

Datasheet for #sbcw25253 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 #sbcw25253 DN (please note that AlN submount numbering is A113V)

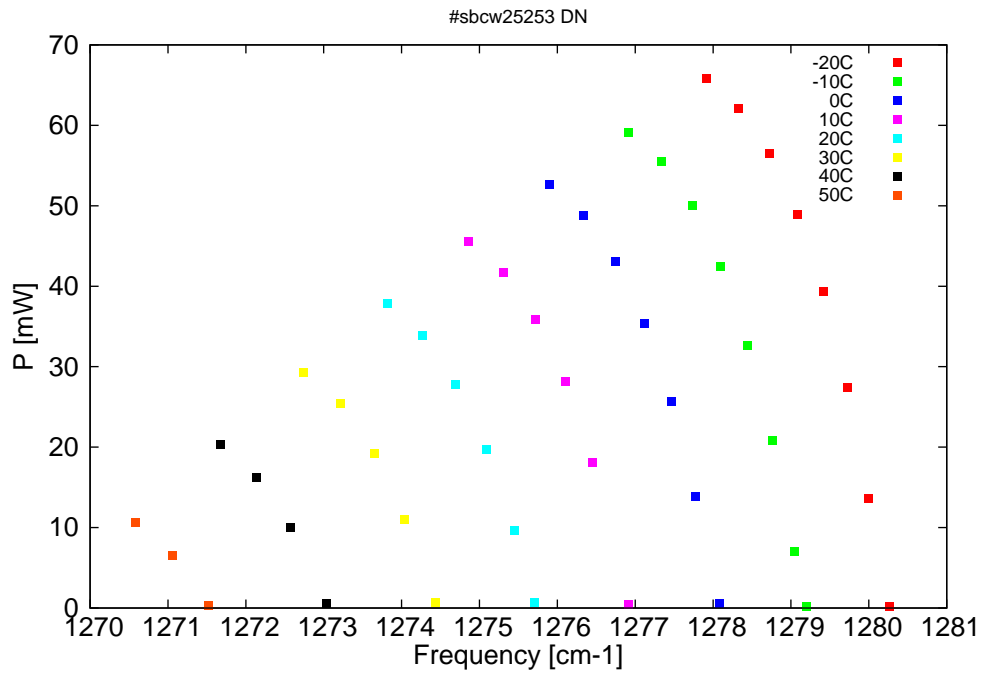


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

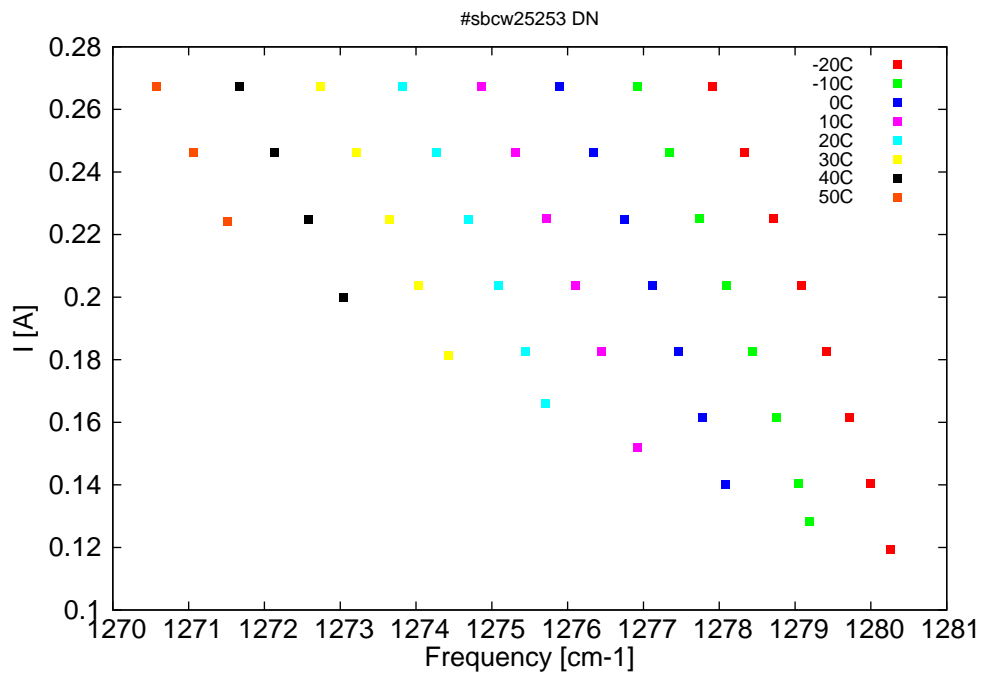


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7810.9	1280.3	0.2	-20	8.72	0.119
7812.5	1280	13.7	-20	8.99	0.141
7814.2	1279.7	27.4	-20	9.26	0.162
7816.1	1279.4	39.4	-20	9.52	0.183
7818.1	1279.1	48.9	-20	9.78	0.204
7820.3	1278.7	56.5	-20	10.04	0.225
7822.7	1278.3	62.2	-20	10.29	0.246
7825.3	1277.9	65.8	-20	10.55	0.267
7817.4	1279.2	0.2	-10	8.67	0.128
7818.3	1279	7	-10	8.82	0.141
7820.1	1278.8	20.8	-10	9.08	0.162
7822	1278.4	32.6	-10	9.35	0.183
7824.1	1278.1	42.4	-10	9.6	0.204
7826.3	1277.7	50	-10	9.86	0.225
7828.7	1277.3	55.5	-10	10.11	0.246
7831.4	1276.9	59.1	-10	10.37	0.267
7824.3	1278.1	0.5	0	8.67	0.14
7826.1	1277.8	13.8	0	8.94	0.162
7828	1277.5	25.7	0	9.19	0.183
7830.1	1277.1	35.4	0	9.45	0.204
7832.4	1276.7	43.1	0	9.7	0.225
7834.9	1276.3	48.8	0	9.95	0.246
7837.6	1275.9	52.6	0	10.21	0.267
7831.4	1276.9	0.5	10	8.69	0.152
7834.2	1276.5	18	10	9.05	0.183
7836.4	1276.1	28.1	10	9.31	0.204
7838.7	1275.7	35.9	10	9.56	0.225
7841.2	1275.3	41.7	10	9.81	0.246
7844	1274.9	45.5	10	10.06	0.267
7838.8	1275.7	0.7	20	8.74	0.166
7840.4	1275.4	9.7	20	8.93	0.183
7842.6	1275.1	19.7	20	9.18	0.204
7845	1274.7	27.8	20	9.43	0.225
7847.6	1274.3	33.9	20	9.67	0.246
7850.4	1273.8	37.8	20	9.93	0.267
7846.7	1274.4	0.7	30	8.81	0.181
7849.1	1274	11	30	9.06	0.204
7851.5	1273.6	19.2	30	9.31	0.225
7854.1	1273.2	25.4	30	9.56	0.246
7857	1272.7	29.3	30	9.81	0.267
7855.2	1273	0.5	40	8.92	0.2
7858.1	1272.6	10	40	9.2	0.225
7860.8	1272.1	16.3	40	9.45	0.246
7863.7	1271.7	20.4	40	9.7	0.267
7864.6	1271.5	0.3	50	9.1	0.224
7867.4	1271.1	6.5	50	9.35	0.246
7870.4	1270.6	10.6	50	9.59	0.267

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$\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{LASER}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

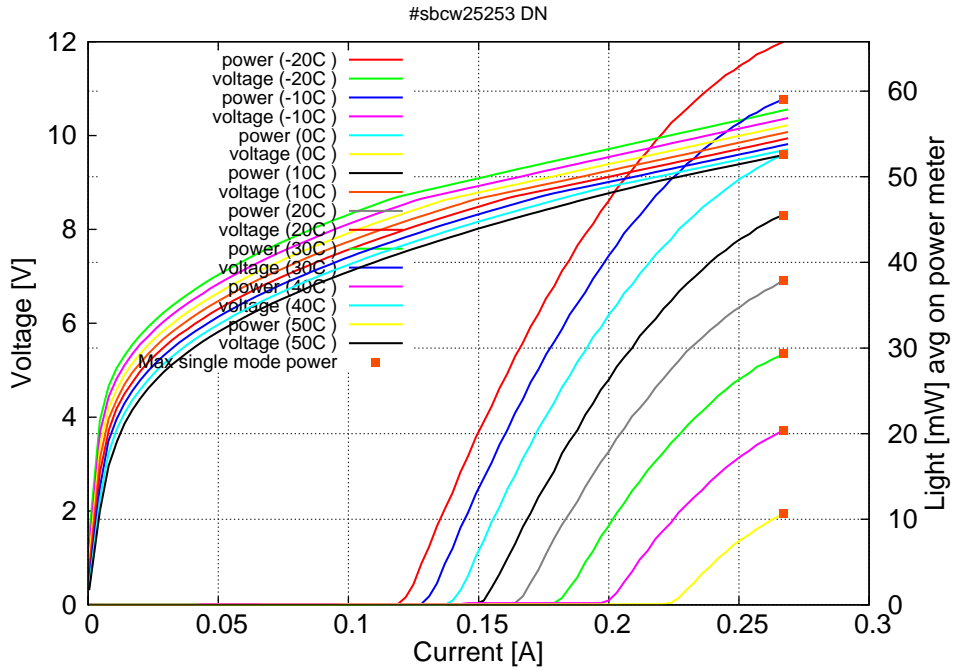


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12\text{A}$ / $V_{th}=8.7\text{V}$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

