

Datasheet for #sbcw21142 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.

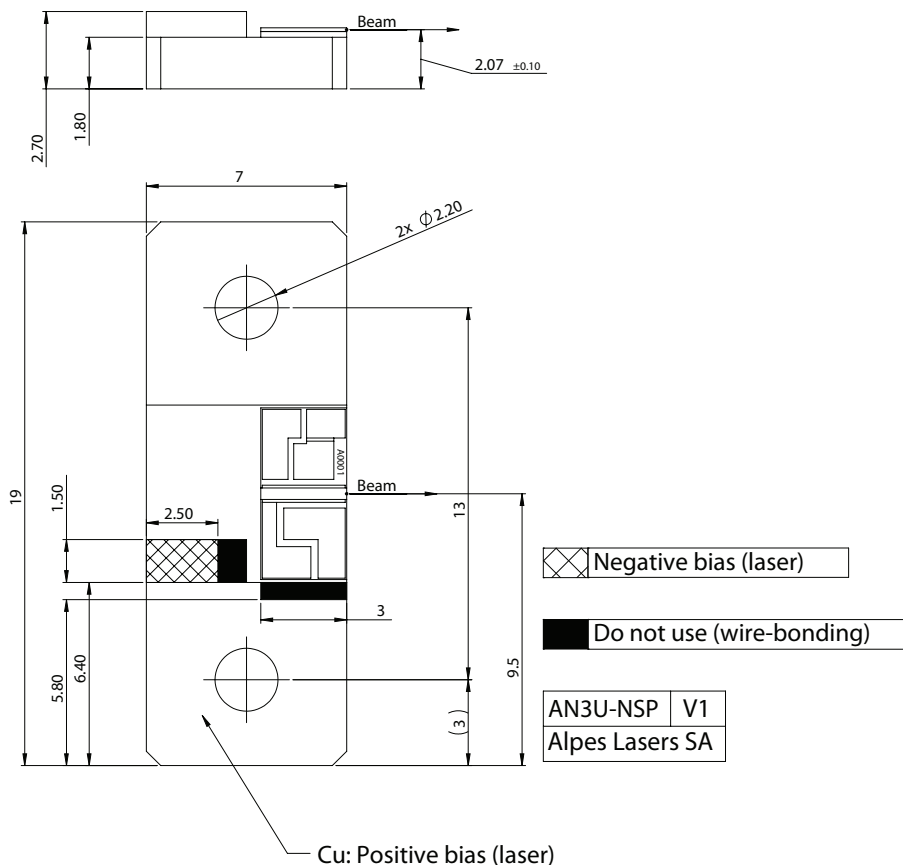


Figure 1: Mechanical and electrical interface for #sbcw21142 DN

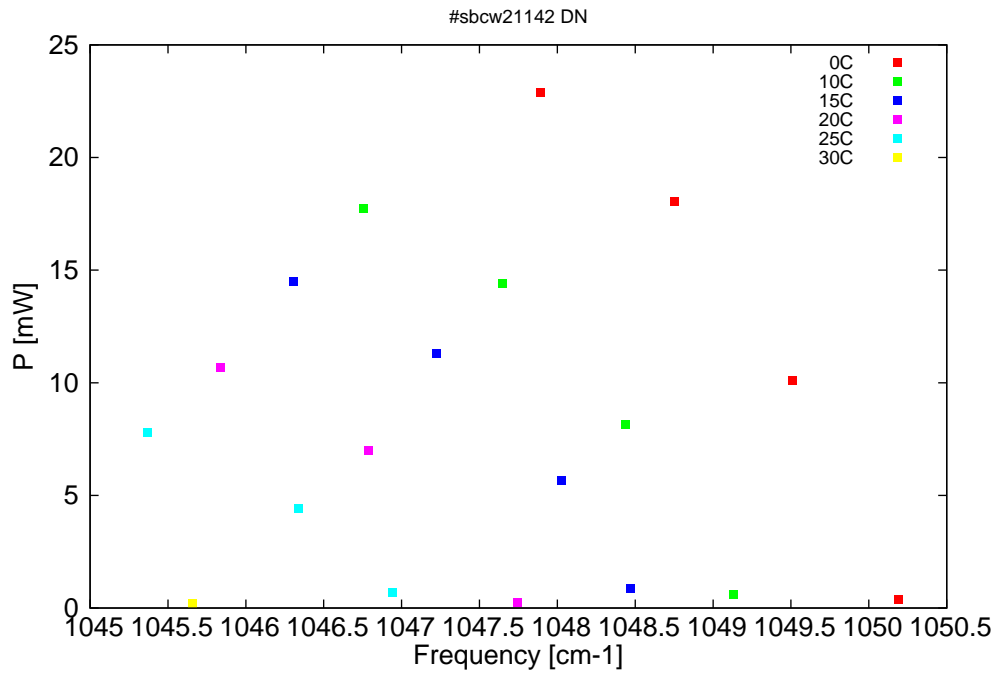


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

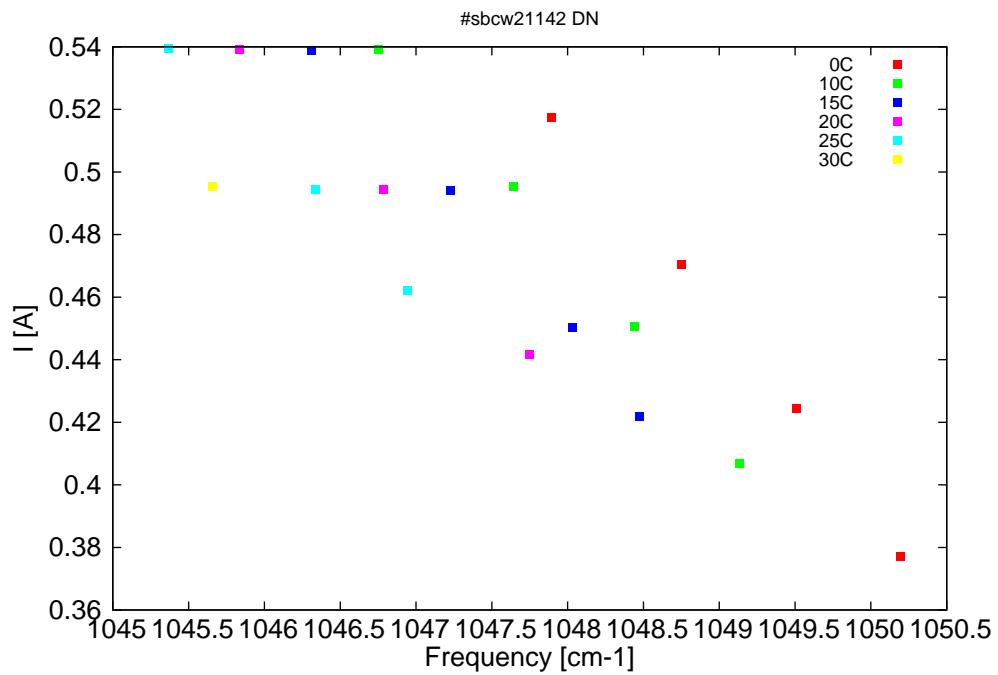


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9522.1	1050.2	0.4	0	10.06	0.377
9528.3	1049.5	10.1	0	10.4	0.424
9535.2	1048.8	18	0	10.76	0.471
9542.9	1047.9	22.9	0	11.15	0.517
9531.7	1049.1	0.6	10	10.21	0.407
9538	1048.4	8.1	10	10.54	0.451
9545.2	1047.6	14.4	10	10.91	0.495
9553.4	1046.8	17.7	10	11.31	0.539
9537.7	1048.5	0.9	15	10.29	0.422
9541.7	1048	5.7	15	10.51	0.45
9549	1047.2	11.3	15	10.88	0.494
9557.4	1046.3	14.5	15	11.28	0.539
9544.3	1047.7	0.2	20	10.41	0.442
9553.1	1046.8	7	20	10.86	0.495
9561.7	1045.8	10.7	20	11.27	0.539
9551.6	1046.9	0.7	25	10.55	0.462
9557.2	1046.3	4.4	25	10.83	0.494
9566	1045.4	7.8	25	11.26	0.54
9563.3	1045.7	0.2	30	10.82	0.495

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

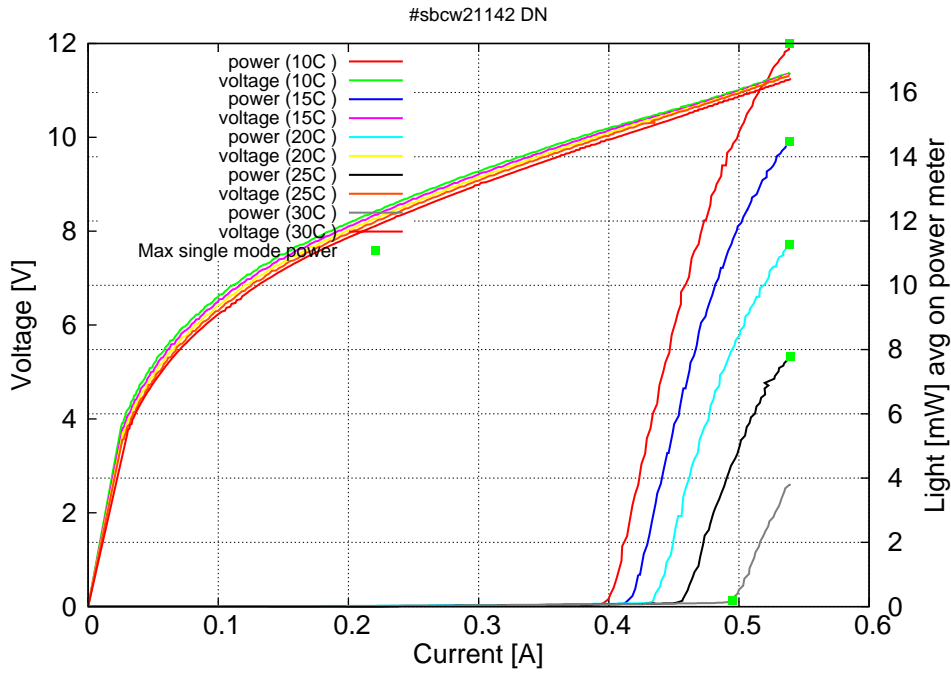


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C: $I_{th}=0.37A$ / $V_{th}=10.0V$ (2-wires measurements). Maximum operation current: 0.54A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

