

Datasheet for #sbcw21147 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 #sbcw21147 DN

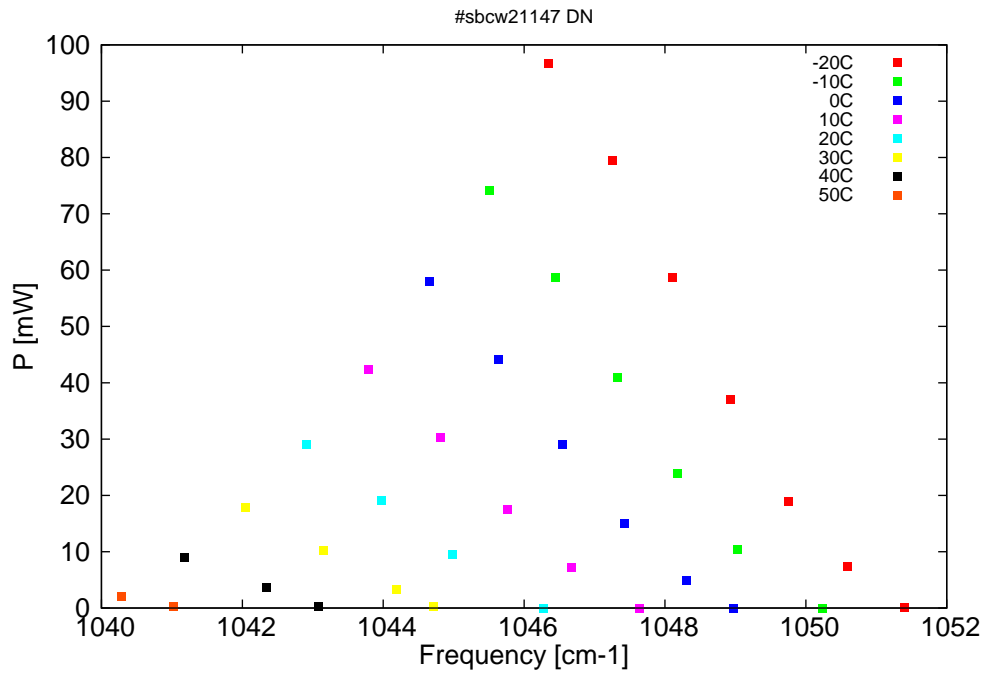


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

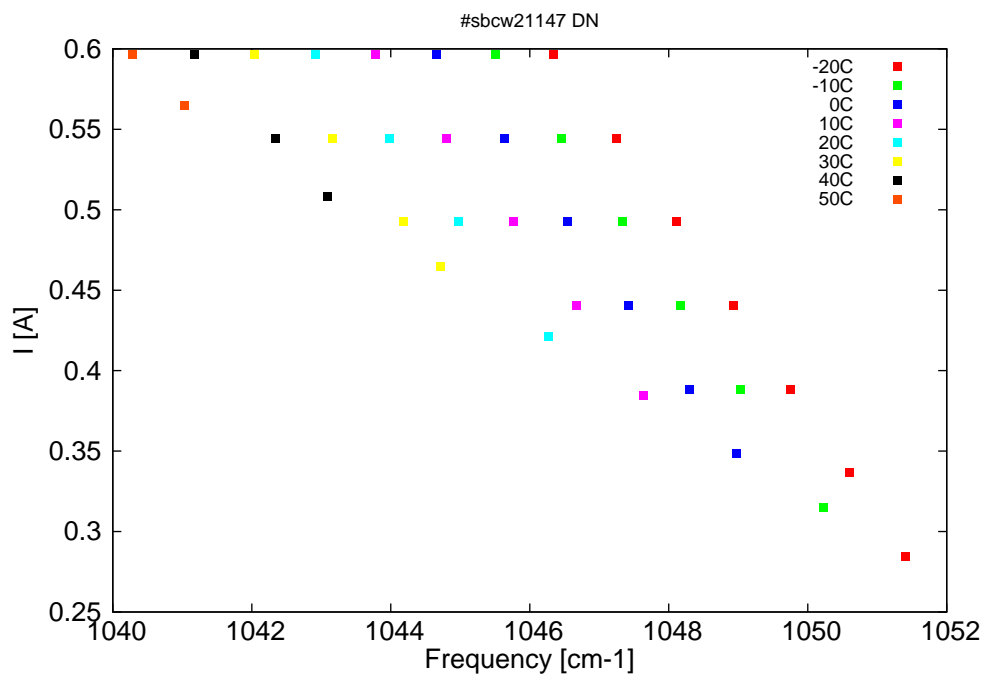


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9511.1	1051.4	0	-20	8.77	0.284
9518.4	1050.6	7.4	-20	9.11	0.336
9526	1049.8	18.9	-20	9.43	0.388
9533.5	1048.9	37.1	-20	9.72	0.44
9541	1048.1	58.7	-20	10	0.492
9548.8	1047.3	79.5	-20	10.29	0.544
9557.1	1046.3	96.7	-20	10.59	0.596
9521.7	1050.2	0	-10	8.87	0.315
9532.6	1049	10.4	-10	9.34	0.388
9540.4	1048.2	23.8	-10	9.64	0.44
9548.1	1047.3	41	-10	9.94	0.492
9556.1	1046.5	58.6	-10	10.23	0.544
9564.7	1045.5	74.2	-10	10.54	0.596
9533.2	1049	0	0	8.99	0.349
9539.2	1048.3	5	0	9.25	0.388
9547.3	1047.4	15	0	9.57	0.44
9555.3	1046.5	29	0	9.88	0.492
9563.6	1045.6	44.2	0	10.18	0.544
9572.6	1044.7	58.1	0	10.51	0.596
9545.3	1047.6	0	10	9.14	0.385
9554	1046.7	7.1	10	9.5	0.44
9562.4	1045.8	17.6	10	9.82	0.492
9571.2	1044.8	30.3	10	10.14	0.544
9580.5	1043.8	42.3	10	10.47	0.596
9557.8	1046.3	0	20	9.31	0.421
9569.6	1045	9.5	20	9.77	0.492
9578.7	1044	19.2	20	10.1	0.544
9588.5	1042.9	29.1	20	10.44	0.596
9572	1044.7	0.3	30	9.53	0.465
9576.8	1044.2	3.3	30	9.72	0.492
9586.3	1043.2	10.2	30	10.07	0.544
9596.5	1042	17.9	30	10.41	0.596
9586.9	1043.1	0.3	40	9.78	0.508
9593.8	1042.3	3.6	40	10.03	0.544
9604.5	1041.2	8.9	40	10.39	0.596
9605.9	1041	0.2	50	10.14	0.565
9612.8	1040.3	2.1	50	10.37	0.596

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

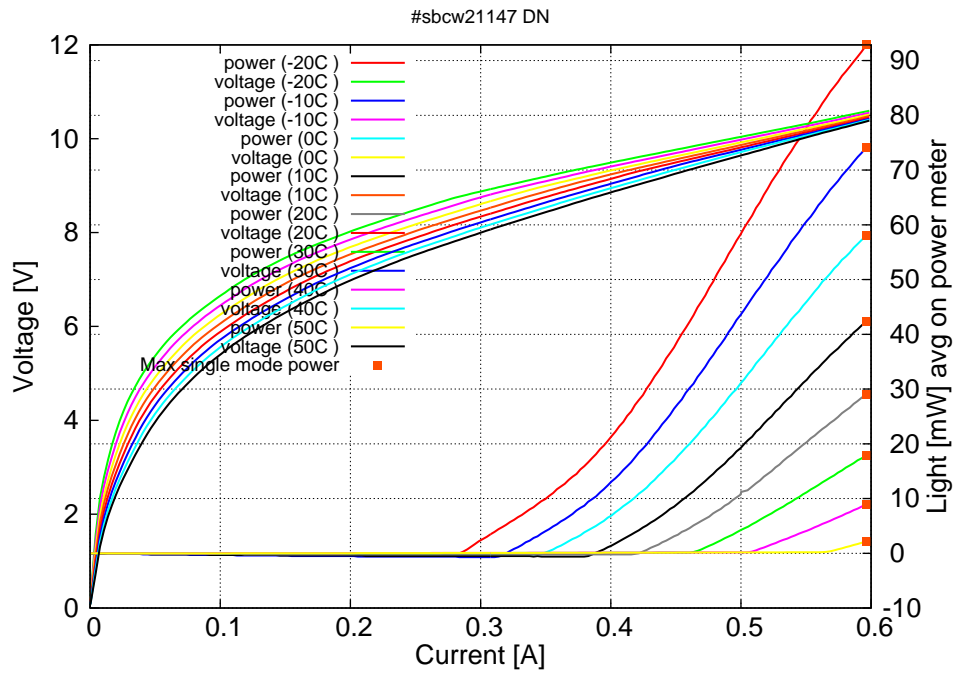


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.29A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.60A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

