

Datasheet for #sbcw20228 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 #sbcw20228 DN

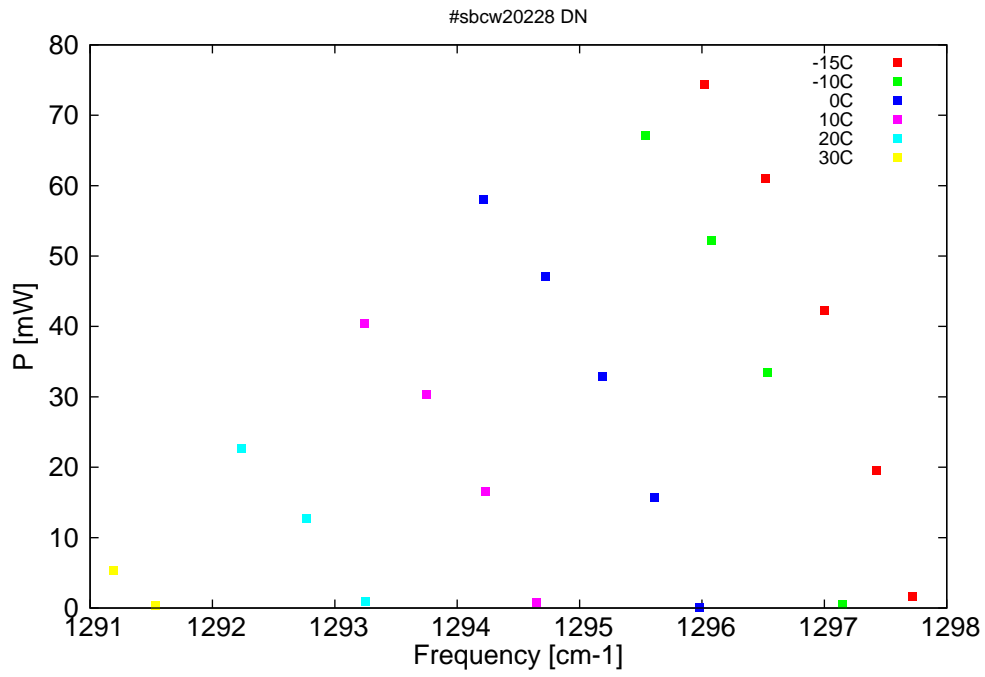


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

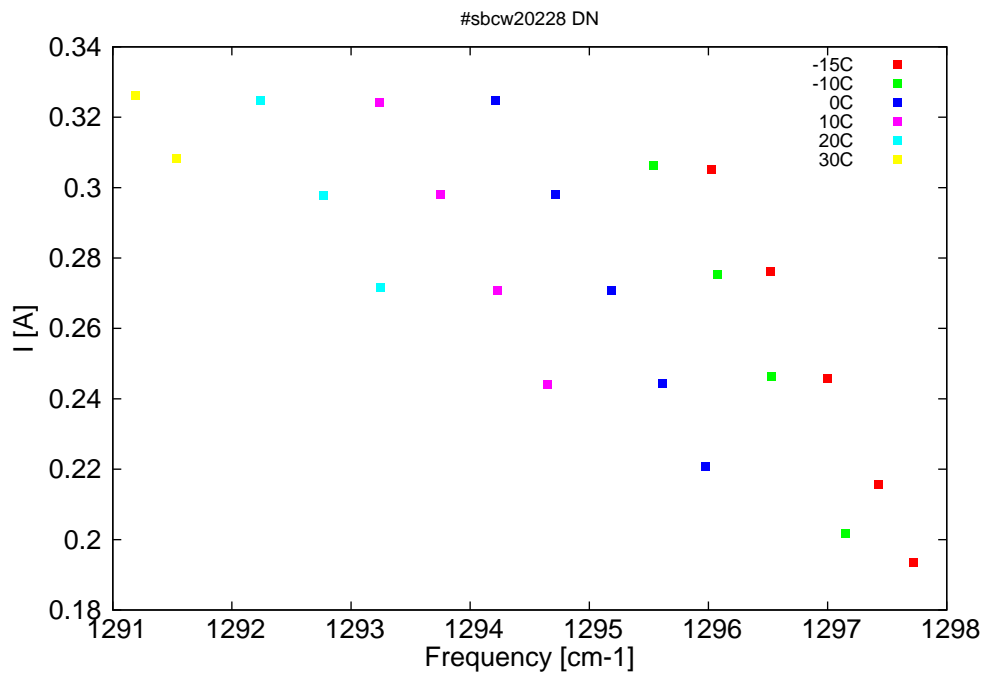


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7705.8	1297.7	1.6	-15	9.29	0.193
7707.5	1297.4	19.5	-15	9.48	0.216
7710.1	1297	42.2	-15	9.75	0.246
7712.9	1296.5	61	-15	10.02	0.276
7715.9	1296	74.4	-15	10.27	0.305
7709.2	1297.2	0.5	-10	9.29	0.202
7712.9	1296.5	33.4	-10	9.68	0.246
7715.6	1296.1	52.2	-10	9.94	0.275
7718.8	1295.5	67.1	-10	10.2	0.306
7716.2	1296	0.1	0	9.34	0.221
7718.4	1295.6	15.6	0	9.54	0.244
7720.9	1295.2	32.9	0	9.77	0.271
7723.7	1294.7	47.1	0	10.01	0.298
7726.7	1294.2	58.1	0	10.24	0.325
7724.1	1294.6	0.7	10	9.41	0.244
7726.6	1294.2	16.5	10	9.64	0.271
7729.5	1293.7	30.4	10	9.87	0.298
7732.5	1293.2	40.4	10	10.1	0.324
7732.5	1293.2	0.9	20	9.52	0.272
7735.3	1292.8	12.7	20	9.74	0.298
7738.5	1292.2	22.6	20	9.97	0.325
7742.7	1291.5	0.3	30	9.71	0.308
7744.8	1291.2	5.4	30	9.86	0.326

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

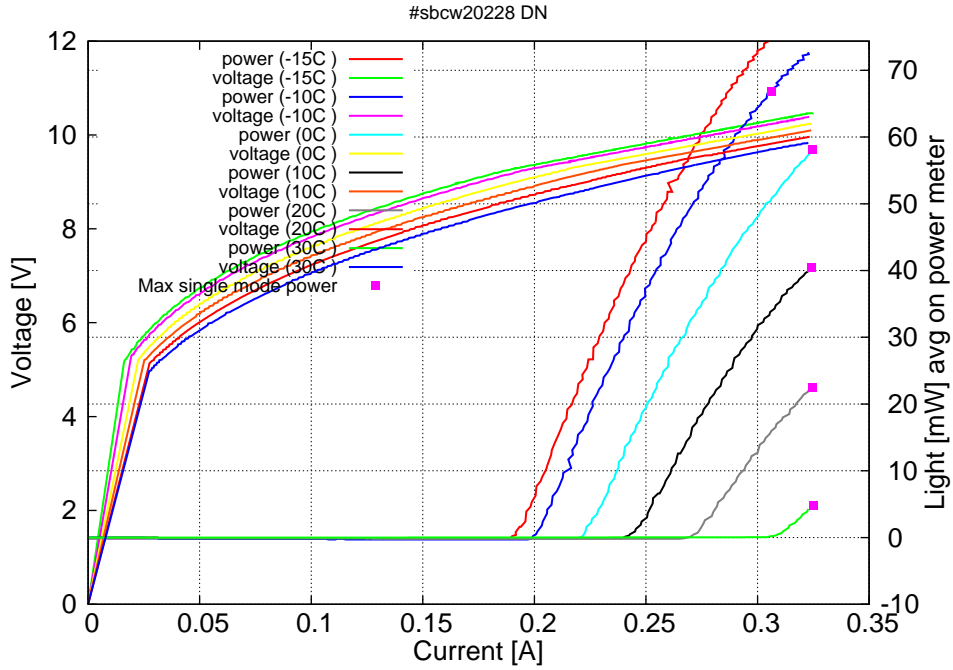


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -15C: $I_{th}=0.19A$ / $V_{th}=9.3V$ (2-wires measurements). Maximum operation current: 0.305A between -15C and -10C, 0.325A between 0C and 30C.

Figure 3: spectra at different temperatures for various DC currents

