

Datasheet for #sbcw14338 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 #sbcw14338 DN

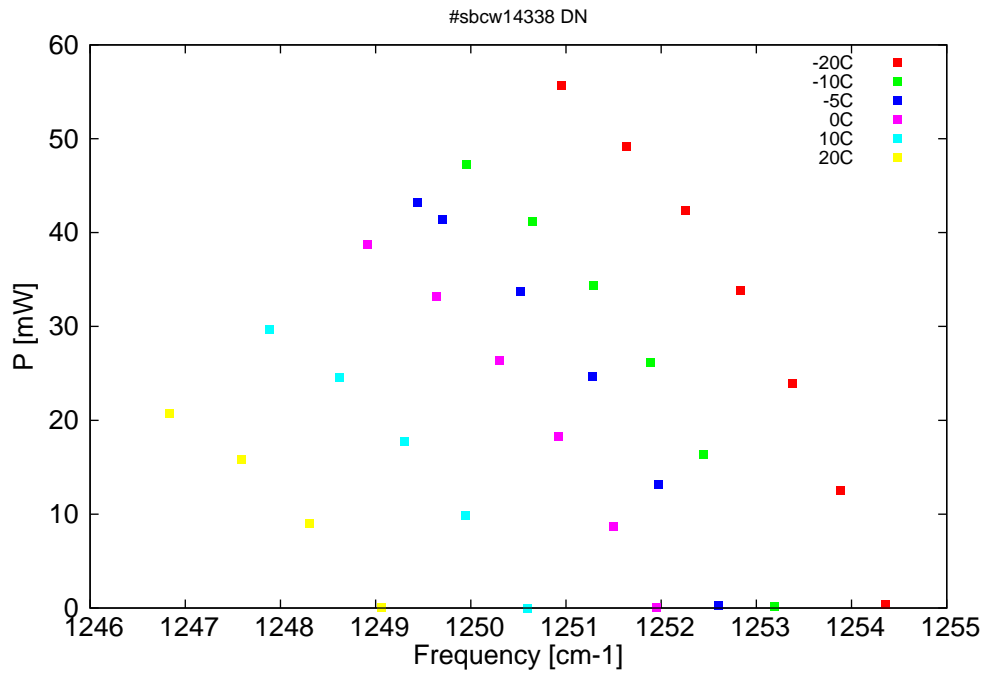


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

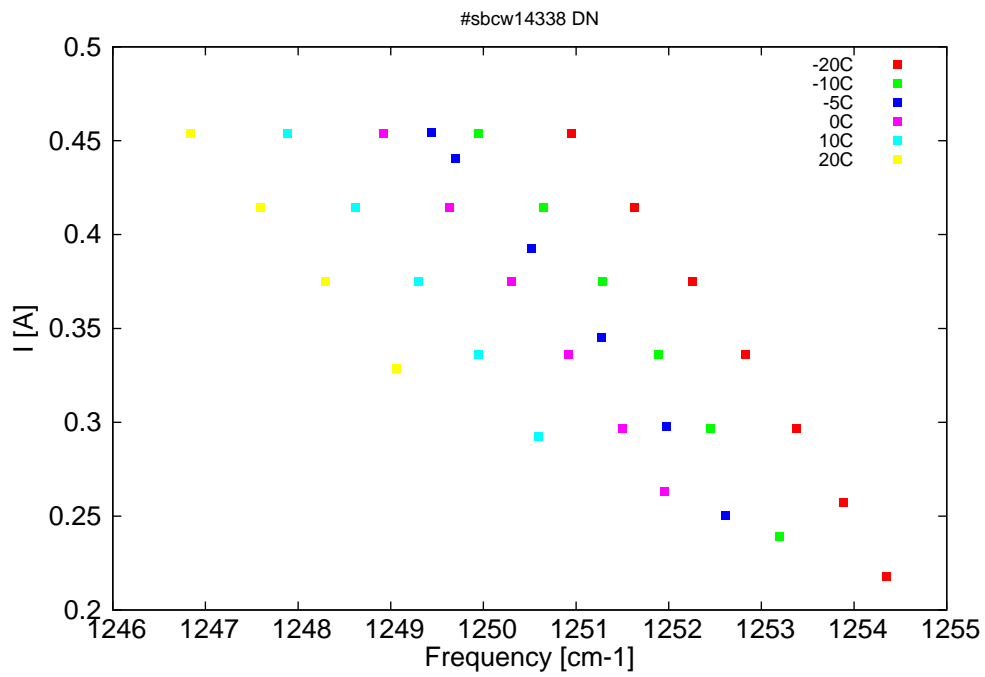


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7972.2	1254.4	0.4	-20	7.45	0.218
7975.2	1253.9	12.5	-20	7.61	0.257
7978.4	1253.4	23.9	-20	7.77	0.297
7981.9	1252.8	33.8	-20	7.92	0.336
7985.6	1252.3	42.4	-20	8.09	0.375
7989.6	1251.6	49.2	-20	8.25	0.415
7993.9	1251	55.7	-20	8.42	0.454
7979.6	1253.2	0.2	-10	7.5	0.239
7984.4	1252.4	16.3	-10	7.73	0.297
7987.9	1251.9	26.2	-10	7.89	0.336
7991.8	1251.3	34.3	-10	8.06	0.375
7995.9	1250.6	41.2	-10	8.23	0.415
8000.3	1250	47.2	-10	8.4	0.454
7983.4	1252.6	0.2	-5	7.52	0.25
7987.4	1252	13.2	-5	7.72	0.298
7991.8	1251.3	24.7	-5	7.92	0.345
7996.7	1250.5	33.7	-5	8.13	0.393
8001.9	1249.7	41.4	-5	8.33	0.44
8003.6	1249.4	43.2	-5	8.39	0.454
7987.5	1252	0.1	0	7.56	0.263
7990.4	1251.5	8.7	0	7.7	0.297
7994.1	1250.9	18.3	0	7.86	0.336
7998.1	1250.3	26.4	0	8.04	0.375
8002.3	1249.6	33.2	0	8.21	0.415
8006.9	1248.9	38.7	0	8.38	0.454
7996.2	1250.6	0	10	7.65	0.292
8000.4	1249.9	9.8	10	7.84	0.336
8004.5	1249.3	17.7	10	8.01	0.375
8008.9	1248.6	24.6	10	8.19	0.415
8013.6	1247.9	29.7	10	8.37	0.454
8006	1249.1	0.1	20	7.77	0.329
8010.9	1248.3	9.1	20	7.99	0.375
8015.4	1247.6	15.9	20	8.17	0.415
8020.3	1246.8	20.7	20	8.35	0.454

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

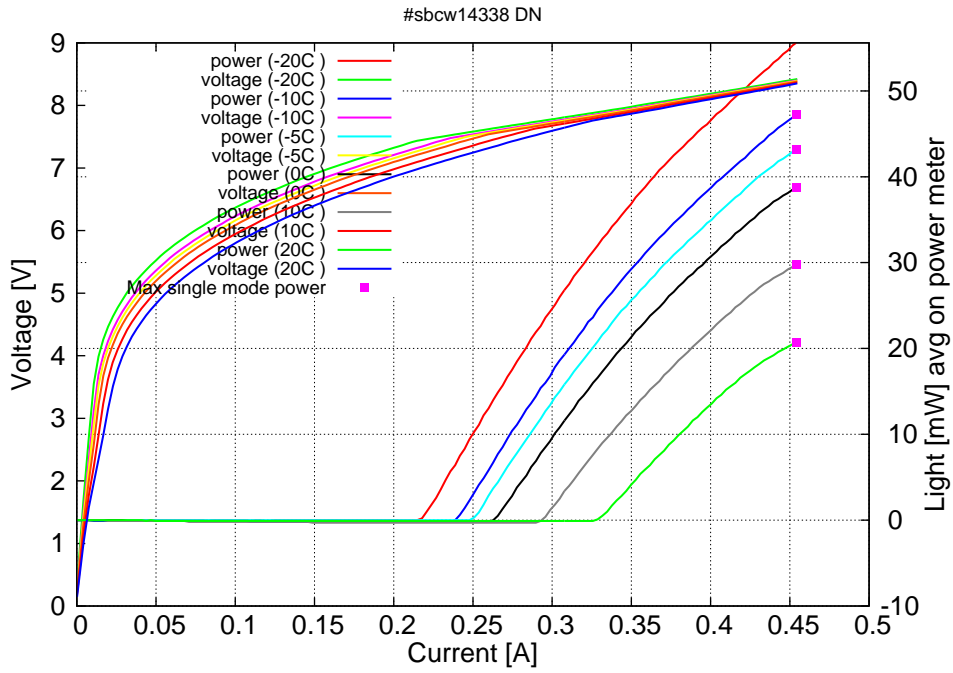


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=7.4V$ (2-wires measurements). Maximum operation current: 0.455A for all temperatures (mode jumping for temperatures higher than 20C).

Figure 3: spectra at different temperatures for various DC currents

