

**Datasheet for #sbcw13856 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.

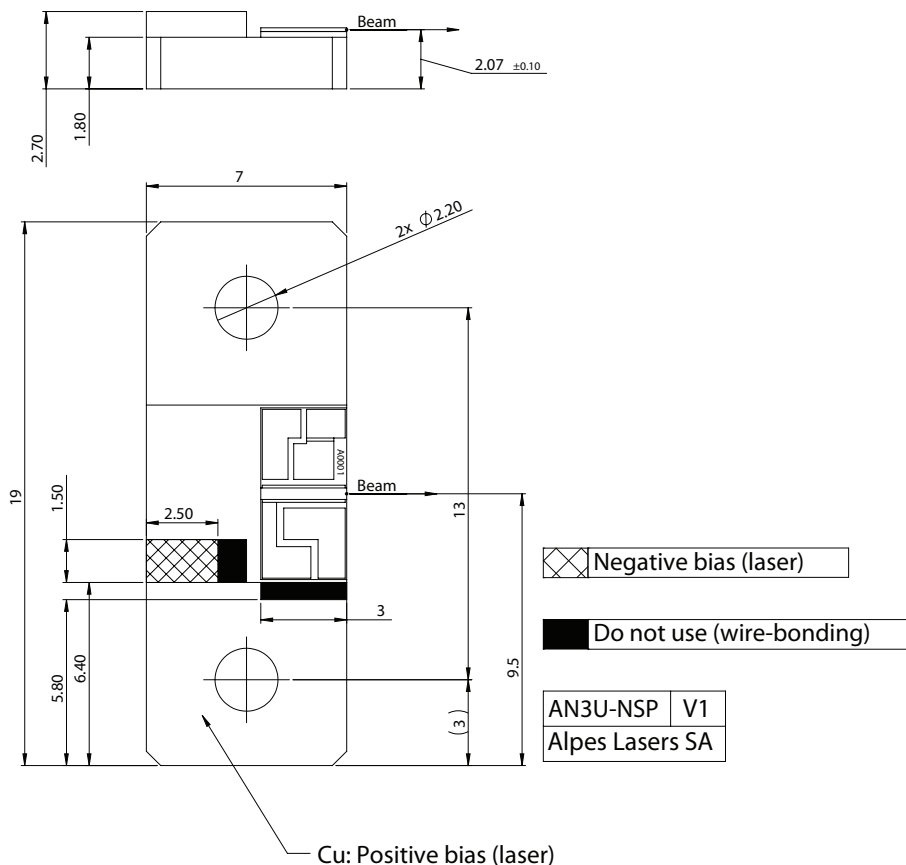


Figure 1: Mechanical and electrical interface for #sbcw13856 DN

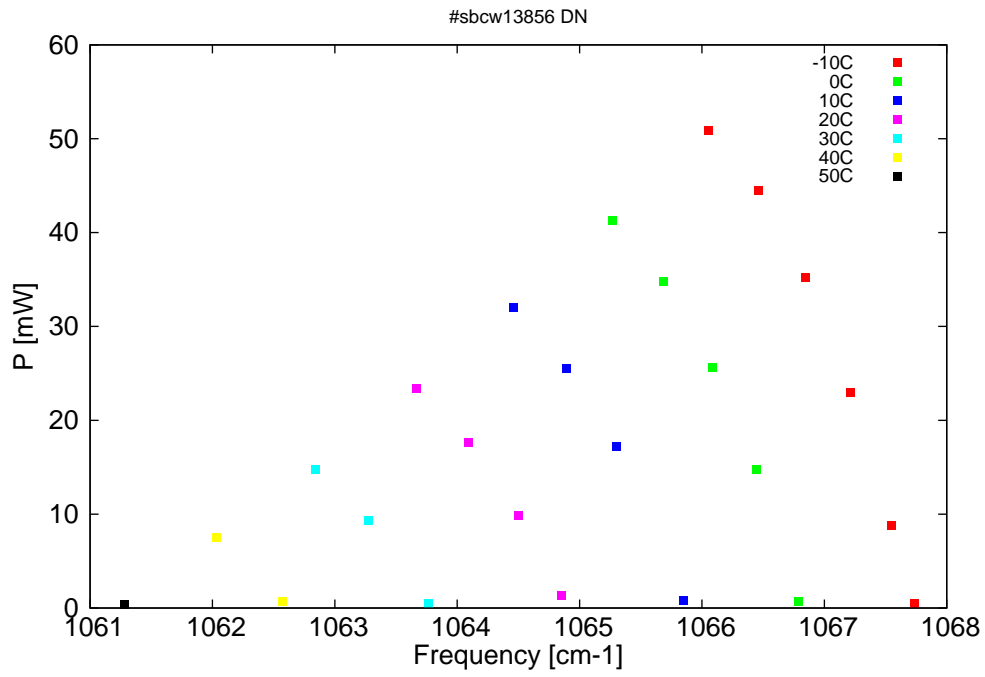


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

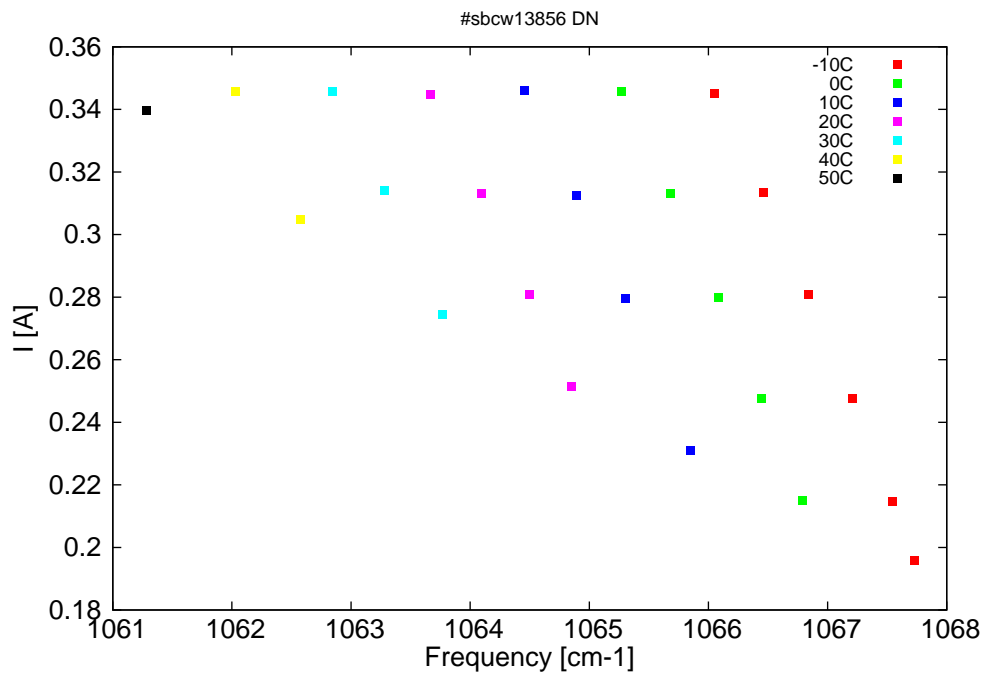


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9365.6	1067.7	0.5	-10	10.58	0.196
9367.3	1067.5	8.8	-10	10.82	0.215
9370.2	1067.2	22.9	-10	11.21	0.248
9373.5	1066.8	35.2	-10	11.58	0.281
9376.8	1066.5	44.5	-10	11.93	0.313
9380.4	1066.1	50.9	-10	12.25	0.345
9373.9	1066.8	0.7	0	10.7	0.215
9376.9	1066.4	14.8	0	11.09	0.248
9380.1	1066.1	25.6	0	11.45	0.28
9383.6	1065.7	34.7	0	11.8	0.313
9387.3	1065.3	41.3	0	12.13	0.346
9382.2	1065.9	0.8	10	10.78	0.231
9387	1065.3	17.2	10	11.33	0.28
9390.6	1064.9	25.5	10	11.68	0.313
9394.4	1064.5	32	10	12.02	0.346
9391	1064.8	1.4	20	10.91	0.251
9394.1	1064.5	9.8	20	11.23	0.281
9397.7	1064.1	17.7	20	11.57	0.313
9401.4	1063.7	23.4	20	11.89	0.345
9400.6	1063.8	0.5	30	11.05	0.274
9404.9	1063.3	9.3	30	11.47	0.314
9408.7	1062.8	14.7	30	11.79	0.346
9411.1	1062.6	0.7	40	11.26	0.305
9415.9	1062	7.5	40	11.67	0.346
9422.6	1061.3	0.4	50	11.5	0.34

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

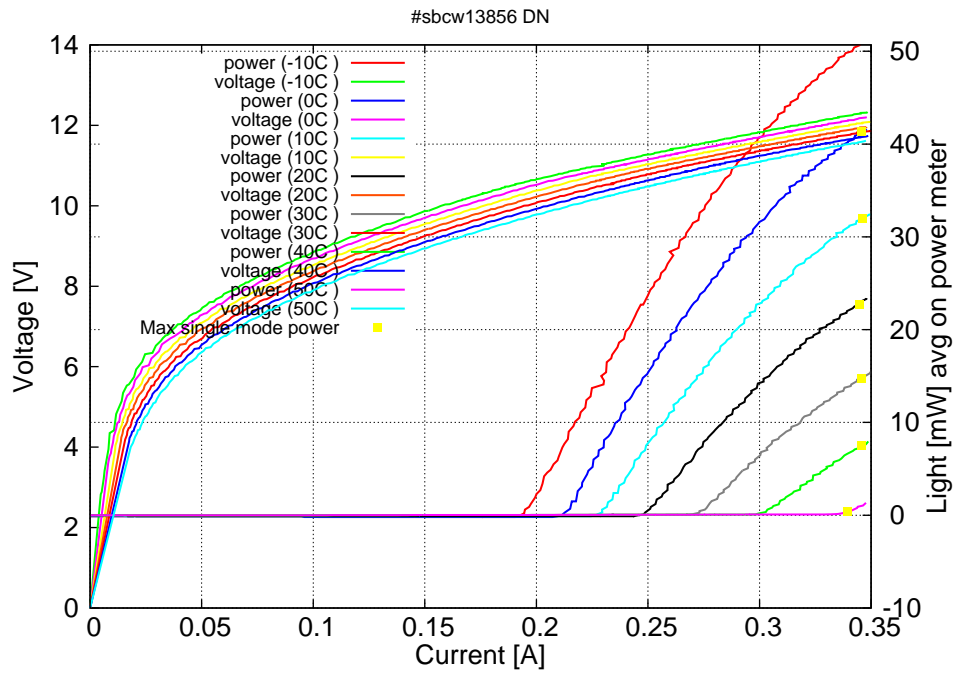


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C:  $I_{th}=0.19A$  /  $V_{th}=10.6V$  (2-wires measurements). Maximum operation current: 0.35A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

