

Datasheet for #sbcw20227 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.

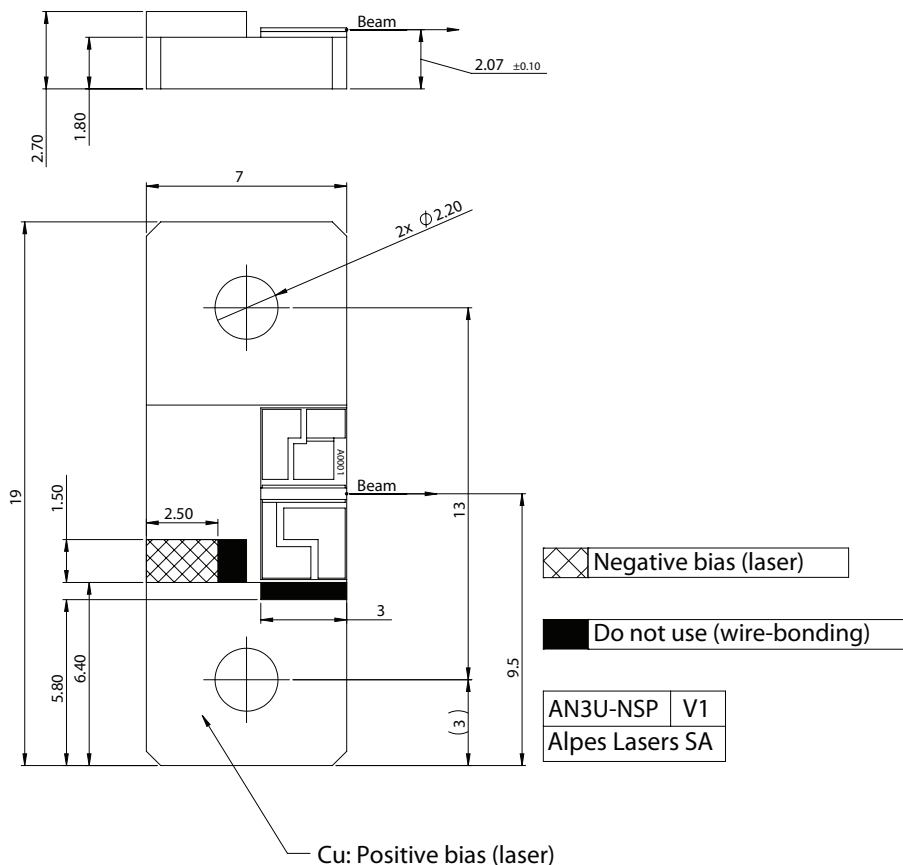


Figure 1: Mechanical and electrical interface for #sbcw20227 DN

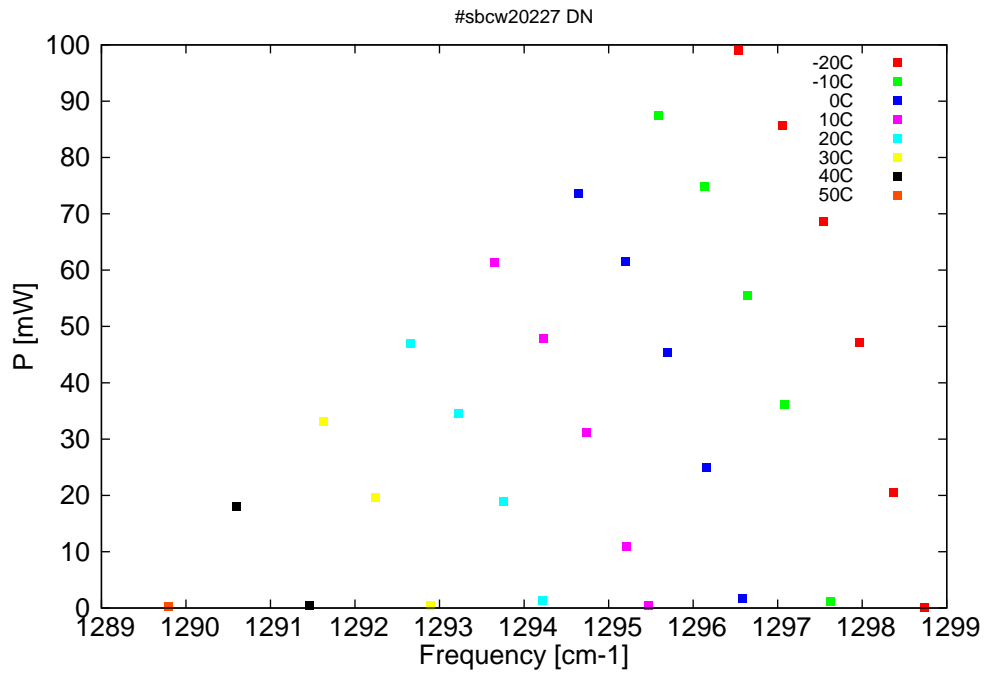


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

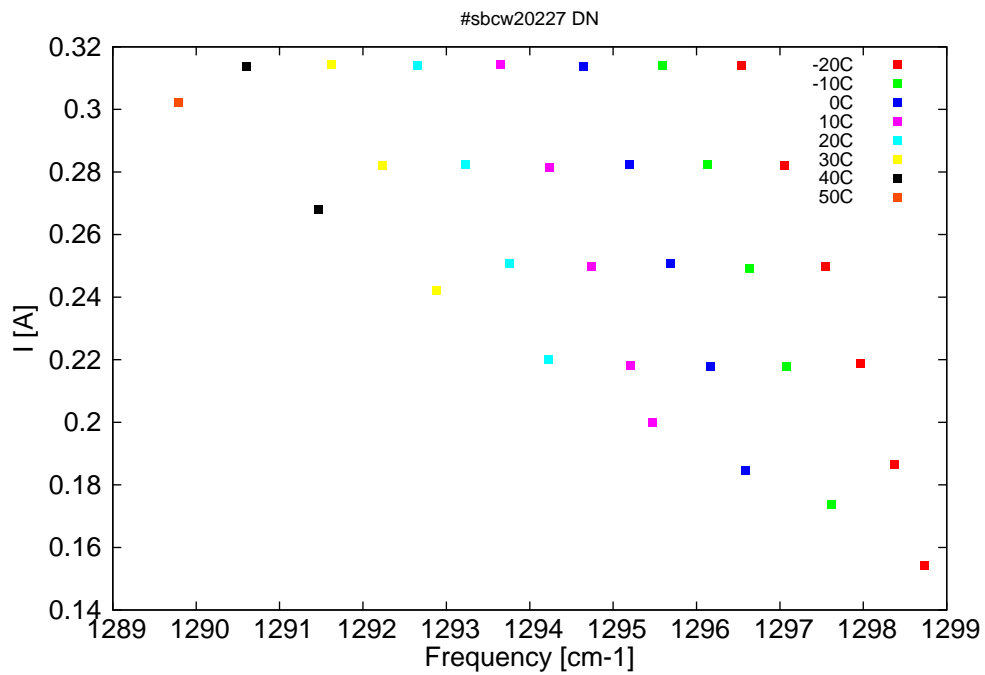


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7699.8	1298.7	0.2	-20	8.86	0.154
7701.9	1298.4	20.5	-20	9.15	0.186
7704.3	1298	47.2	-20	9.43	0.219
7706.9	1297.5	68.6	-20	9.68	0.25
7709.8	1297.1	85.6	-20	9.94	0.282
7712.9	1296.5	99	-20	10.2	0.314
7706.4	1297.6	1.2	-10	8.89	0.174
7709.7	1297.1	36.2	-10	9.28	0.218
7712.3	1296.6	55.5	-10	9.53	0.249
7715.3	1296.1	74.8	-10	9.8	0.282
7718.5	1295.6	87.4	-10	10.06	0.314
7712.6	1296.6	1.7	0	8.86	0.185
7715.1	1296.2	24.9	0	9.14	0.218
7717.9	1295.7	45.5	0	9.41	0.251
7720.8	1295.2	61.5	0	9.67	0.282
7724.1	1294.6	73.6	0	9.92	0.314
7719.2	1295.5	0.4	10	8.86	0.2
7720.7	1295.2	11	10	9.01	0.218
7723.6	1294.7	31.2	10	9.28	0.25
7726.6	1294.2	47.8	10	9.53	0.281
7730.1	1293.6	61.3	10	9.8	0.314
7726.7	1294.2	1.4	20	8.9	0.22
7729.4	1293.8	18.9	20	9.16	0.251
7732.6	1293.2	34.6	20	9.41	0.282
7736	1292.7	47	20	9.67	0.314
7734.6	1292.9	0.4	30	8.97	0.242
7738.5	1292.2	19.7	30	9.29	0.282
7742.2	1291.6	33.1	30	9.55	0.315
7743.2	1291.5	0.5	40	9.07	0.268
7748.3	1290.6	18.1	40	9.44	0.314
7753.2	1289.8	0.2	50	9.25	0.302

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

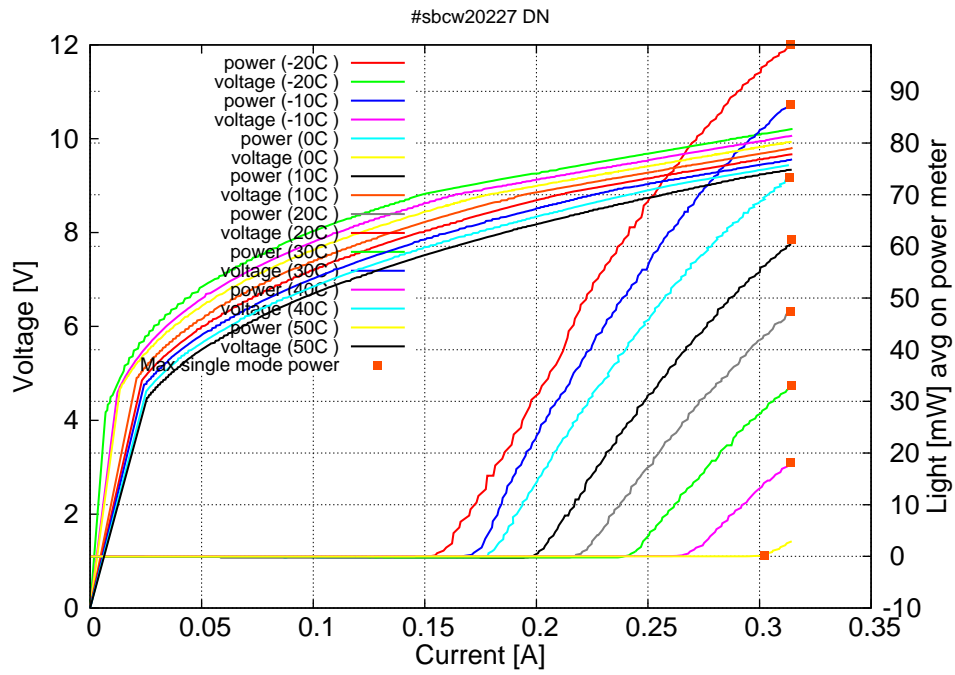


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.315A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

