

Datasheet for #sbcw25389 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 #sbcw25389 DN (please note that AlN submount numbering is A0ZJ7)

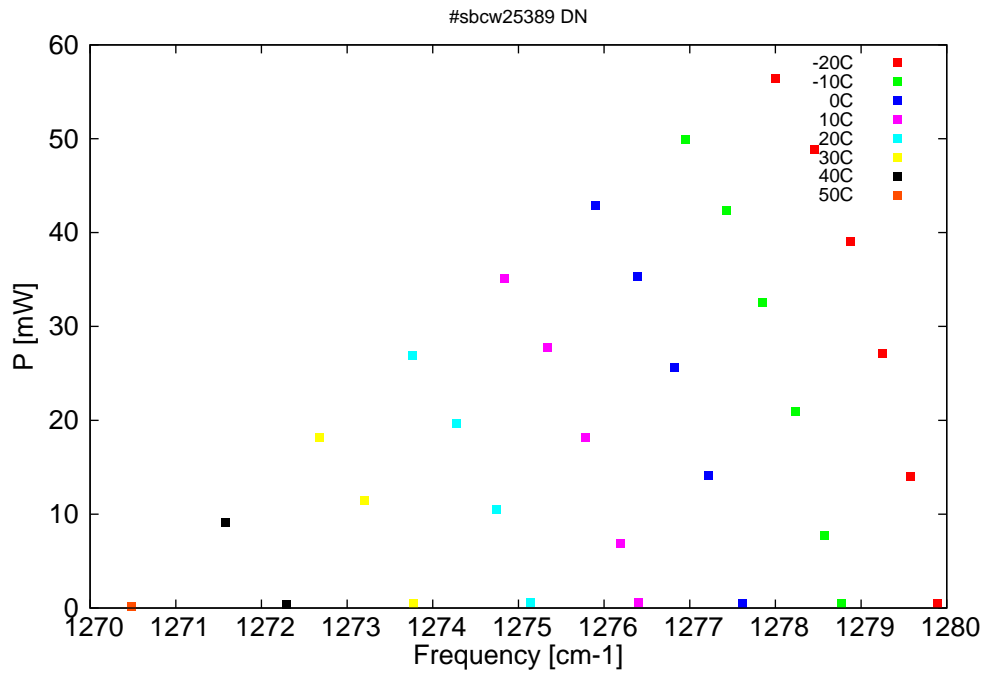


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

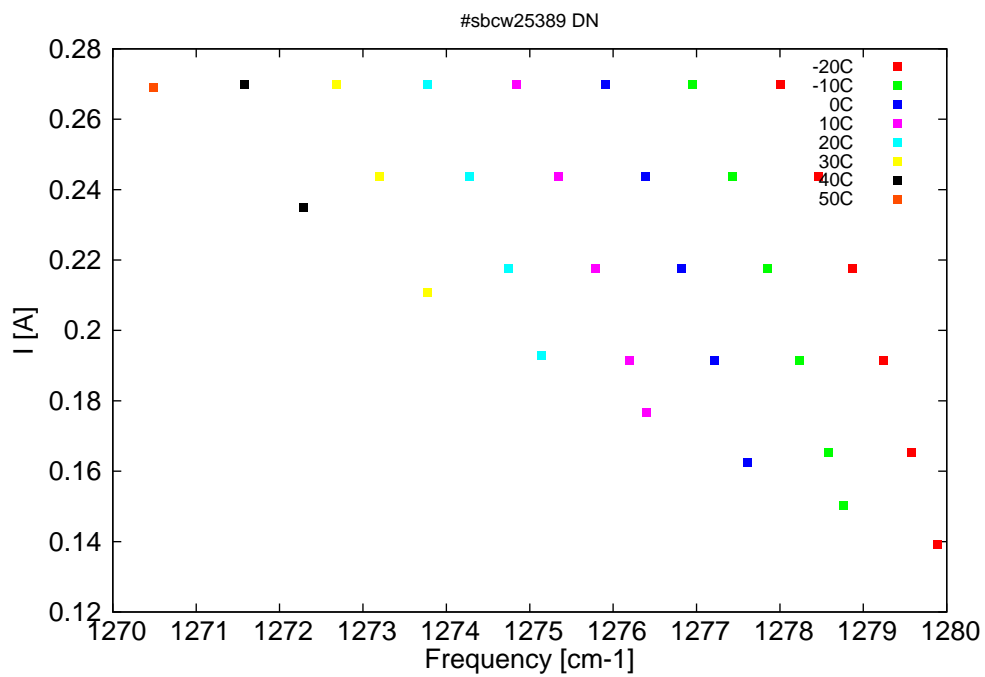


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7813.2	1279.9	0.5	-20	8.51	0.139
7815.1	1279.6	14	-20	8.77	0.165
7817.1	1279.2	27.1	-20	9.01	0.192
7819.4	1278.9	39.1	-20	9.26	0.218
7821.9	1278.5	48.9	-20	9.52	0.244
7824.7	1278	56.4	-20	9.78	0.27
7820	1278.8	0.5	-10	8.51	0.15
7821.2	1278.6	7.7	-10	8.65	0.165
7823.3	1278.2	20.9	-10	8.9	0.192
7825.6	1277.8	32.6	-10	9.14	0.218
7828.2	1277.4	42.4	-10	9.39	0.244
7831.1	1277	49.9	-10	9.65	0.27
7827.1	1277.6	0.5	0	8.52	0.163
7829.5	1277.2	14.1	0	8.79	0.192
7831.9	1276.8	25.6	0	9.03	0.218
7834.6	1276.4	35.4	0	9.29	0.244
7837.6	1275.9	42.8	0	9.54	0.27
7834.5	1276.4	0.5	10	8.56	0.177
7835.8	1276.2	6.9	10	8.7	0.192
7838.3	1275.8	18.1	10	8.94	0.218
7841.1	1275.3	27.7	10	9.19	0.244
7844.1	1274.8	35.1	10	9.45	0.27
7842.3	1275.1	0.6	20	8.63	0.193
7844.7	1274.7	10.5	20	8.86	0.218
7847.6	1274.3	19.7	20	9.11	0.244
7850.7	1273.8	26.9	20	9.37	0.27
7850.7	1273.8	0.5	30	8.73	0.211
7854.2	1273.2	11.4	30	9.04	0.244
7857.4	1272.7	18.1	30	9.3	0.27
7859.8	1272.3	0.4	40	8.9	0.235
7864.3	1271.6	9.1	40	9.24	0.27
7871	1270.5	0.2	50	9.19	0.269

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

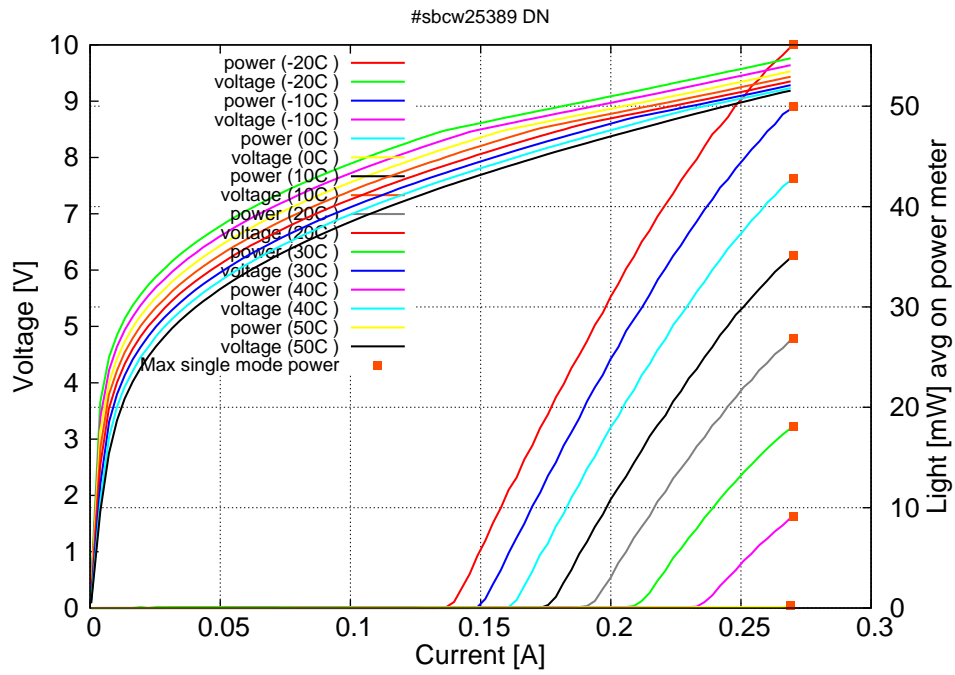


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=8.5V$ (2-wires measurements). Maximum operation current: 0.27A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

