

Datasheet for #sbcw25251 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 #sbcw25251 DN (please note that AlN submount numbering is A113W)

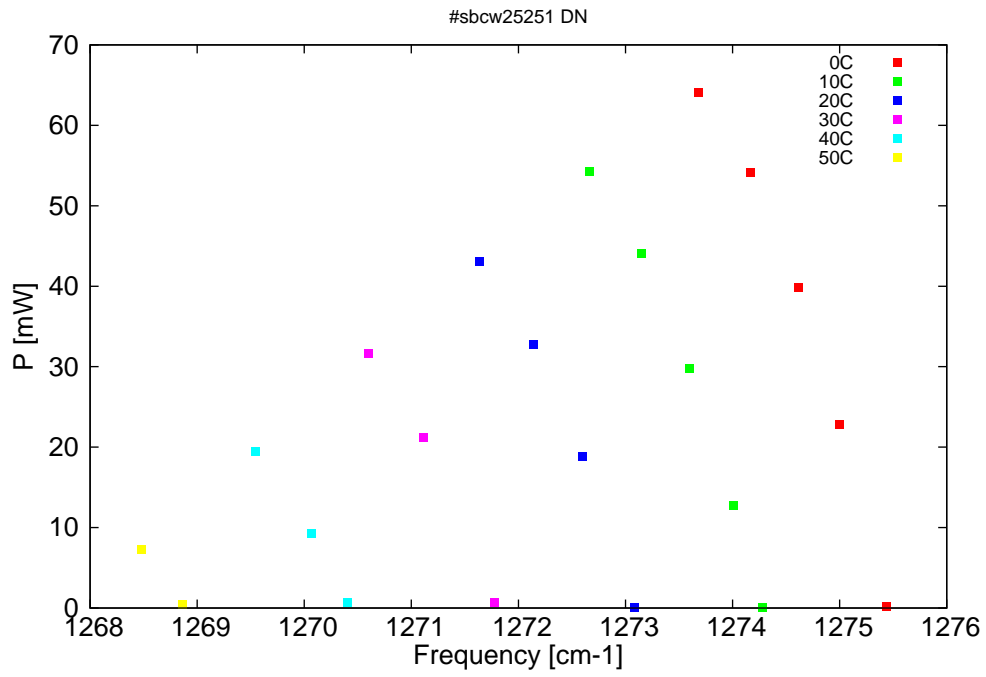


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

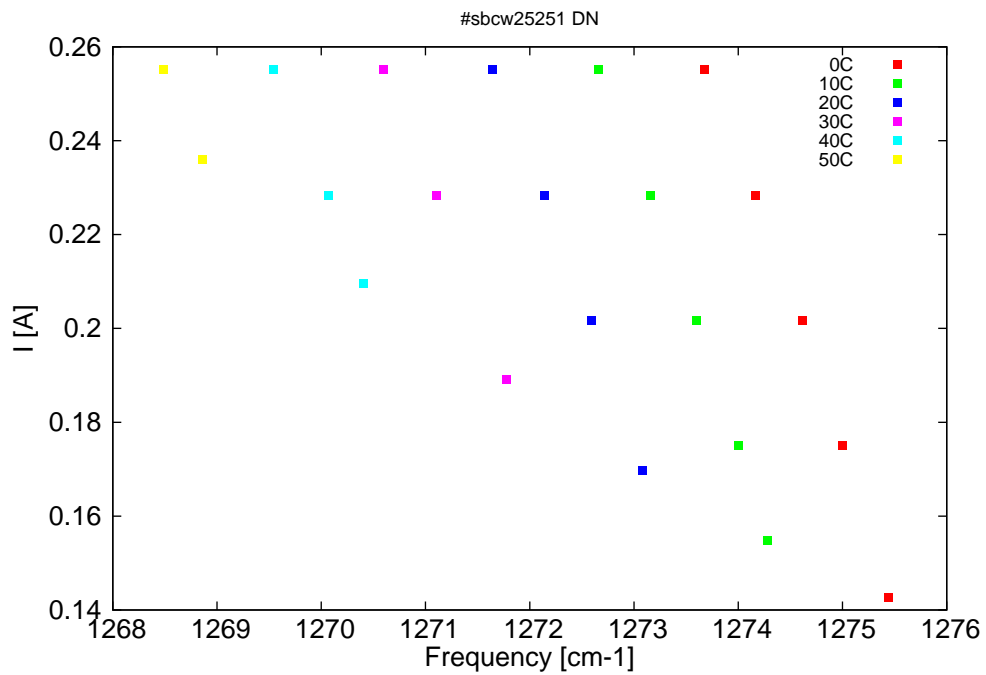


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7840.4	1275.4	0.2	0	8.84	0.143
7843.1	1275	22.8	0	9.23	0.175
7845.5	1274.6	39.9	0	9.55	0.202
7848.3	1274.2	54.1	0	9.84	0.228
7851.3	1273.7	64.1	0	10.15	0.255
7847.6	1274.3	0	10	8.84	0.155
7849.2	1274	12.7	10	9.07	0.175
7851.8	1273.6	29.7	10	9.38	0.202
7854.5	1273.2	44	10	9.67	0.228
7857.6	1272.7	54.2	10	9.98	0.255
7854.9	1273.1	0.1	20	8.82	0.17
7858	1272.6	18.9	20	9.18	0.202
7860.8	1272.1	32.8	20	9.5	0.228
7863.9	1271.6	43.1	20	9.82	0.255
7863	1271.8	0.7	30	8.97	0.189
7867.1	1271.1	21.3	30	9.43	0.228
7870.3	1270.6	31.7	30	9.74	0.255
7871.5	1270.4	0.6	40	9.11	0.21
7873.6	1270.1	9.2	40	9.33	0.228
7876.8	1269.5	19.5	40	9.65	0.255
7881.1	1268.9	0.4	50	9.25	0.236
7883.4	1268.5	7.3	50	9.46	0.255

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

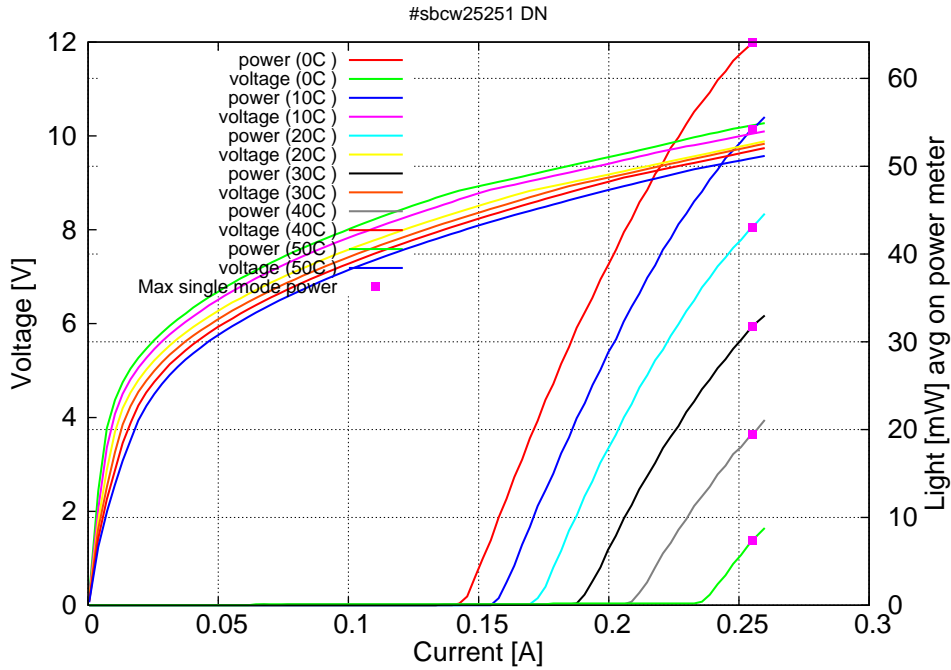


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.14A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.26A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

