

Datasheet for #sbcw20219 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.

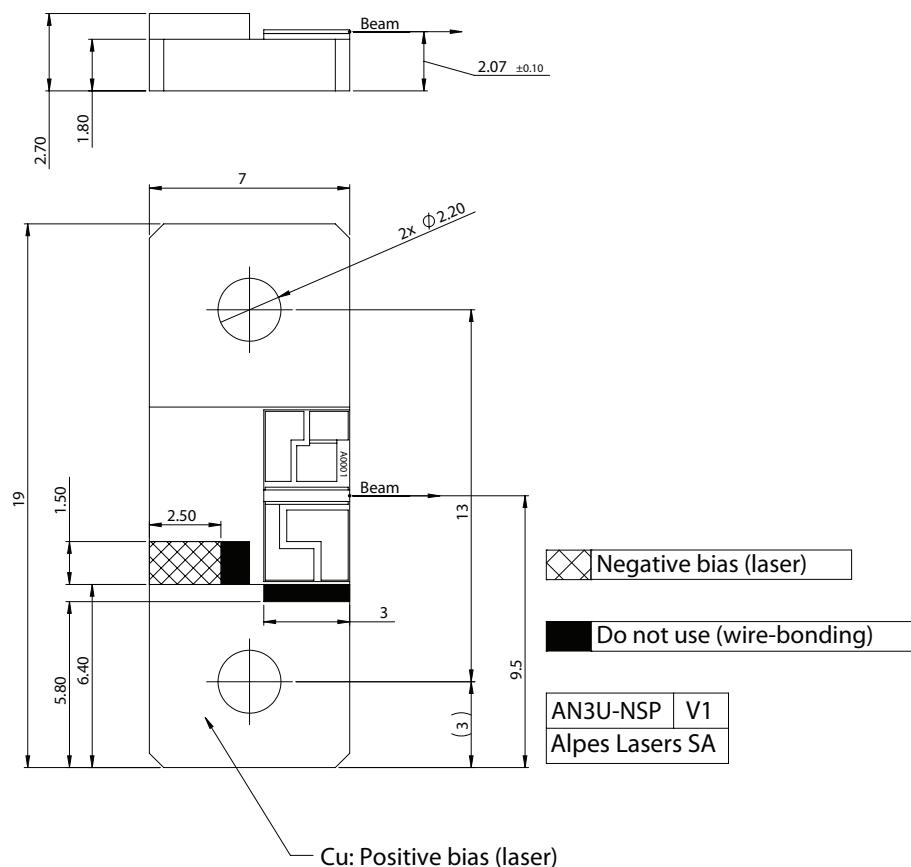


Figure 1: Mechanical and electrical interface for #sbcw20219 DN

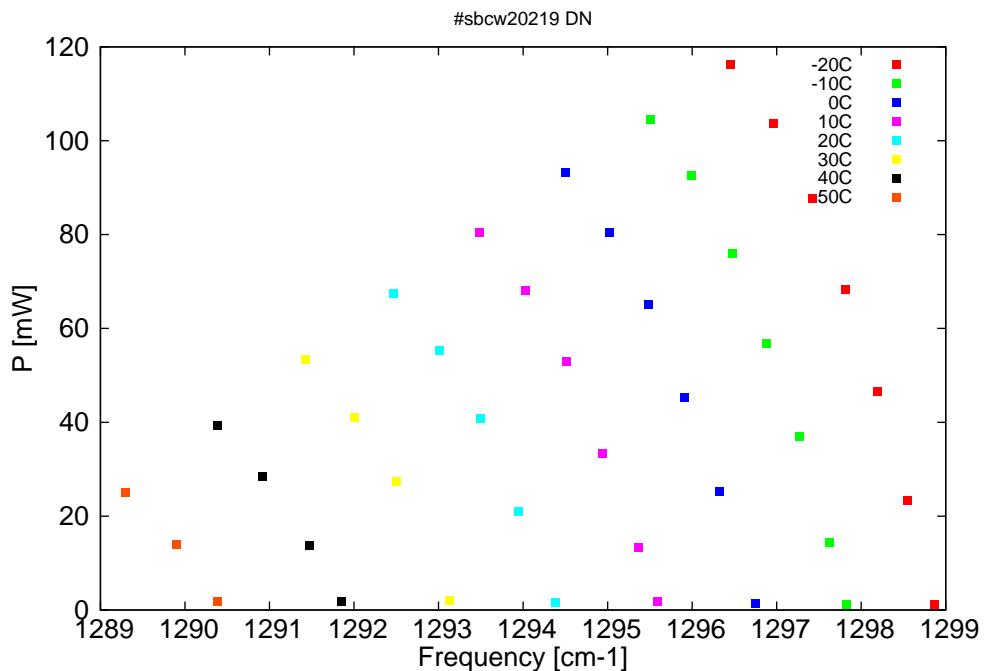


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

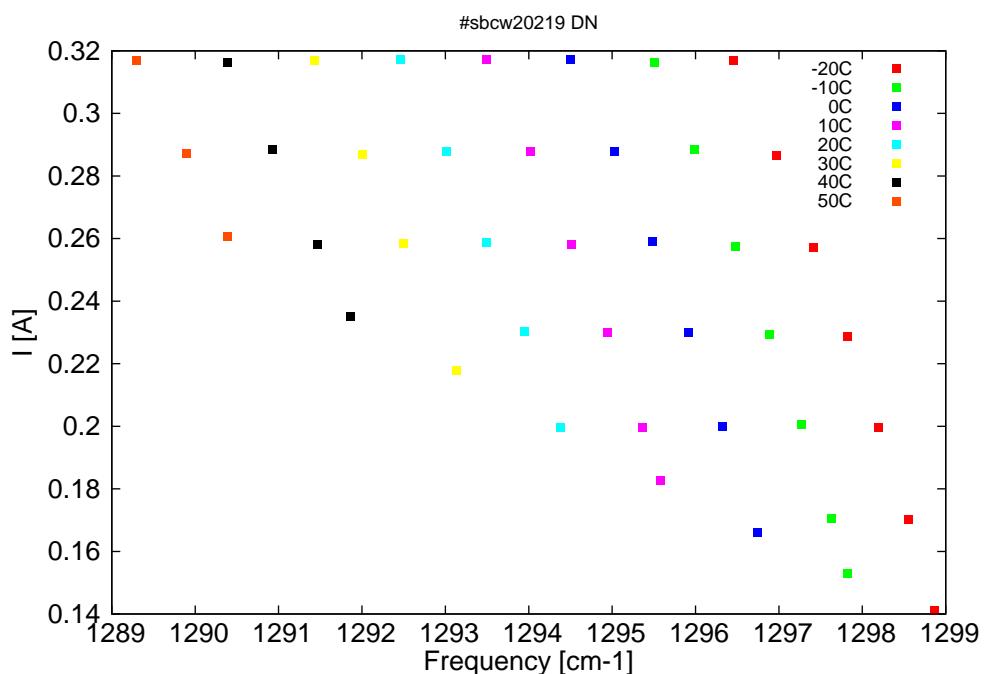


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7699	1298.9	1.1	-20	8.9	0.141
7700.9	1298.5	23.4	-20	9.18	0.17
7703	1298.2	46.5	-20	9.44	0.199
7705.2	1297.8	68.4	-20	9.68	0.229
7707.6	1297.4	87.6	-20	9.91	0.257
7710.3	1297	103.6	-20	10.15	0.287
7713.3	1296.5	116.2	-20	10.39	0.317
7705.2	1297.8	1.3	-10	8.85	0.153
7706.4	1297.6	14.3	-10	9.02	0.17
7708.5	1297.3	36.9	-10	9.28	0.2
7710.8	1296.9	56.8	-10	9.52	0.229
7713.2	1296.5	76	-10	9.75	0.257
7716.1	1296	92.6	-10	10	0.289
7719	1295.5	104.6	-10	10.23	0.316
7711.6	1296.7	1.4	0	8.81	0.166
7714.1	1296.3	25.4	0	9.12	0.2
7716.6	1295.9	45.2	0	9.38	0.23
7719.1	1295.5	65.1	0	9.61	0.259
7721.9	1295	80.5	0	9.84	0.288
7725	1294.5	93.1	0	10.08	0.317
7718.5	1295.6	1.8	10	8.82	0.183
7719.8	1295.4	13.3	10	8.97	0.199
7722.4	1294.9	33.3	10	9.23	0.23
7724.9	1294.5	52.9	10	9.46	0.258
7727.8	1294	68	10	9.7	0.288
7731	1293.5	80.5	10	9.93	0.317
7725.7	1294.4	1.7	20	8.82	0.2
7728.3	1294	20.9	20	9.08	0.23
7731	1293.5	40.9	20	9.32	0.259
7733.9	1293	55.3	20	9.56	0.288
7737.2	1292.5	67.6	20	9.79	0.317
7733.2	1293.1	2	30	8.84	0.218
7736.9	1292.5	27.4	30	9.18	0.258
7739.9	1292	41.1	30	9.41	0.287
7743.4	1291.4	53.4	30	9.66	0.317
7740.8	1291.9	1.8	40	8.86	0.235
7743.1	1291.5	13.7	40	9.05	0.258
7746.4	1290.9	28.4	40	9.3	0.288
7749.6	1290.4	39.2	40	9.53	0.316
7749.6	1290.4	1.8	50	8.96	0.261
7752.6	1289.9	14	50	9.17	0.287
7756.1	1289.3	25.1	50	9.41	0.317

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

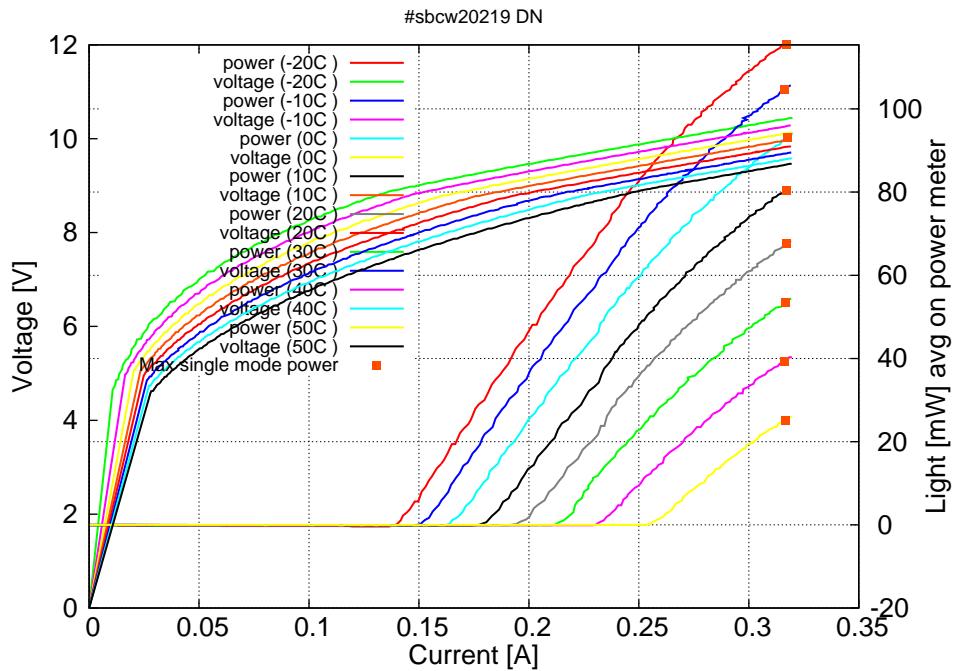


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.32A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

