

Datasheet for #sbcw8541 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 #sbcw8541 DN

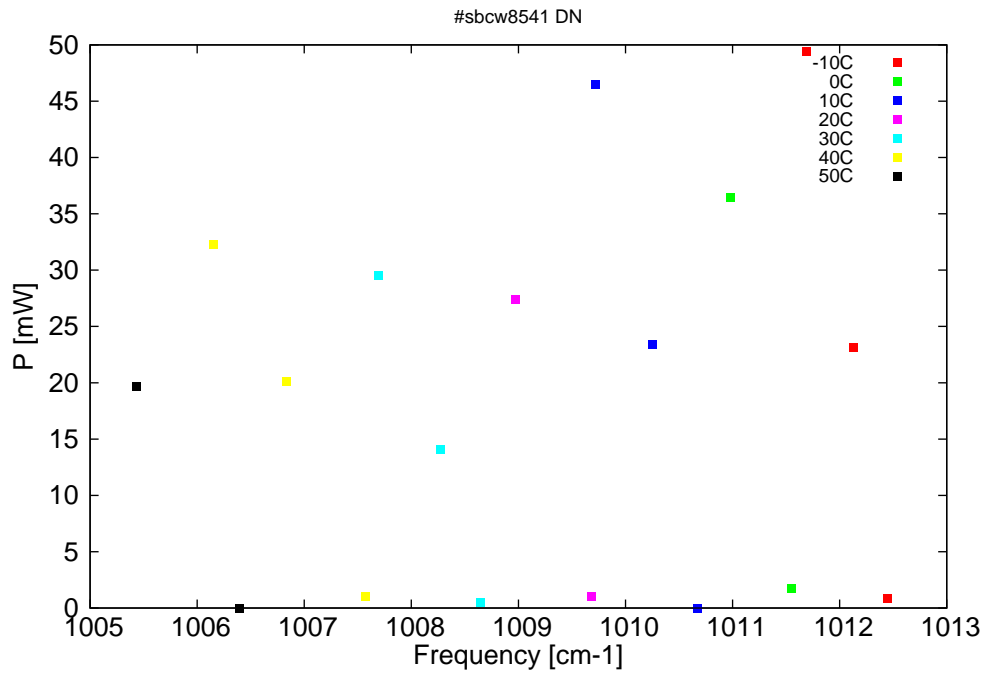


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

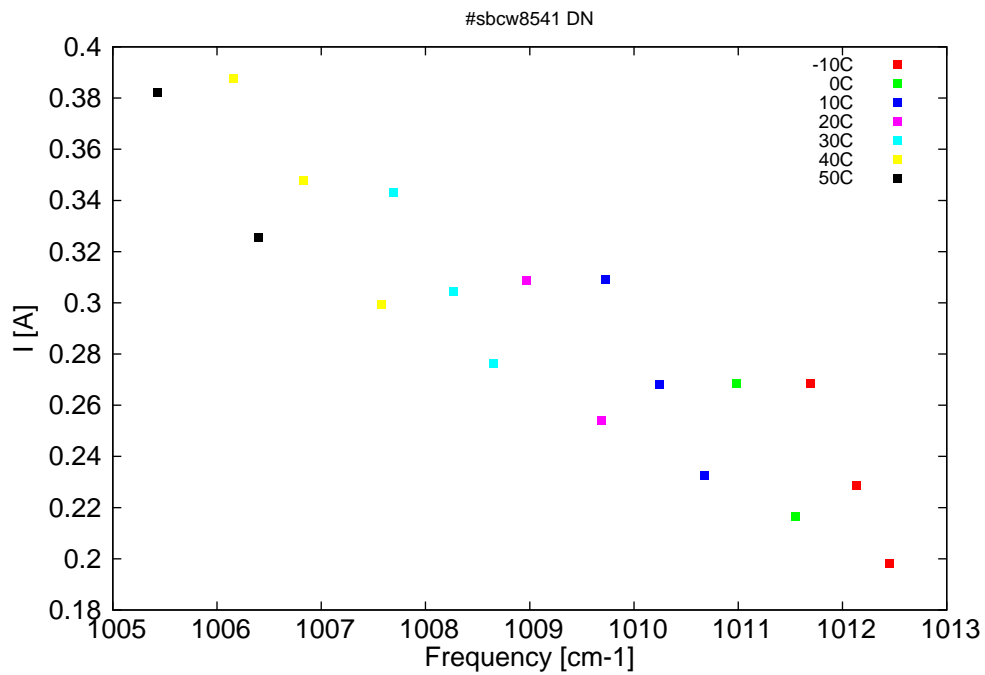


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm^{-1}]	P[mW]	Temp[$^{\circ}\text{C}$]	U_{LASER} [V]	I[A]
9877.1	1012.4	0.9	-10	9.24	0.198
9880.1	1012.1	23.1	-10	9.54	0.229
9884.4	1011.7	49.5	-10	9.93	0.268
9885.8	1011.6	1.7	0	9.34	0.217
9891.4	1011	36.4	0	9.84	0.268
9894.4	1010.7	0	10	9.41	0.232
9898.5	1010.2	23.4	10	9.76	0.268
9903.7	1009.7	46.5	10	10.15	0.309
9904.1	1009.7	1	20	9.54	0.254
9911.1	1009	27.4	20	10.06	0.309
9914.3	1008.6	0.5	30	9.68	0.276
9918	1008.3	14	30	9.95	0.304
9923.6	1007.7	29.5	30	10.31	0.343
9924.8	1007.6	1.1	40	9.83	0.299
9932.1	1006.8	20.1	40	10.29	0.348
9938.8	1006.2	32.3	40	10.67	0.388
9936.5	1006.4	0	50	10.02	0.326
9946	1005.4	19.7	50	10.55	0.382

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

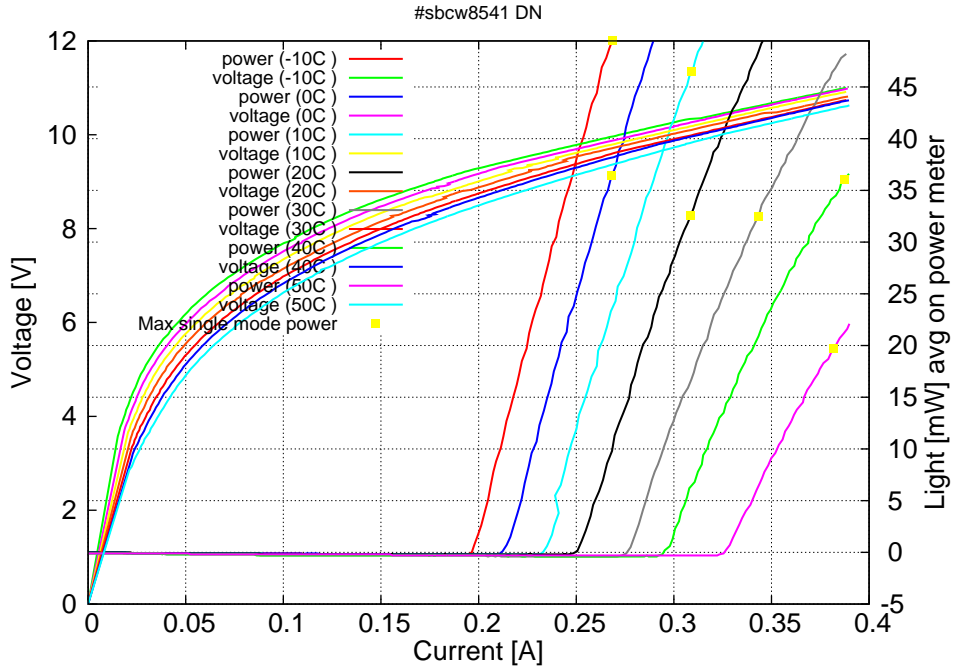


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.19\text{A}$ / $V_{th}=9.2\text{V}$ (2-wires measurements). Maximum operation current: 0.27A between -10C and 0C, 0.31A between 10C and 20C, 0.35A at 30C, 0.39A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

