

Datasheet for #sbcw25250 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

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 #sbcw25250 DN (please note that AlN submount numbering is A113L)

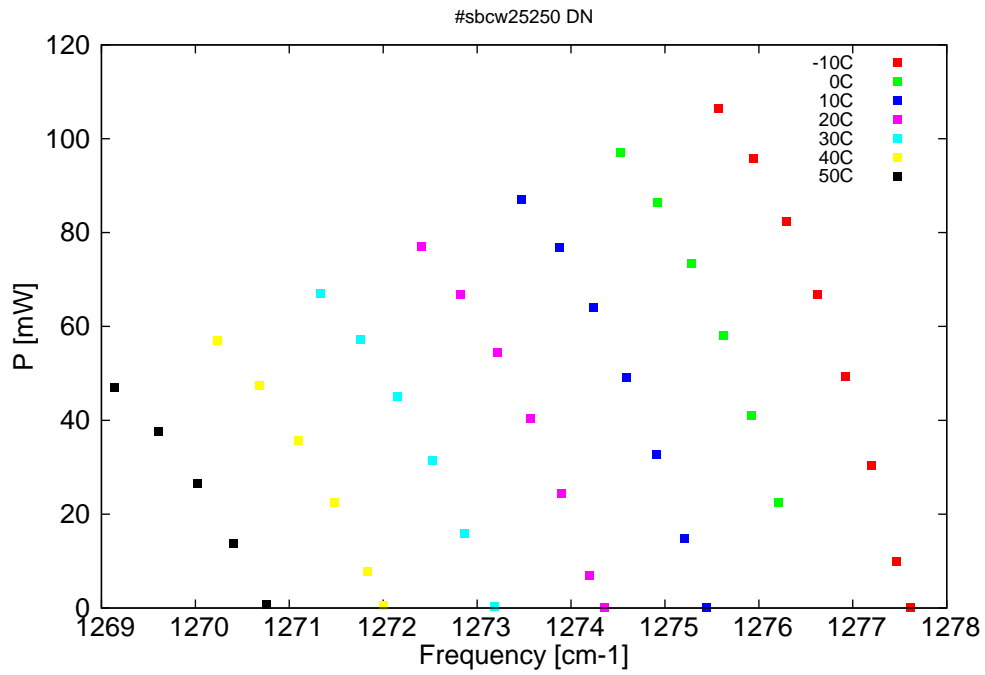


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

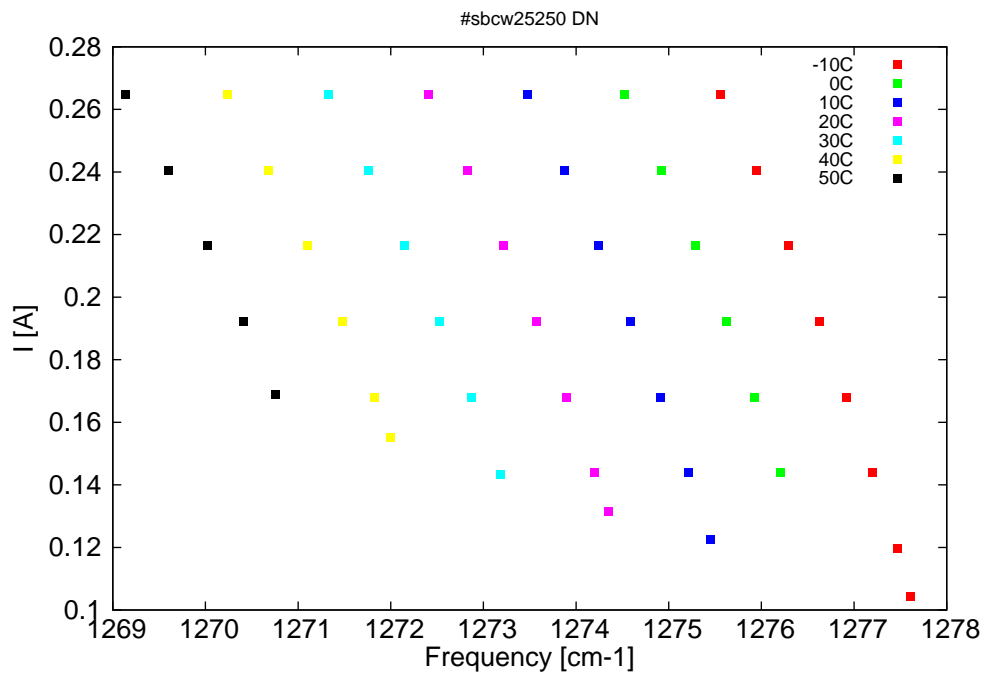


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7827.1	1277.6	0.1	-10	7.76	0.104
7828	1277.5	10	-10	7.9	0.12
7829.6	1277.2	30.3	-10	8.12	0.144
7831.3	1276.9	49.4	-10	8.32	0.168
7833.2	1276.6	66.8	-10	8.52	0.192
7835.2	1276.3	82.3	-10	8.73	0.216
7837.3	1275.9	95.8	-10	8.93	0.241
7839.7	1275.6	106.5	-10	9.14	0.265
7835.7	1276.2	22.5	0	8.02	0.144
7837.5	1275.9	40.9	0	8.22	0.168
7839.3	1275.6	58	0	8.42	0.192
7841.4	1275.3	73.4	0	8.63	0.216
7843.6	1274.9	86.4	0	8.83	0.241
7846.1	1274.5	97	0	9.04	0.265
7840.4	1275.4	0.2	10	7.74	0.122
7841.8	1275.2	14.9	10	7.93	0.144
7843.7	1274.9	32.6	10	8.14	0.168
7845.7	1274.6	49.1	10	8.34	0.192
7847.8	1274.2	64	10	8.54	0.216
7850.1	1273.9	76.8	10	8.74	0.241
7852.5	1273.5	87.1	10	8.95	0.265
7847.1	1274.4	0.2	20	7.74	0.132
7848.1	1274.2	7	20	7.84	0.144
7849.9	1273.9	24.4	20	8.06	0.168
7851.9	1273.6	40.3	20	8.26	0.192
7854.1	1273.2	54.6	20	8.45	0.216
7856.5	1272.8	66.8	20	8.66	0.241
7859.1	1272.4	77	20	8.87	0.265
7854.3	1273.2	0.4	30	7.77	0.143
7856.3	1272.9	15.9	30	7.98	0.168
7858.4	1272.5	31.4	30	8.18	0.192
7860.7	1272.2	45.2	30	8.38	0.216
7863.1	1271.8	57.2	30	8.59	0.241
7865.8	1271.3	67.1	30	8.79	0.265
7861.6	1272	0.5	40	7.8	0.155
7862.7	1271.8	7.7	40	7.91	0.168
7864.9	1271.5	22.5	40	8.12	0.192
7867.2	1271.1	35.8	40	8.32	0.216
7869.8	1270.7	47.4	40	8.52	0.241
7872.6	1270.2	56.9	40	8.73	0.265
7869.4	1270.8	0.8	50	7.85	0.169
7871.5	1270.4	13.8	50	8.05	0.192
7873.9	1270	26.6	50	8.25	0.216
7876.5	1269.6	37.6	50	8.45	0.241
7879.3	1269.1	47	50	8.67	0.265

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

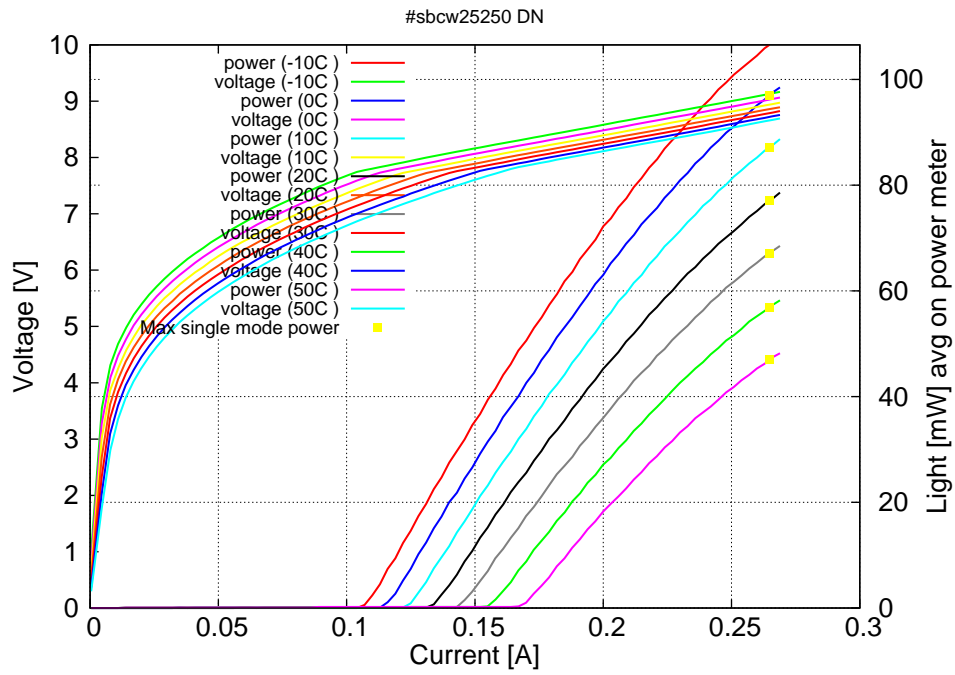


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.11A$ / $V_{th}=7.8V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

