

**Datasheet for #sbcw21258 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 bias and positive bias on the specific zones drawn below. 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.

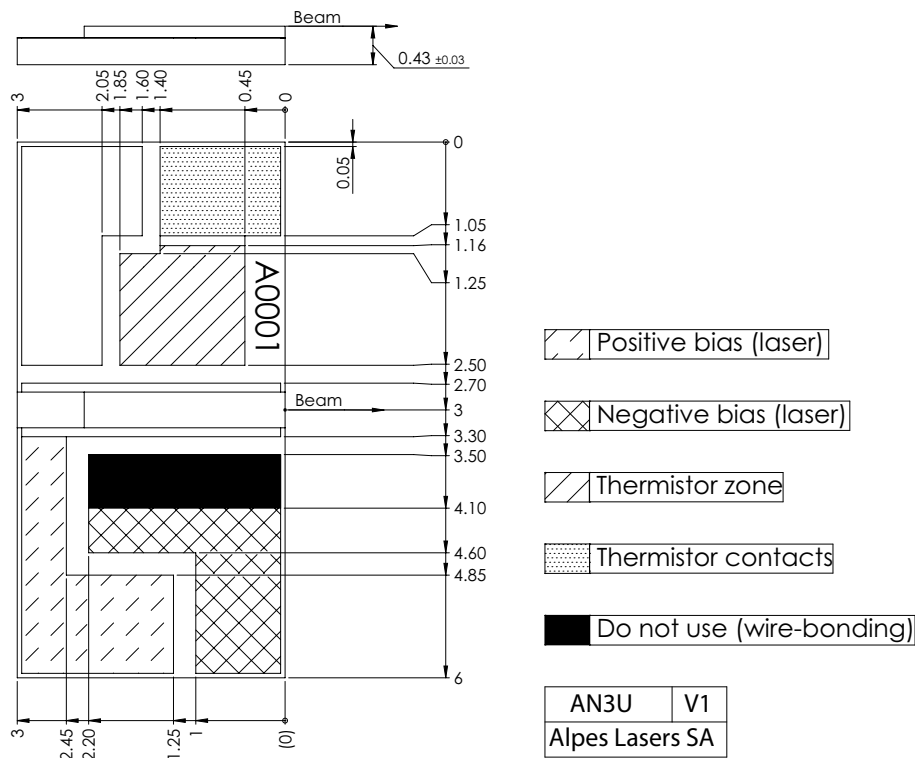


Figure 1: Mechanical and electrical interface for #sbcw21258 DN (please note that AlN submount numbering is A0NG7)

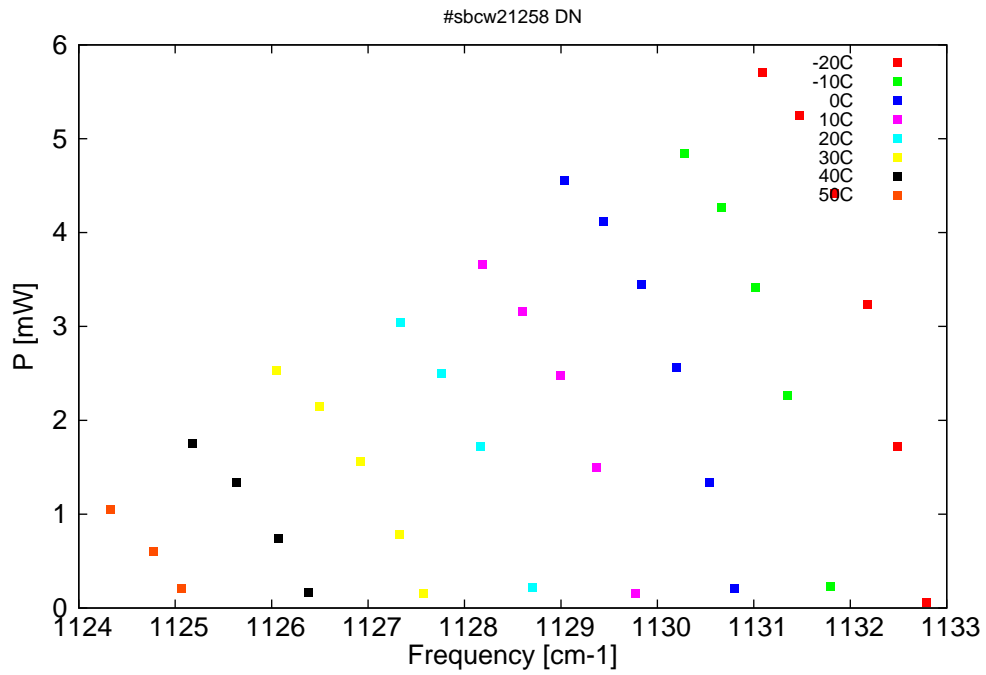


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

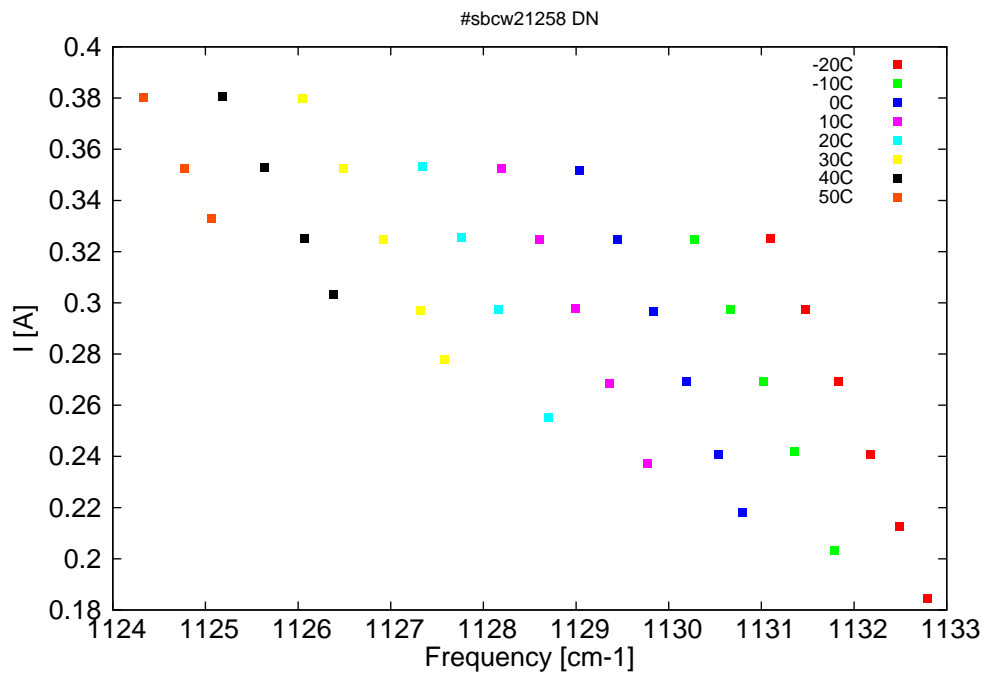


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
8827.8	1132.8	0.1	-20	9.43	0.185
8830.1	1132.5	1.7	-20	9.87	0.213
8832.5	1132.2	3.2	-20	10.3	0.241
8835.2	1131.8	4.4	-20	10.75	0.269
8838	1131.5	5.2	-20	11.19	0.298
8841	1131.1	5.7	-20	11.63	0.325
8835.6	1131.8	0.2	-10	9.51	0.203
8839	1131.4	2.3	-10	10.1	0.242
8841.6	1131	3.4	-10	10.52	0.269
8844.3	1130.7	4.3	-10	10.94	0.297
8847.3	1130.3	4.8	-10	11.36	0.325
8843.3	1130.8	0.2	0	9.55	0.218
8845.3	1130.5	1.3	0	9.89	0.241
8848	1130.2	2.6	0	10.3	0.269
8850.8	1129.8	3.4	0	10.7	0.297
8853.9	1129.4	4.1	0	11.1	0.325
8857.1	1129	4.6	0	11.49	0.352
8851.4	1129.8	0.2	10	9.64	0.237
8854.5	1129.4	1.5	10	10.1	0.268
8857.5	1129	2.5	10	10.5	0.298
8860.5	1128.6	3.2	10	10.88	0.325
8863.8	1128.2	3.7	10	11.26	0.353
8859.7	1128.7	0.2	20	9.73	0.255
8864	1128.2	1.7	20	10.29	0.297
8867.1	1127.8	2.5	20	10.67	0.326
8870.4	1127.3	3	20	11.03	0.353
8868.6	1127.6	0.1	30	9.84	0.278
8870.6	1127.3	0.8	30	10.08	0.297
8873.7	1126.9	1.6	30	10.44	0.325
8877.1	1126.5	2.2	30	10.79	0.353
8880.6	1126	2.5	30	11.13	0.38
8878	1126.4	0.2	40	9.97	0.303
8880.5	1126.1	0.7	40	10.23	0.325
8883.9	1125.6	1.3	40	10.57	0.353
8887.4	1125.2	1.7	40	10.91	0.38
8888.4	1125.1	0.2	50	10.14	0.333
8890.6	1124.8	0.6	50	10.37	0.352
8894.2	1124.3	1.1	50	10.69	0.38

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

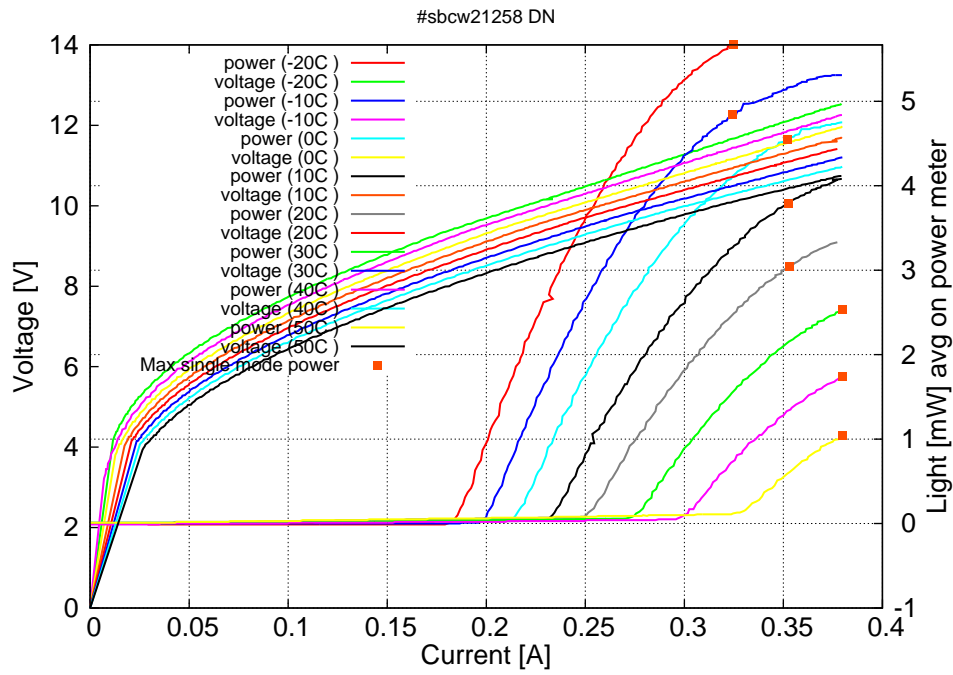


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.18A$  /  $V_{th}=9.4V$  (2-wires measurements). Maximum operation current: 0.325A between -20C and -10C, 0.35A between 0C and 20C, 0.38A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

