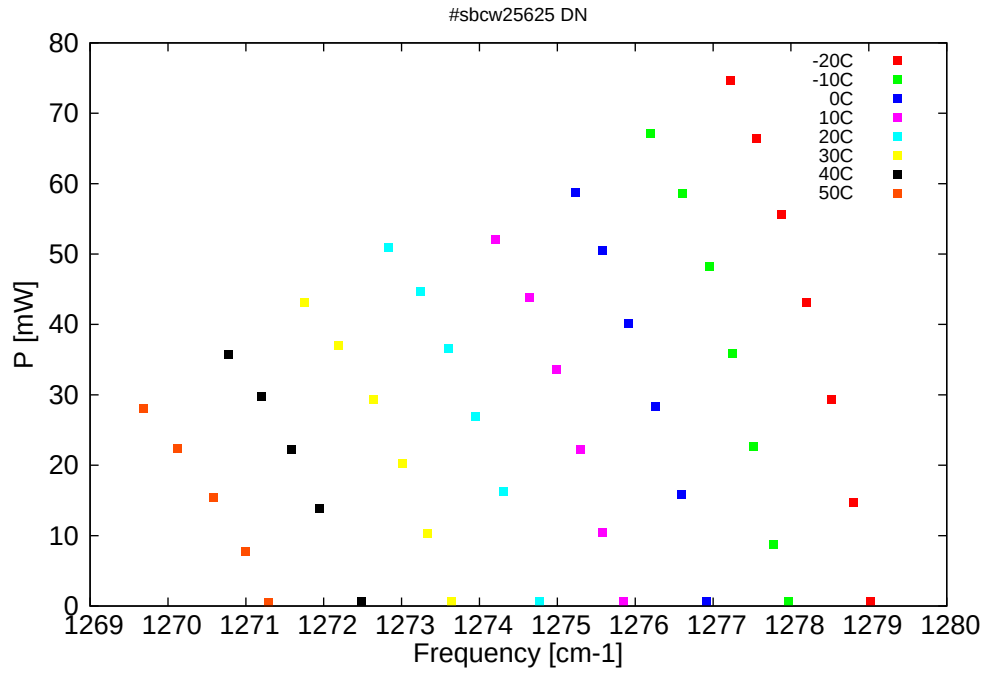


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

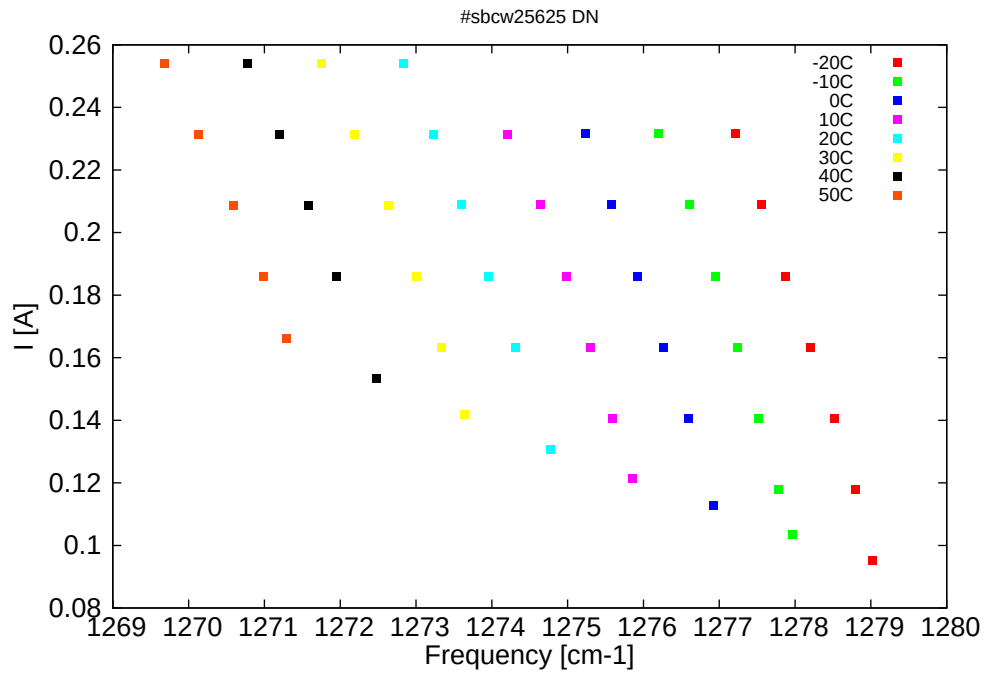


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
7818.5	1279	0.6	-20	8.16	0.095
7819.8	1278.8	14.7	-20	8.44	0.118
7821.5	1278.5	29.3	-20	8.71	0.141
7823.5	1278.2	43.2	-20	8.97	0.163
7825.5	1277.9	55.7	-20	9.22	0.186
7827.5	1277.6	66.4	-20	9.46	0.209
7829.5	1277.2	74.7	-20	9.7	0.232
7824.9	1278	0.7	-10	8.1	0.104
7826.1	1277.8	8.7	-10	8.28	0.118
7827.7	1277.5	22.7	-10	8.54	0.141
7829.3	1277.2	35.9	-10	8.79	0.163
7831.2	1276.9	48.2	-10	9.03	0.186
7833.2	1276.6	58.6	-10	9.28	0.209
7835.7	1276.2	67.1	-10	9.52	0.232
7831.4	1276.9	0.6	0	8.07	0.113
7833.3	1276.6	15.8	0	8.38	0.141
7835.4	1276.3	28.4	0	8.63	0.163
7837.5	1275.9	40.2	0	8.87	0.186
7839.6	1275.6	50.5	0	9.11	0.209
7841.7	1275.2	58.8	0	9.34	0.232
7837.9	1275.9	0.6	10	8.04	0.121
7839.5	1275.6	10.5	10	8.25	0.141
7841.3	1275.3	22.3	10	8.5	0.163
7843.2	1275	33.6	10	8.74	0.186
7845.4	1274.6	43.8	10	8.97	0.209
7848	1274.2	52.1	10	9.21	0.231
7844.6	1274.8	0.6	20	8.02	0.131
7847.4	1274.3	16.3	20	8.37	0.163
7849.6	1274	26.9	20	8.61	0.186
7851.8	1273.6	36.6	20	8.84	0.209
7854	1273.2	44.7	20	9.07	0.231
7856.5	1272.8	50.9	20	9.31	0.254
7851.5	1273.6	0.6	30	8.03	0.142
7853.4	1273.3	10.3	30	8.25	0.163
7855.4	1273	20.3	30	8.48	0.186
7857.7	1272.6	29.3	30	8.72	0.209
7860.5	1272.2	37.1	30	8.95	0.231
7863.1	1271.8	43.2	30	9.18	0.254
7858.6	1272.5	0.7	40	8.05	0.154
7862	1271.9	13.9	40	8.38	0.186
7864.2	1271.6	22.3	40	8.61	0.209
7866.6	1271.2	29.8	40	8.84	0.231
7869.2	1270.8	35.7	40	9.06	0.254
7866	1271.3	0.6	50	8.08	0.166
7867.9	1271	7.8	50	8.28	0.186
7870.4	1270.6	15.5	50	8.5	0.209
7873.2	1270.1	22.4	50	8.73	0.231
7876	1269.7	28	50	8.95	0.254

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

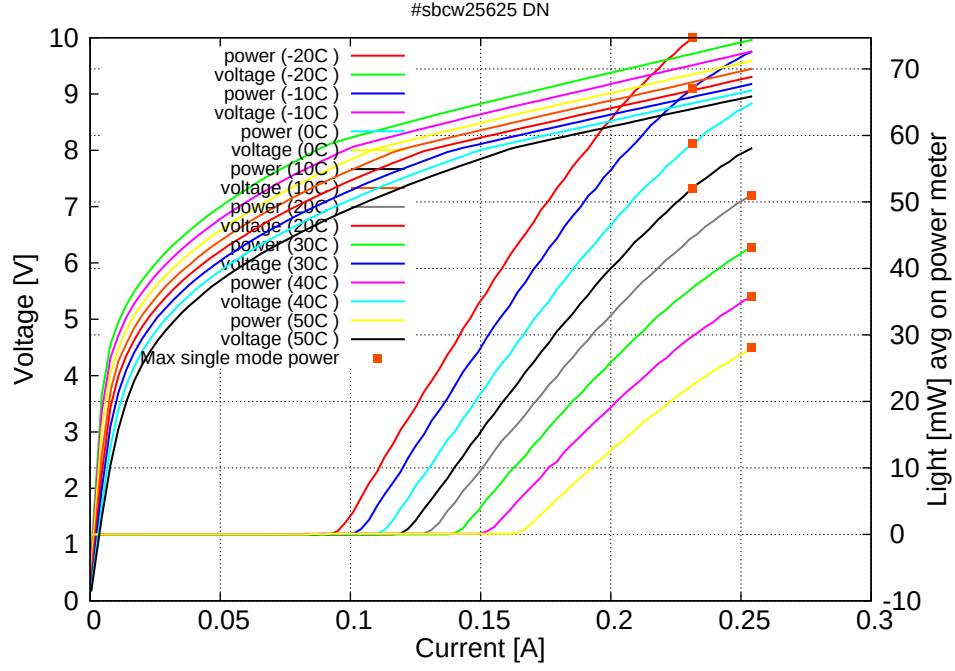


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.2V$ (2-wires measurements). Maximum operation current: 0.235A between -20C and 10C, 0.255A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

