

Datasheet for #sbcw25623 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.

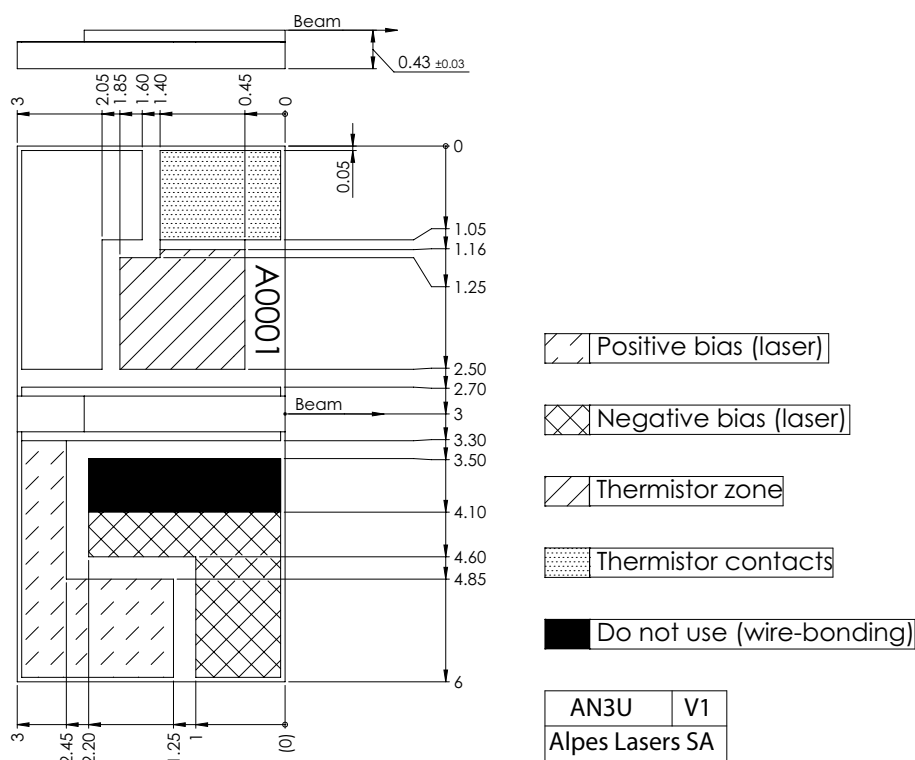


Figure 1: Mechanical and electrical interface for #sbcw25623 DN (please note that AlN submount numbering is A115Y)

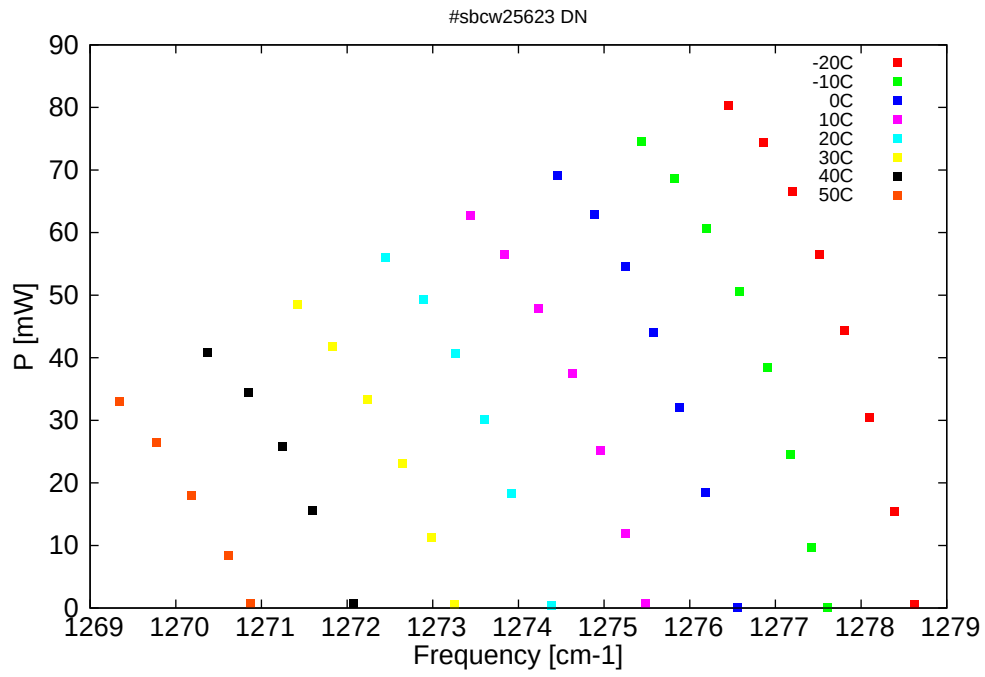


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

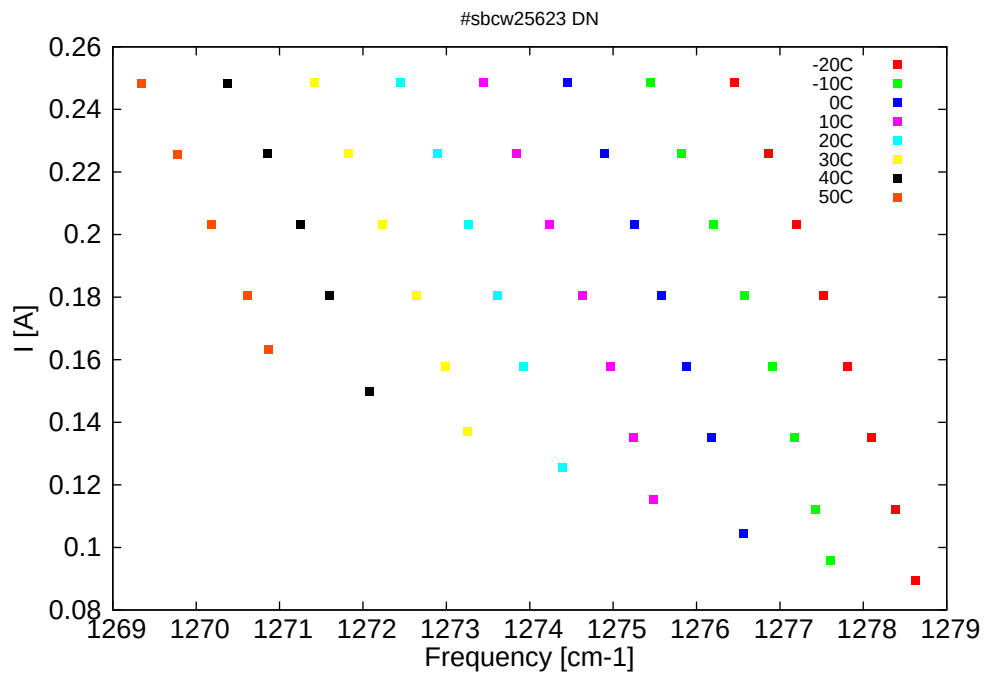


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
7820.9	1278.6	0.5	-20	8.02	0.09
7822.4	1278.4	15.5	-20	8.31	0.112
7824.1	1278.1	30.4	-20	8.6	0.135
7825.9	1277.8	44.4	-20	8.87	0.158
7827.7	1277.5	56.4	-20	9.13	0.18
7829.6	1277.2	66.6	-20	9.41	0.203
7831.7	1276.9	74.5	-20	9.67	0.226
7834.2	1276.5	80.3	-20	9.93	0.249
7827.1	1277.6	0.1	-10	7.97	0.096
7828.2	1277.4	9.6	-10	8.17	0.112
7829.8	1277.2	24.6	-10	8.44	0.135
7831.4	1276.9	38.4	-10	8.72	0.158
7833.4	1276.6	50.5	-10	8.98	0.18
7835.8	1276.2	60.7	-10	9.24	0.203
7838.1	1275.8	68.7	-10	9.5	0.226
7840.4	1275.4	74.6	-10	9.77	0.249
7833.5	1276.6	0.1	0	7.96	0.105
7835.9	1276.2	18.4	0	8.32	0.135
7837.7	1275.9	32	0	8.59	0.158
7839.6	1275.6	44	0	8.85	0.18
7841.6	1275.3	54.5	0	9.11	0.203
7843.8	1274.9	63	0	9.37	0.226
7846.5	1274.5	69	0	9.63	0.249
7840.2	1275.5	0.7	10	7.99	0.115
7841.6	1275.2	11.9	10	8.21	0.135
7843.4	1275	25.2	10	8.47	0.158
7845.4	1274.6	37.5	10	8.73	0.18
7847.8	1274.2	47.8	10	8.98	0.203
7850.3	1273.8	56.5	10	9.24	0.226
7852.7	1273.4	62.7	10	9.5	0.249
7846.9	1274.4	0.4	20	8.01	0.126
7849.8	1273.9	18.3	20	8.37	0.158
7851.7	1273.6	30.2	20	8.63	0.18
7853.8	1273.3	40.6	20	8.89	0.203
7856.1	1272.9	49.3	20	9.14	0.226
7858.9	1272.4	56	20	9.4	0.249
7853.9	1273.3	0.6	30	8.08	0.137
7855.5	1273	11.3	30	8.31	0.158
7857.6	1272.6	23.1	30	8.55	0.18
7860.2	1272.2	33.4	30	8.8	0.203
7862.7	1271.8	41.8	30	9.04	0.226
7865.2	1271.4	48.5	30	9.29	0.249
7861.2	1272.1	0.7	40	8.13	0.15
7864.1	1271.6	15.6	40	8.45	0.18
7866.3	1271.2	25.9	40	8.7	0.203
7868.7	1270.9	34.4	40	8.93	0.226
7871.7	1270.4	40.9	40	9.17	0.248
7868.6	1270.9	0.8	50	8.18	0.163
7870.2	1270.6	8.4	50	8.36	0.18

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7872.9	1270.2	18	50	8.6	0.203
7875.4	1269.8	26.4	50	8.84	0.226
7878.1	1269.3	33	50	9.07	0.248

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

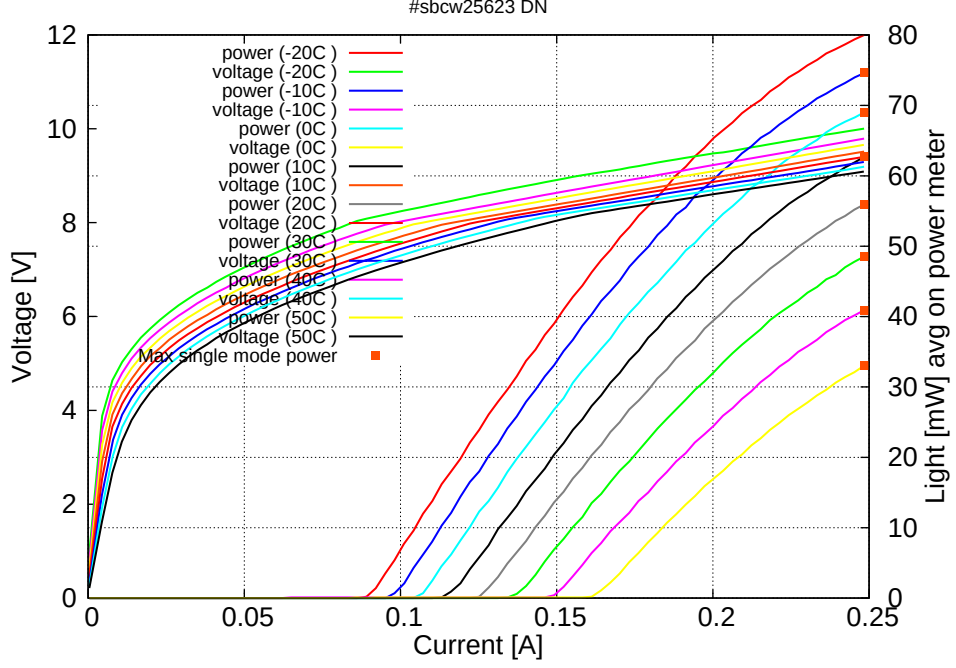


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.09A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.25A for all temperatures.

