

Datasheet for #sbcw20229 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw20229 DN

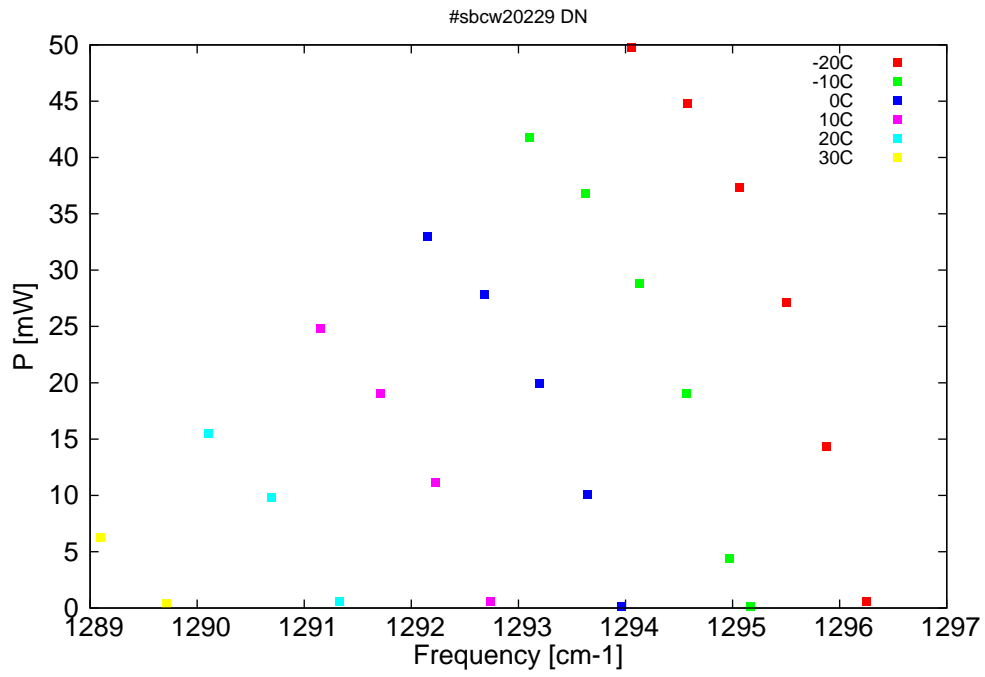


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

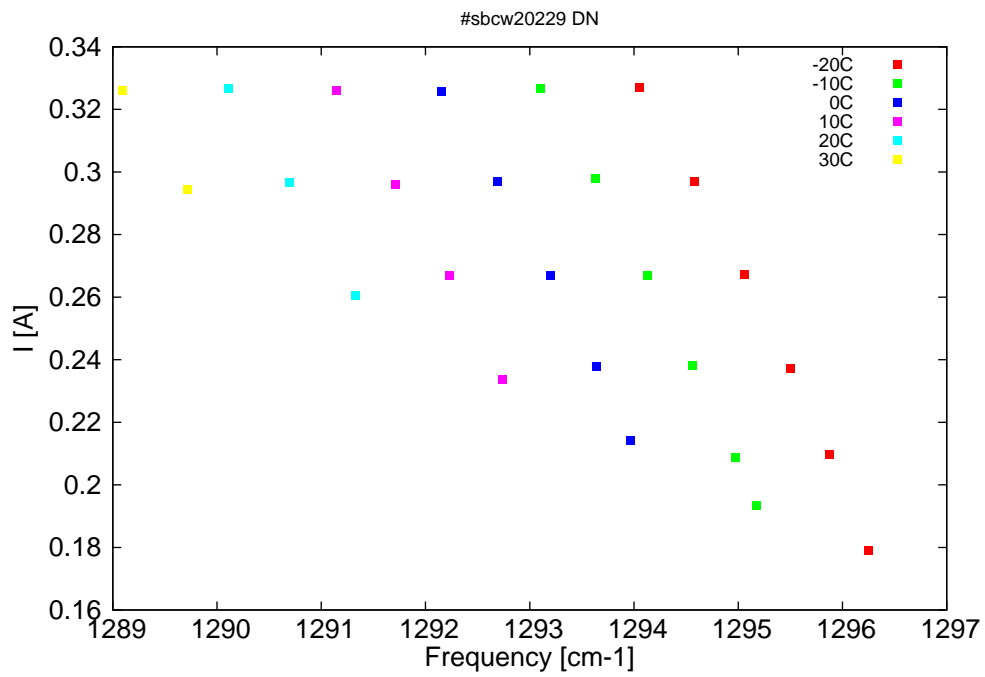


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7714.6	1296.2	0.6	-20	9.18	0.179
7716.8	1295.9	14.3	-20	9.45	0.21
7719	1295.5	27.1	-20	9.68	0.237
7721.6	1295.1	37.4	-20	9.93	0.267
7724.5	1294.6	44.8	-20	10.18	0.297
7727.7	1294.1	49.8	-20	10.43	0.327
7721	1295.2	0.2	-10	9.18	0.193
7722.2	1295	4.4	-10	9.3	0.209
7724.6	1294.6	19.1	-10	9.55	0.238
7727.2	1294.1	28.8	-10	9.8	0.267
7730.2	1293.6	36.8	-10	10.05	0.298
7733.3	1293.1	41.8	-10	10.29	0.327
7728.2	1294	0.1	0	9.23	0.214
7730.1	1293.6	10.1	0	9.43	0.238
7732.8	1293.2	20	0	9.67	0.267
7735.8	1292.7	27.8	0	9.92	0.297
7739	1292.2	33	0	10.16	0.326
7735.5	1292.7	0.5	10	9.27	0.234
7738.6	1292.2	11.1	10	9.55	0.267
7741.6	1291.7	19	10	9.79	0.296
7745	1291.1	24.8	10	10.04	0.326
7744	1291.3	0.6	20	9.38	0.261
7747.8	1290.7	9.8	20	9.67	0.297
7751.3	1290.1	15.5	20	9.92	0.327
7753.7	1289.7	0.4	30	9.55	0.294
7757.4	1289.1	6.3	30	9.8	0.326

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

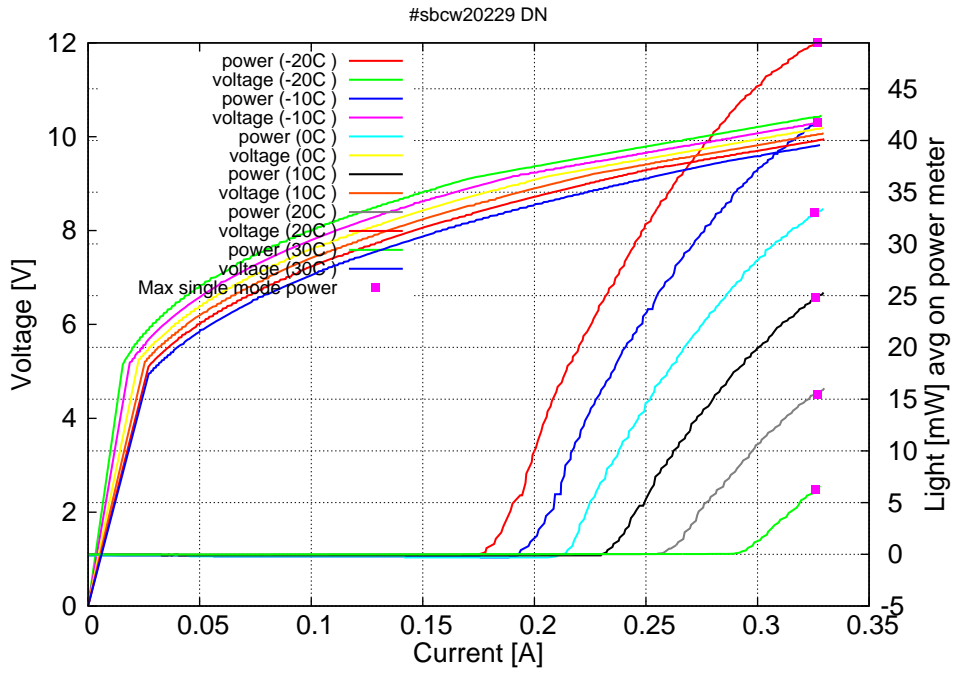


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=9.2V$ (2-wires measurements). Maximum operation current: 0.33A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

