

Datasheet for #sbcw18317 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 #sbcw18317 DN

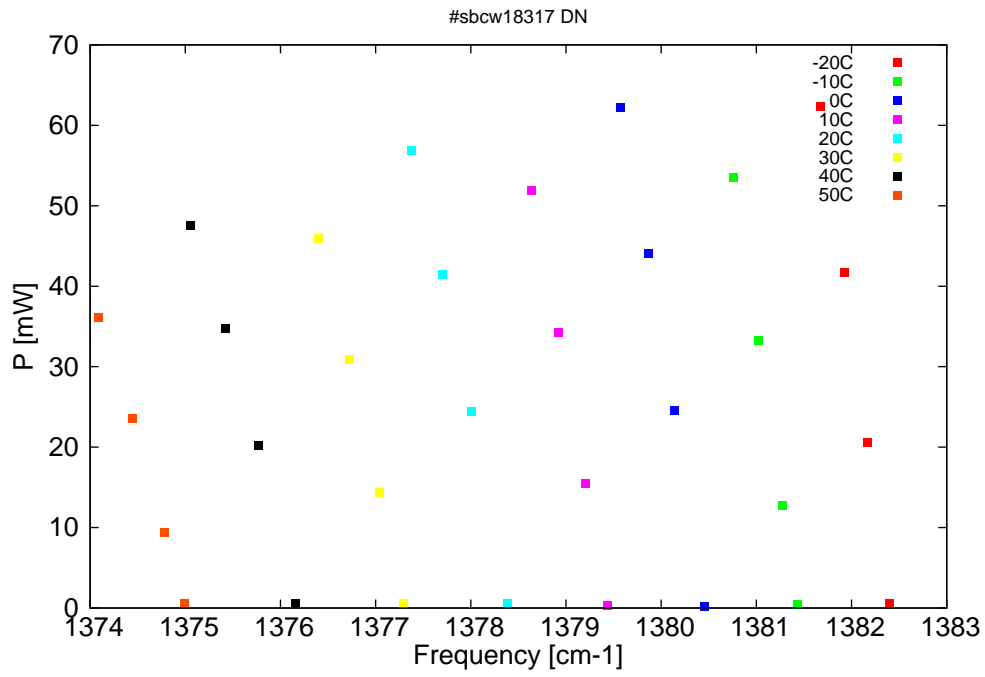


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

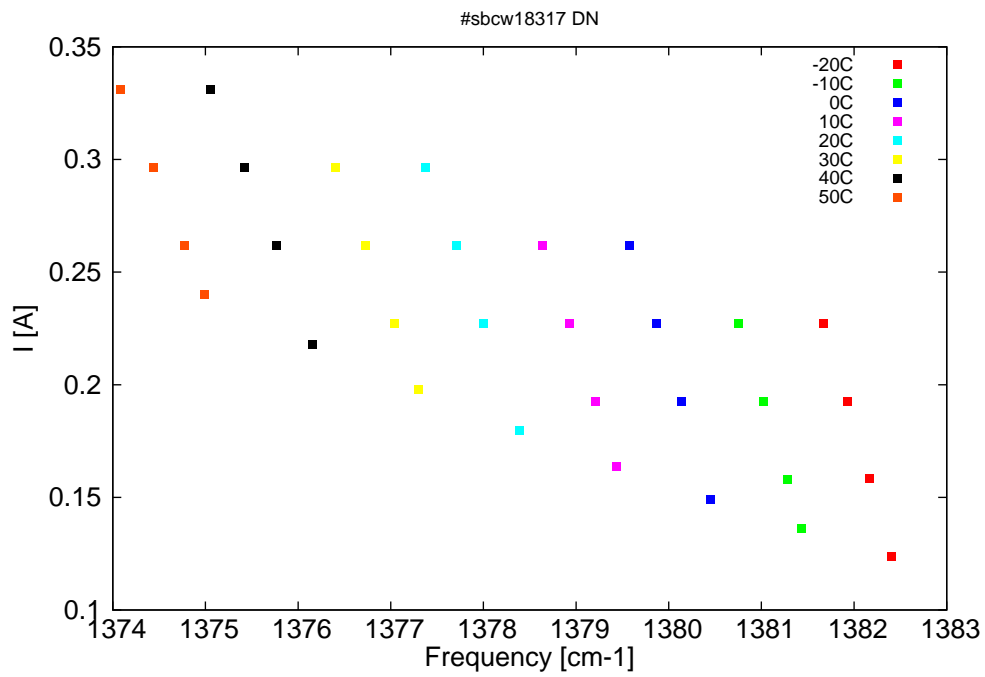


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7233.8	1382.4	0.5	-20	7.91	0.124
7235	1382.2	20.6	-20	8.22	0.158
7236.3	1381.9	41.7	-20	8.5	0.193
7237.6	1381.7	62.3	-20	8.77	0.227
7238.8	1381.4	0.4	-10	7.94	0.136
7239.7	1381.3	12.8	-10	8.14	0.158
7241	1381	33.3	-10	8.42	0.193
7242.4	1380.8	53.5	-10	8.69	0.227
7244	1380.5	0.2	0	7.97	0.149
7245.7	1380.1	24.5	0	8.33	0.193
7247.1	1379.9	44	0	8.6	0.227
7248.6	1379.6	62.2	0	8.86	0.262
7249.3	1379.4	0.4	10	8.01	0.164
7250.5	1379.2	15.5	10	8.25	0.193
7252	1378.9	34.3	10	8.52	0.227
7253.6	1378.6	51.9	10	8.78	0.262
7254.9	1378.4	0.5	20	8.07	0.18
7256.9	1378	24.4	20	8.44	0.227
7258.4	1377.7	41.4	20	8.7	0.262
7260.2	1377.4	56.9	20	8.95	0.297
7260.6	1377.3	0.5	30	8.14	0.198
7262	1377	14.4	30	8.37	0.227
7263.6	1376.7	30.9	30	8.63	0.262
7265.3	1376.4	45.9	30	8.88	0.297
7266.6	1376.2	0.5	40	8.22	0.218
7268.7	1375.8	20.2	40	8.56	0.262
7270.5	1375.4	34.8	40	8.81	0.297
7272.4	1375.1	47.5	40	9.06	0.331
7272.8	1375	0.5	50	8.32	0.24
7273.9	1374.8	9.4	50	8.48	0.262
7275.7	1374.4	23.6	50	8.74	0.297
7277.6	1374.1	36.2	50	8.99	0.331

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

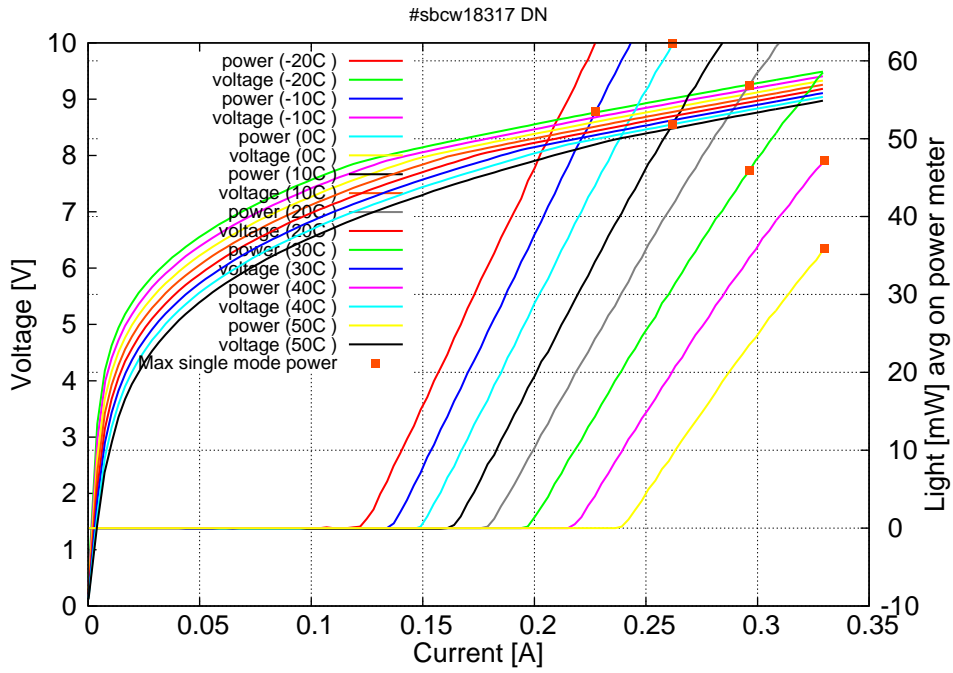


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=7.9V$ (2-wires measurements). Maximum operation current: 0.23A between -20C and -10C, 0.265A between 0C and 10C, 0.30A between 20C and 30C, 0.33A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

