

Datasheet for #sbcw21150 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.

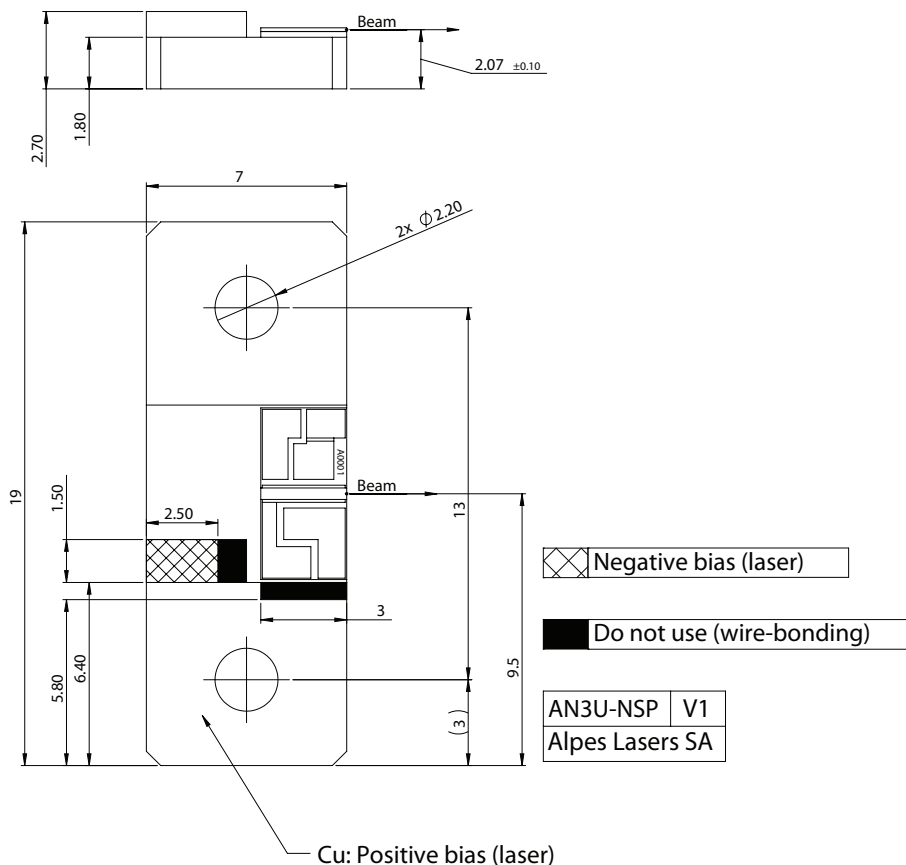


Figure 1: Mechanical and electrical interface for #sbcw21150 DN

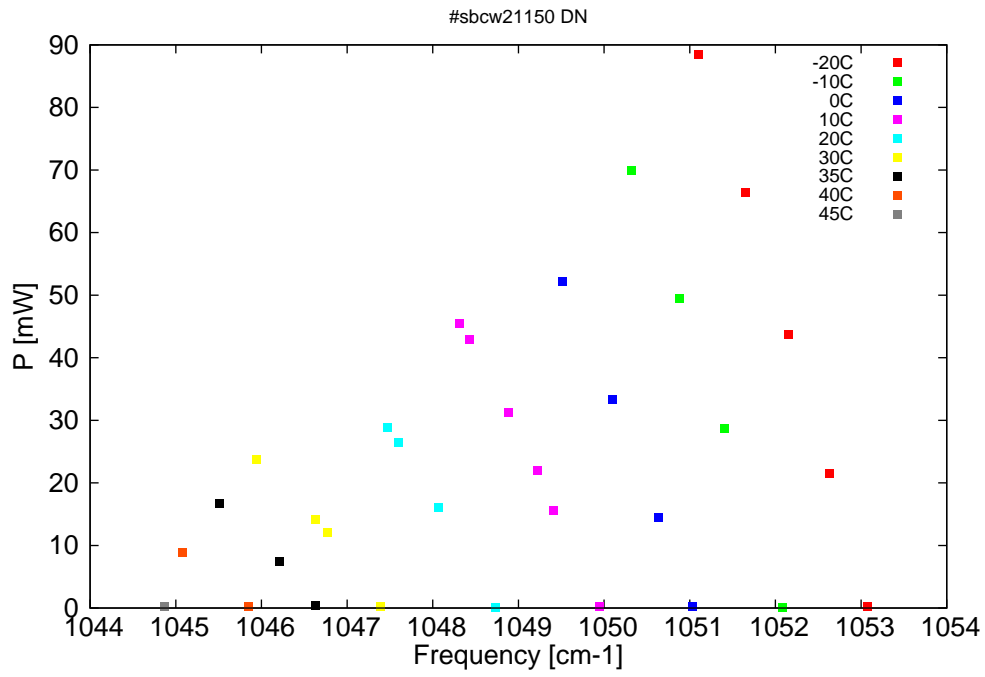


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

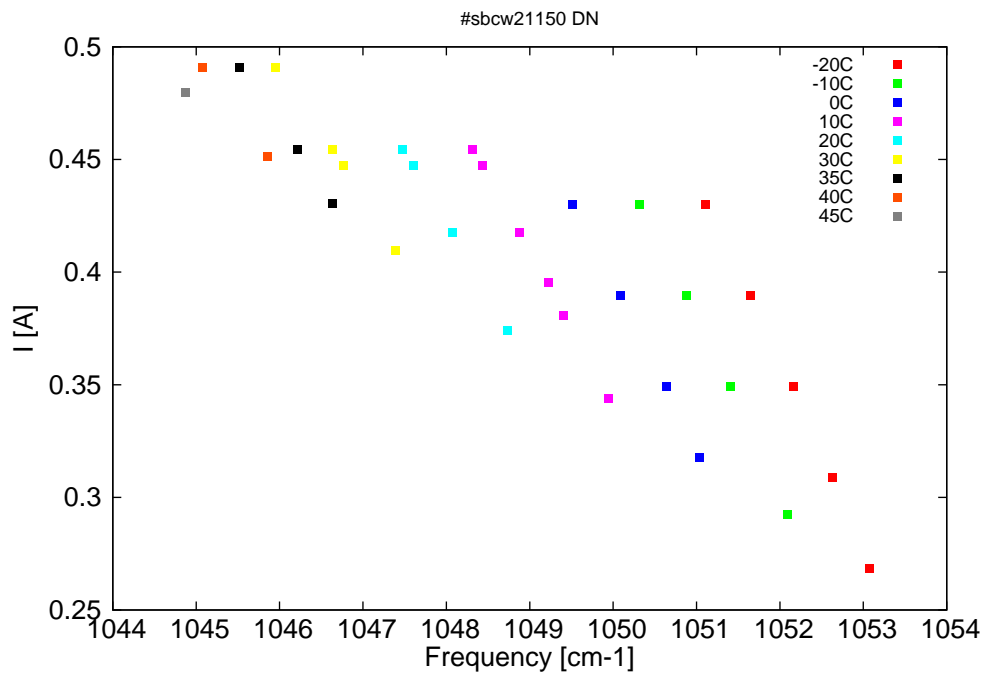


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9496	1053.1	0.3	-20	9.14	0.269
9500	1052.6	21.6	-20	9.43	0.309
9504.3	1052.2	43.7	-20	9.7	0.349
9508.9	1051.7	66.4	-20	9.97	0.39
9513.8	1051.1	88.5	-20	10.23	0.43
9504.9	1052.1	0.1	-10	9.2	0.292
9511.1	1051.4	28.7	-10	9.61	0.349
9515.8	1050.9	49.4	-10	9.89	0.39
9520.9	1050.3	69.9	-10	10.16	0.43
9514.4	1051	0.2	0	9.3	0.318
9518	1050.6	14.5	0	9.53	0.349
9523	1050.1	33.4	0	9.81	0.39
9528.2	1049.5	52.3	0	10.09	0.43
9524.3	1049.9	0.2	10	9.41	0.344
9529.2	1049.4	15.6	10	9.68	0.381
9530.8	1049.2	22	10	9.79	0.396
9534	1048.9	31.2	10	9.94	0.418
9538.1	1048.4	42.9	10	10.16	0.447
9539.2	1048.3	45.5	10	10.21	0.454
9535.3	1048.7	0	20	9.56	0.374
9541.3	1048.1	16.1	20	9.88	0.418
9545.6	1047.6	26.5	20	10.11	0.447
9546.8	1047.5	28.9	20	10.16	0.454
9547.5	1047.4	0.2	30	9.76	0.41
9553.2	1046.8	12	30	10.05	0.447
9554.5	1046.6	14.2	30	10.11	0.454
9560.7	1045.9	23.7	30	10.4	0.491
9554.4	1046.6	0.4	35	9.9	0.431
9558.3	1046.2	7.4	35	10.09	0.454
9564.7	1045.5	16.7	35	10.38	0.491
9561.6	1045.9	0.3	40	10.04	0.452
9568.7	1045.1	8.9	40	10.36	0.491
9570.6	1044.9	0.3	45	10.26	0.48

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

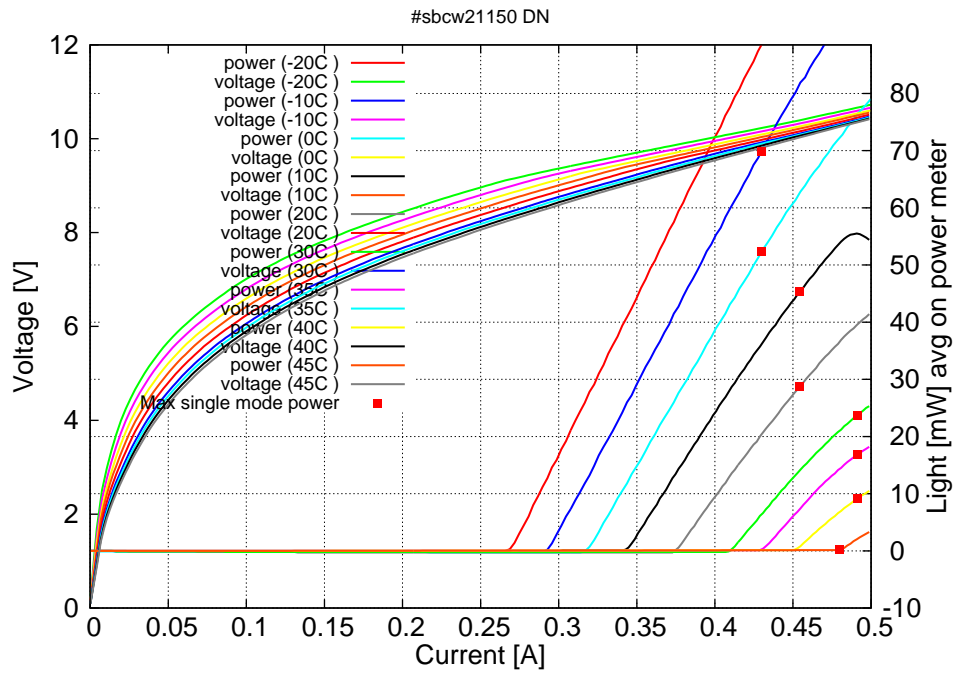


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.27A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.43A between -20C and 0C, 0.455A between 10C and 20C, 0.49A between 30C and 45C.

Figure 3: spectra at different temperatures for various DC currents

