

**Datasheet for #sbcw21145 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.

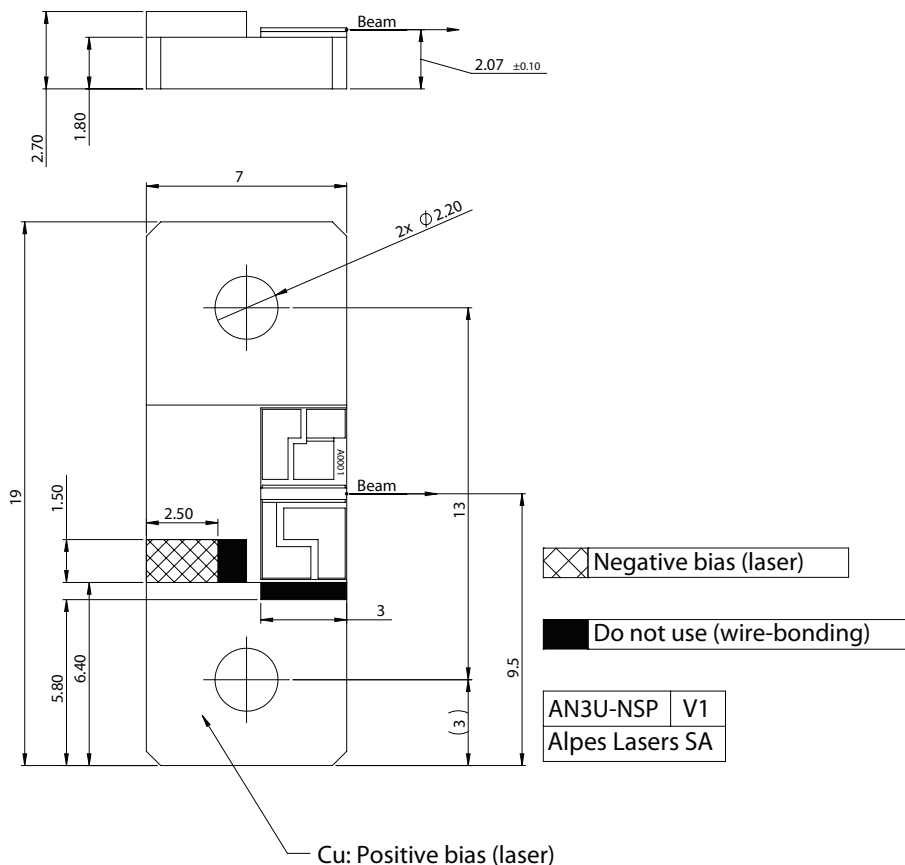


Figure 1: Mechanical and electrical interface for #sbcw21145 DN

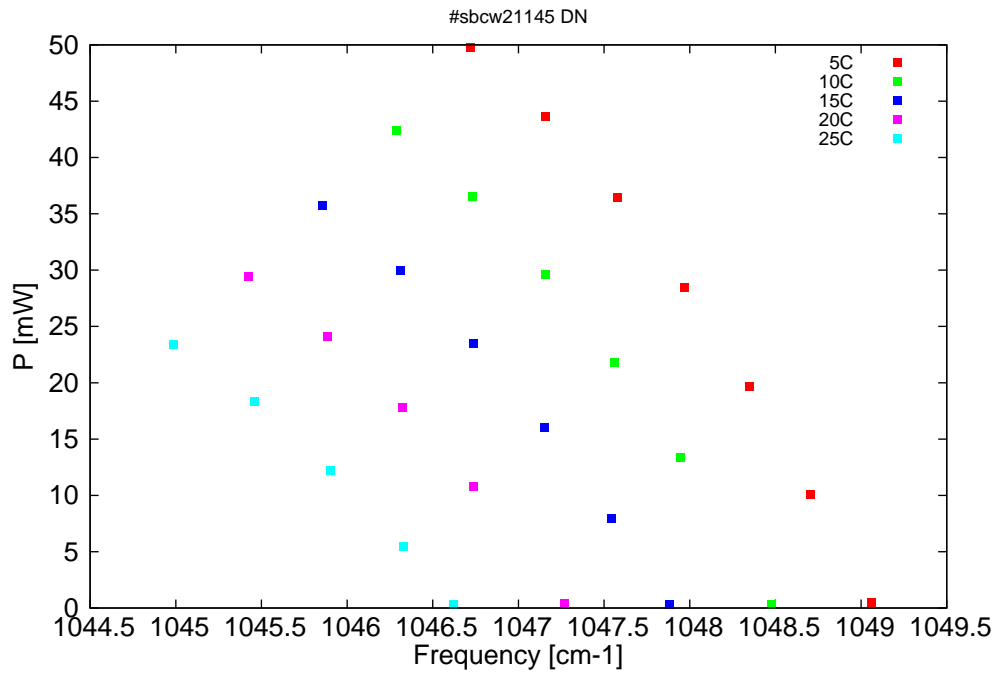


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

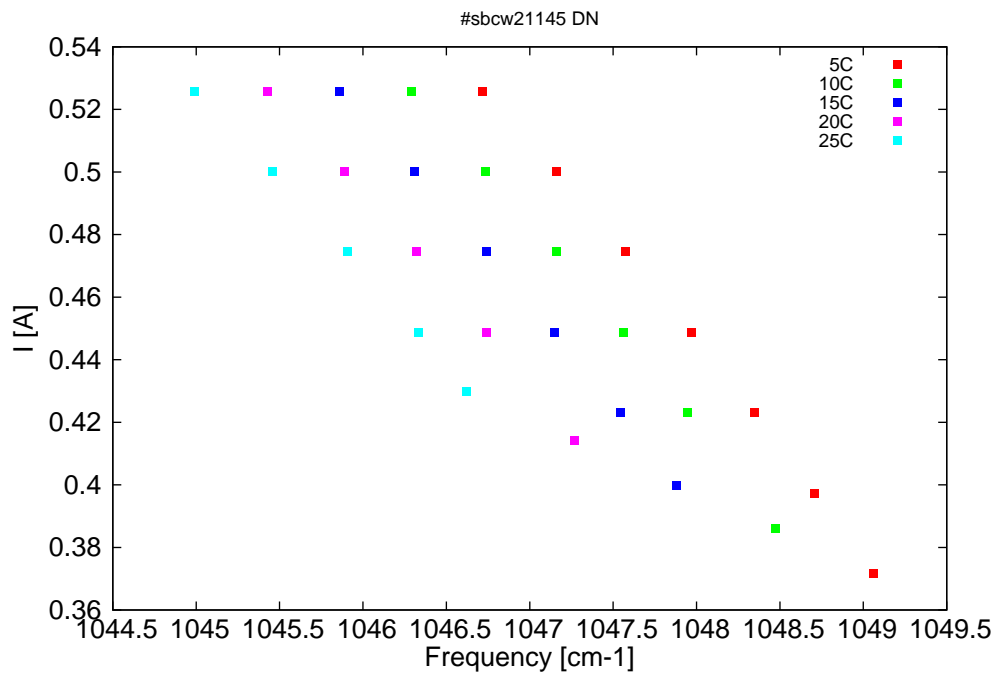


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9532.3	1049.1	0.5	5	9.45	0.372
9535.6	1048.7	10.1	5	9.62	0.397
9538.8	1048.3	19.7	5	9.79	0.423
9542.3	1048	28.4	5	9.96	0.449
9545.9	1047.6	36.4	5	10.12	0.475
9549.7	1047.2	43.6	5	10.29	0.5
9553.7	1046.7	49.8	5	10.46	0.526
9537.7	1048.5	0.3	10	9.5	0.386
9542.5	1047.9	13.4	10	9.75	0.423
9546	1047.6	21.8	10	9.92	0.449
9549.7	1047.2	29.6	10	10.09	0.475
9553.5	1046.7	36.5	10	10.26	0.5
9557.6	1046.3	42.4	10	10.43	0.526
9543.1	1047.9	0.3	15	9.55	0.4
9546.2	1047.5	7.9	15	9.71	0.423
9549.7	1047.2	16	15	9.88	0.449
9553.5	1046.7	23.5	15	10.05	0.475
9557.4	1046.3	30	15	10.22	0.5
9561.5	1045.9	35.7	15	10.41	0.526
9548.6	1047.3	0.4	20	9.61	0.414
9553.5	1046.7	10.8	20	9.85	0.449
9557.3	1046.3	17.8	20	10.02	0.475
9561.3	1045.9	24.1	20	10.2	0.5
9565.5	1045.4	29.5	20	10.38	0.526
9554.6	1046.6	0.3	25	9.68	0.43
9557.2	1046.3	5.5	25	9.81	0.449
9561.1	1045.9	12.3	25	9.99	0.475
9565.2	1045.5	18.3	25	10.17	0.5
9569.5	1045	23.4	25	10.35	0.526

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

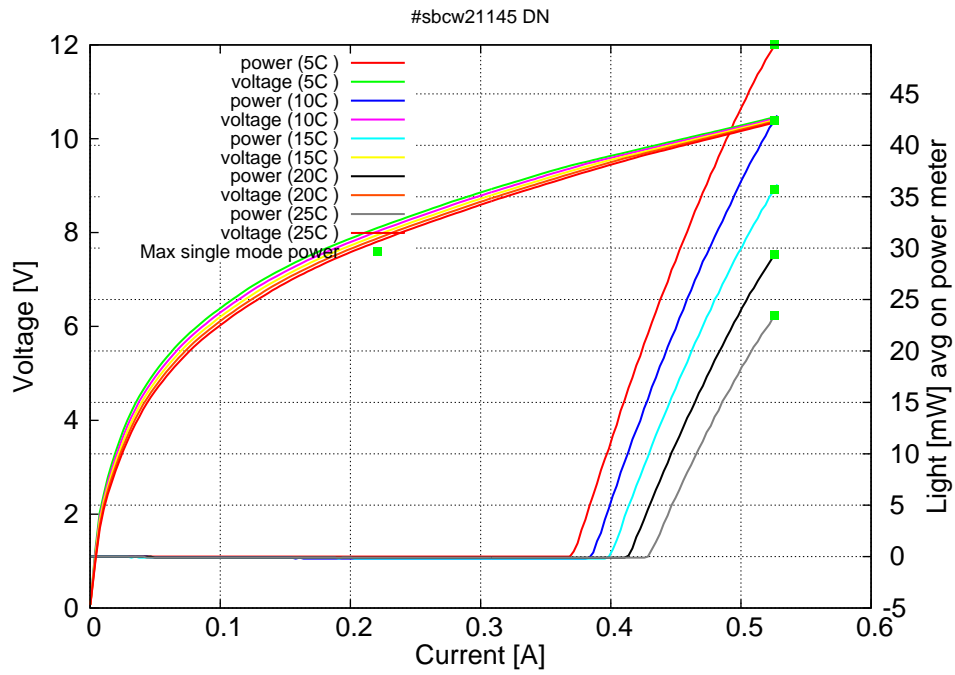


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 5C:  $I_{th}=0.37A$  /  $V_{th}=9.4V$  (2-wires measurements). Maximum operation current: 0.53A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

