

**Datasheet for #sbcw21043 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.

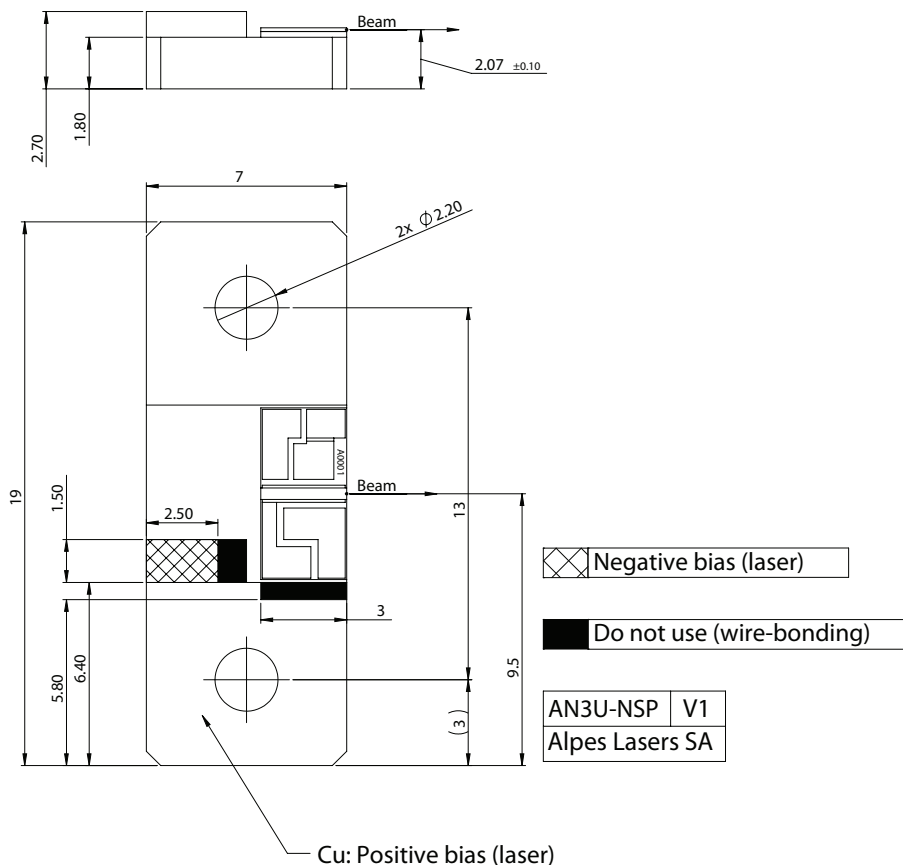


Figure 1: Mechanical and electrical interface for #sbcw21043 DN

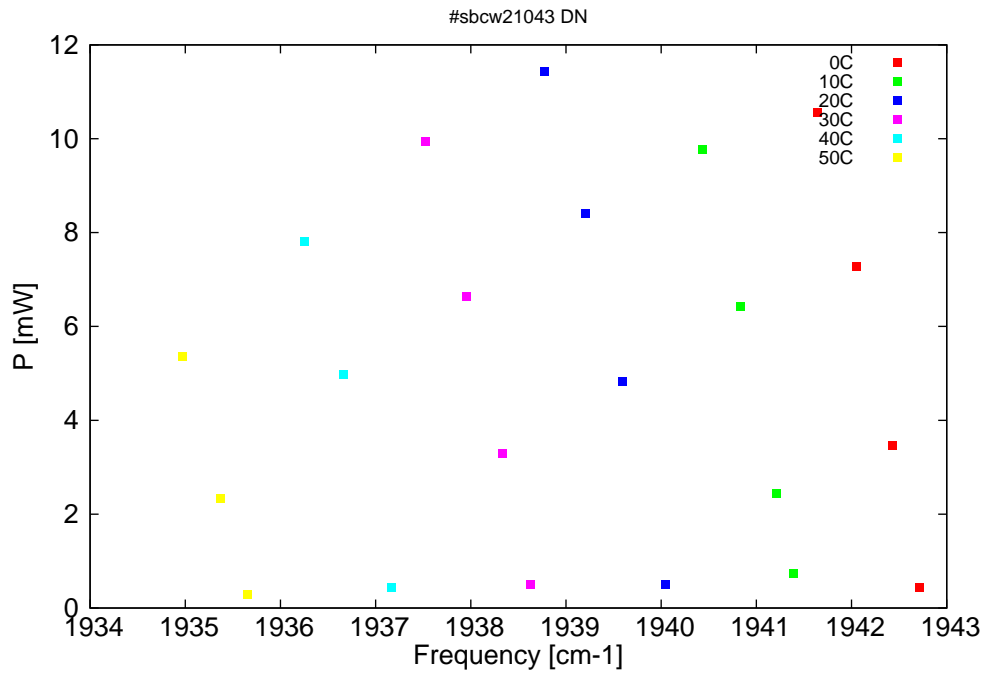


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

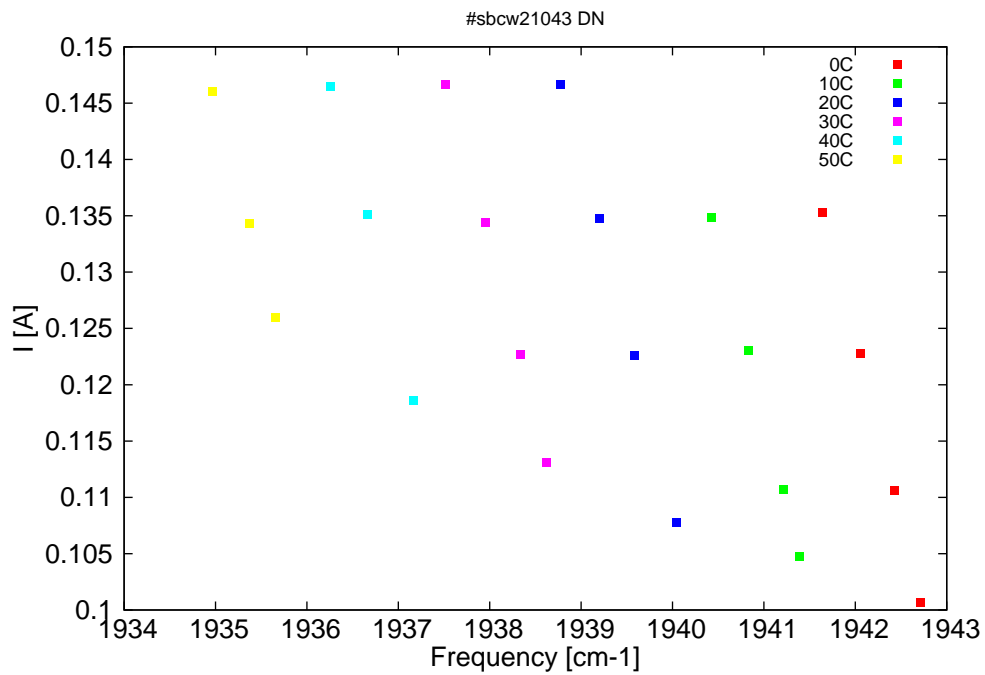


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [ $\text{cm}^{-1}$ ]	P[mW]	Temp[ $^{\circ}\text{C}$ ]	$U_{LASER}$ [V]	I[A]
5147.4	1942.7	0.4	0	12.27	0.101
5148.2	1942.4	3.5	0	12.51	0.111
5149.2	1942.1	7.3	0	12.83	0.123
5150.3	1941.6	10.6	0	13.18	0.135
5151	1941.4	0.7	10	12.19	0.105
5151.4	1941.2	2.4	10	12.33	0.111
5152.4	1940.8	6.4	10	12.64	0.123
5153.5	1940.4	9.8	10	12.95	0.135
5154.5	1940	0.5	20	12.12	0.108
5155.7	1939.6	4.8	20	12.46	0.123
5156.8	1939.2	8.4	20	12.75	0.135
5157.9	1938.8	11.4	20	13.06	0.147
5158.3	1938.6	0.5	30	12.1	0.113
5159.1	1938.3	3.3	30	12.3	0.123
5160.1	1938	6.6	30	12.57	0.134
5161.2	1937.5	9.9	30	12.87	0.147
5162.2	1937.2	0.4	40	12.08	0.119
5163.5	1936.7	5	40	12.43	0.135
5164.6	1936.3	7.8	40	12.69	0.147
5166.2	1935.7	0.3	50	12.1	0.126
5167	1935.4	2.3	50	12.27	0.134
5168	1935	5.4	50	12.52	0.146

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

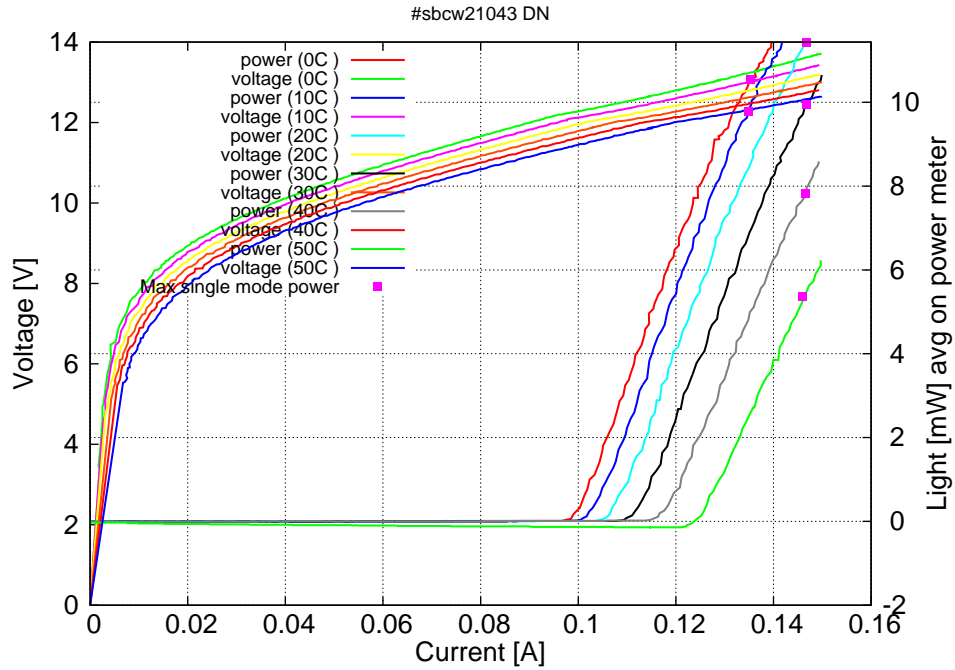


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 0C:  $I_{th}=0.10A$  /  $V_{th}=12.2V$  (2-wires measurements). Maximum operation current: 0.135A between 0C and 10C, 0.15A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

