

**Datasheet for #sbcw11538 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.

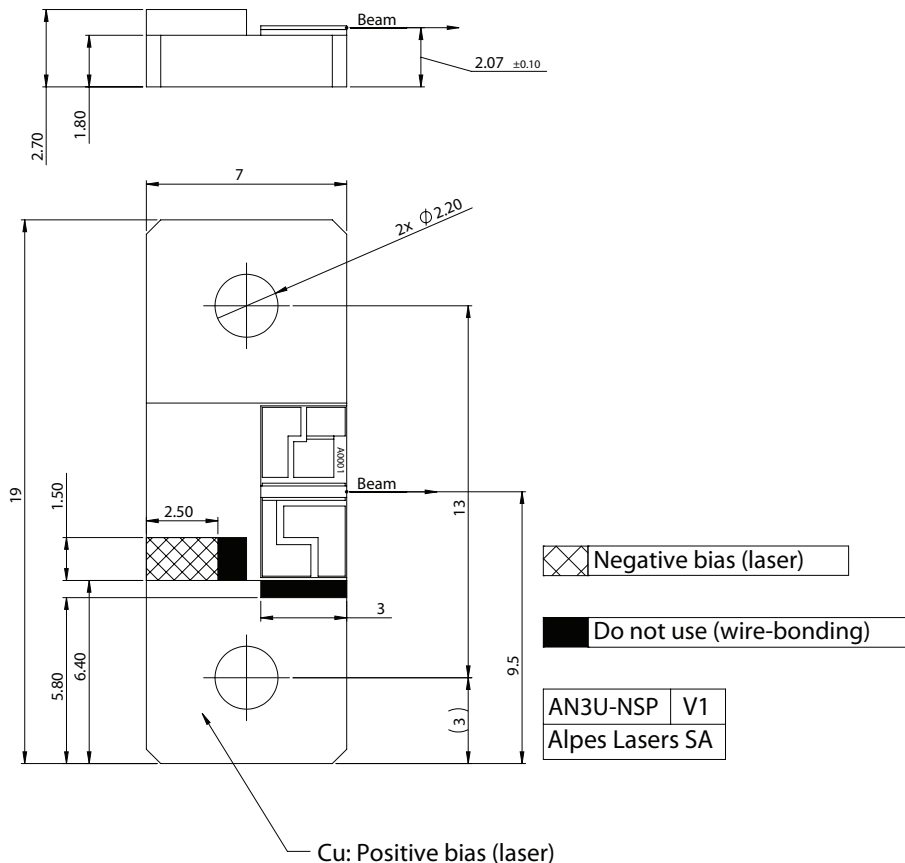


Figure 1: Mechanical and electrical interface for #sbcw11538 DN

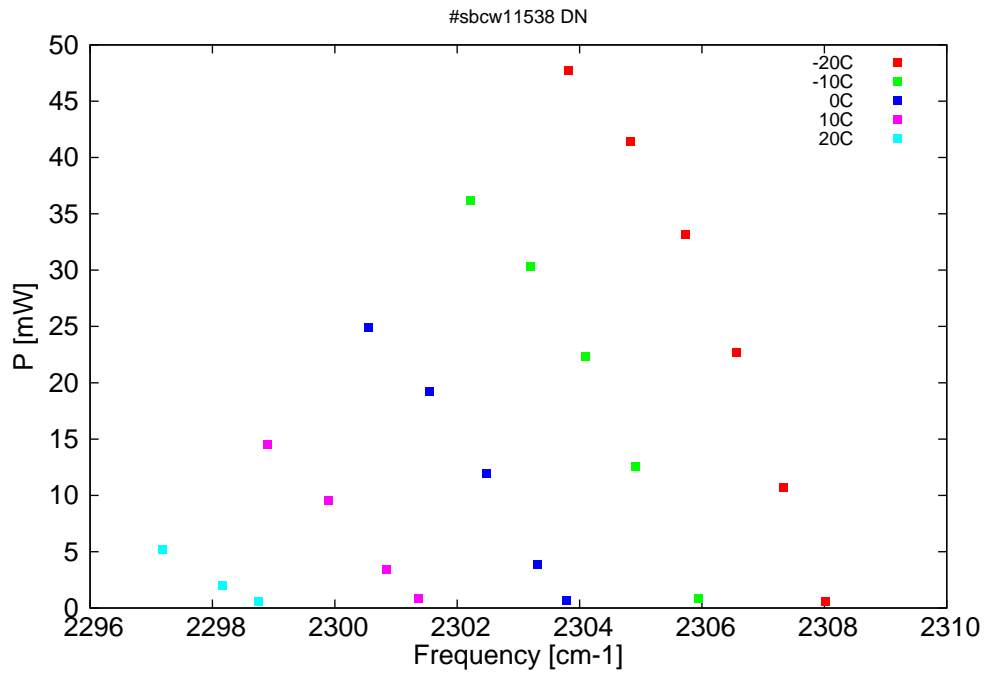


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

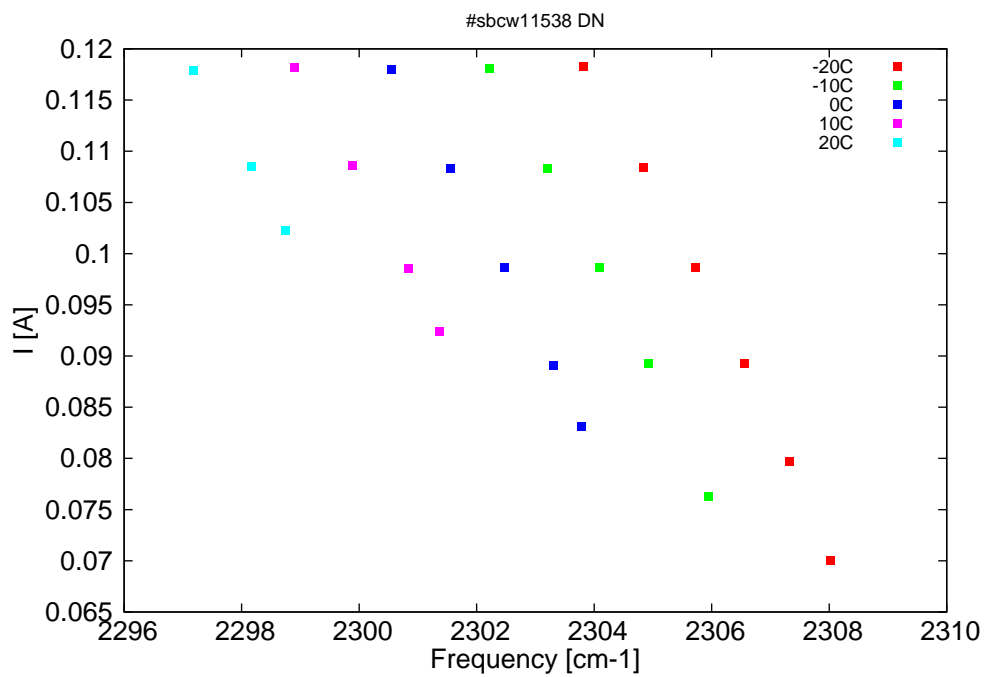


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4332.7	2308	0.6	-20	14.36	0.07
4334	2307.3	10.7	-20	14.65	0.08
4335.5	2306.6	22.7	-20	14.96	0.089
4337	2305.7	33.2	-20	15.27	0.099
4338.7	2304.8	41.4	-20	15.58	0.108
4340.6	2303.8	47.7	-20	15.91	0.118
4336.6	2305.9	0.8	-10	14.41	0.076
4338.5	2304.9	12.6	-10	14.79	0.089
4340.1	2304.1	22.3	-10	15.09	0.099
4341.8	2303.2	30.3	-10	15.39	0.108
4343.6	2302.2	36.2	-10	15.7	0.118
4340.7	2303.8	0.6	0	14.5	0.083
4341.6	2303.3	3.9	0	14.65	0.089
4343.1	2302.5	12	0	14.93	0.099
4344.9	2301.5	19.2	0	15.23	0.108
4346.8	2300.6	24.9	0	15.53	0.118
4345.2	2301.4	0.9	10	14.65	0.092
4346.2	2300.8	3.4	10	14.81	0.099
4348	2299.9	9.5	10	15.09	0.109
4349.9	2298.9	14.5	10	15.38	0.118
4350.2	2298.7	0.5	20	14.84	0.102
4351.3	2298.2	2	20	14.99	0.109
4353.1	2297.2	5.2	20	15.25	0.118

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

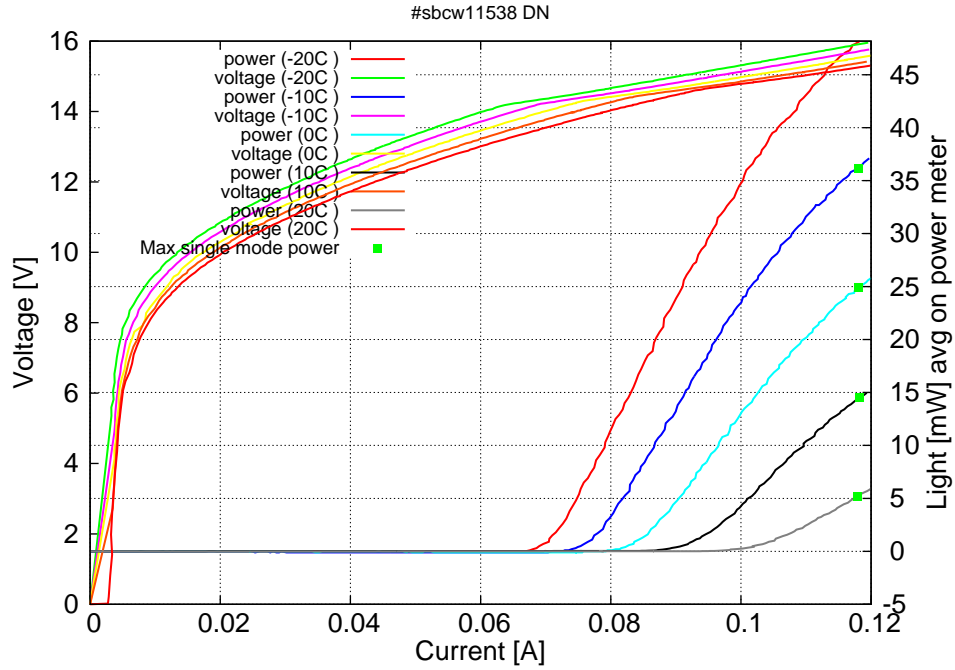


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=14.3V$  (2-wires measurements). Maximum operation current: 0.12A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

