

Datasheet for #sbcw21154 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 #sbcw21154 DN

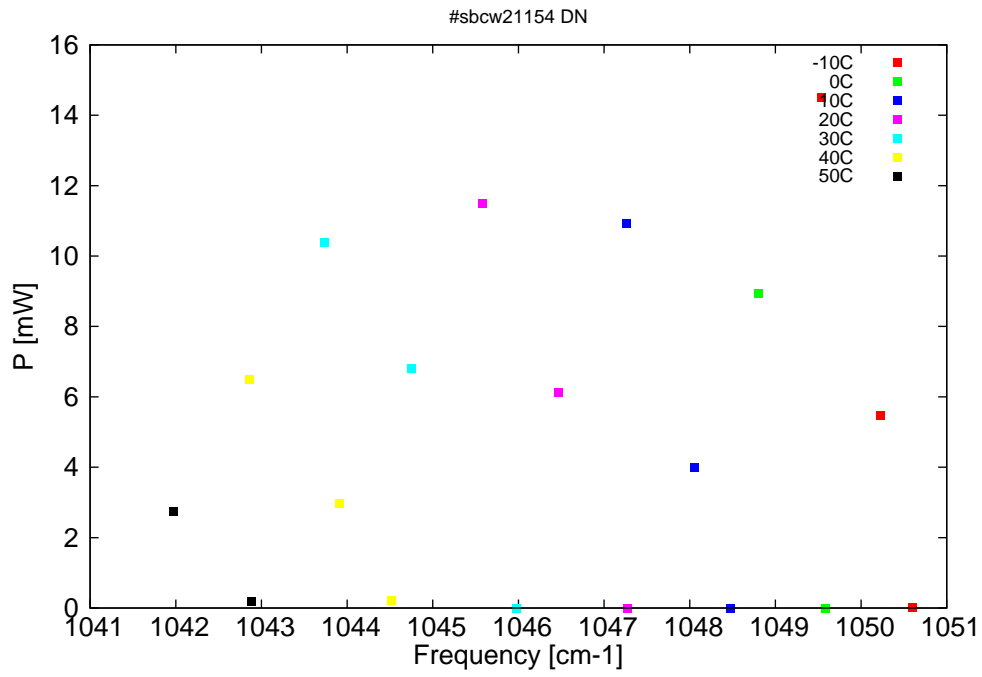


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

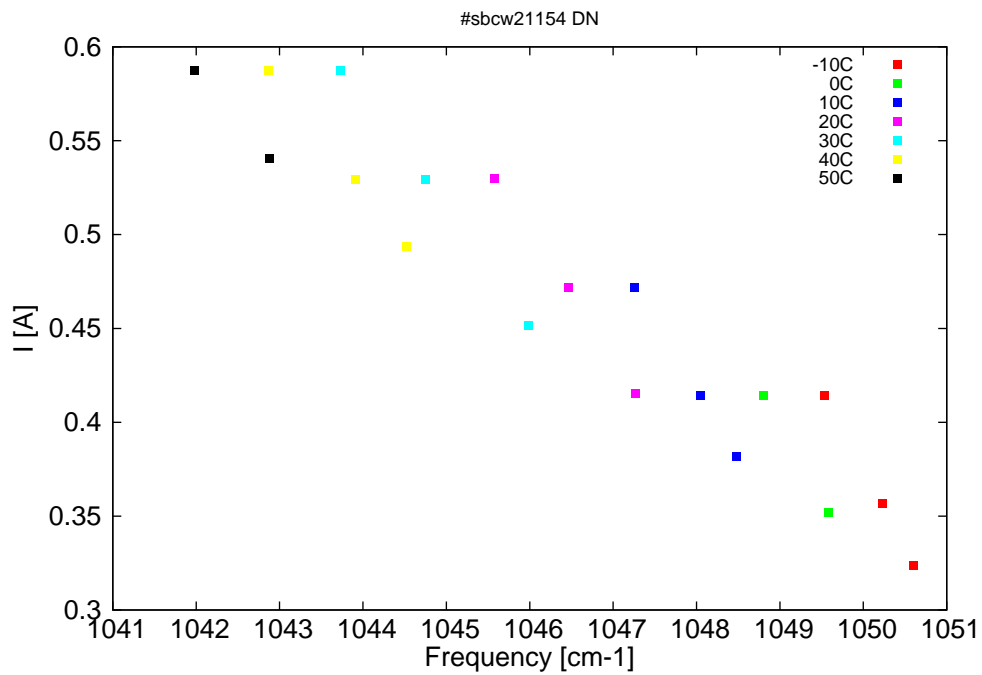


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9518.3	1050.6	0	-10	8.94	0.324
9521.7	1050.2	5.5	-10	9.15	0.357
9528	1049.5	14.5	-10	9.5	0.415
9527.6	1049.6	0	0	9.01	0.352
9534.7	1048.8	8.9	0	9.4	0.415
9537.7	1048.5	0	10	9.1	0.382
9541.5	1048.1	4	10	9.31	0.415
9548.7	1047.3	10.9	10	9.66	0.472
9548.7	1047.3	0	20	9.23	0.416
9556	1046.5	6.1	20	9.59	0.472
9564.1	1045.6	11.5	20	9.95	0.53
9560.4	1046	0	30	9.39	0.452
9571.7	1044.7	6.8	30	9.89	0.53
9581	1043.7	10.4	30	10.26	0.587
9573.8	1044.5	0.2	40	9.6	0.494
9579.3	1043.9	3	40	9.84	0.53
9589	1042.9	6.5	40	10.22	0.587
9588.8	1042.9	0.2	50	9.86	0.54
9597.1	1042	2.8	50	10.18	0.587

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

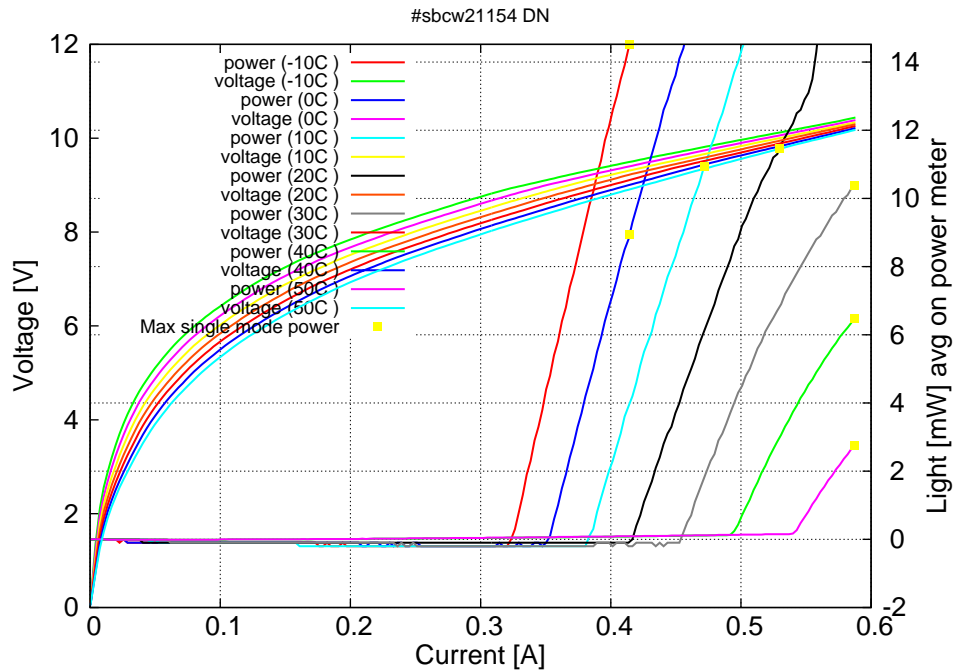


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.325A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.415A between -10C and 0C, 0.475A at 10C, 0.53A at 20C, 0.59A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

