

**Datasheet for #sbcw18570 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 #sbcw18570 DN

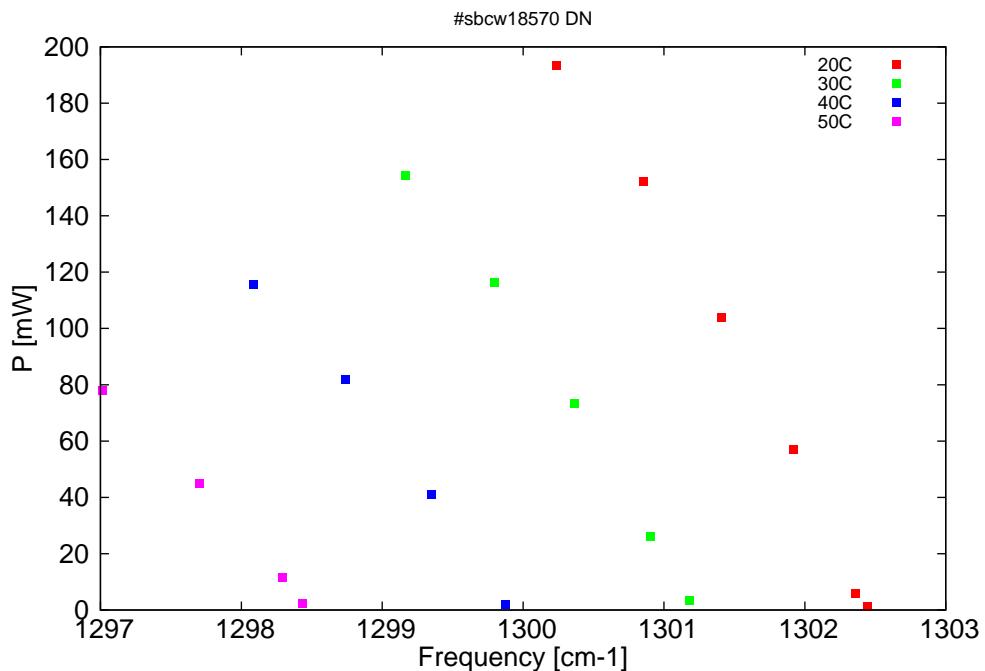


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

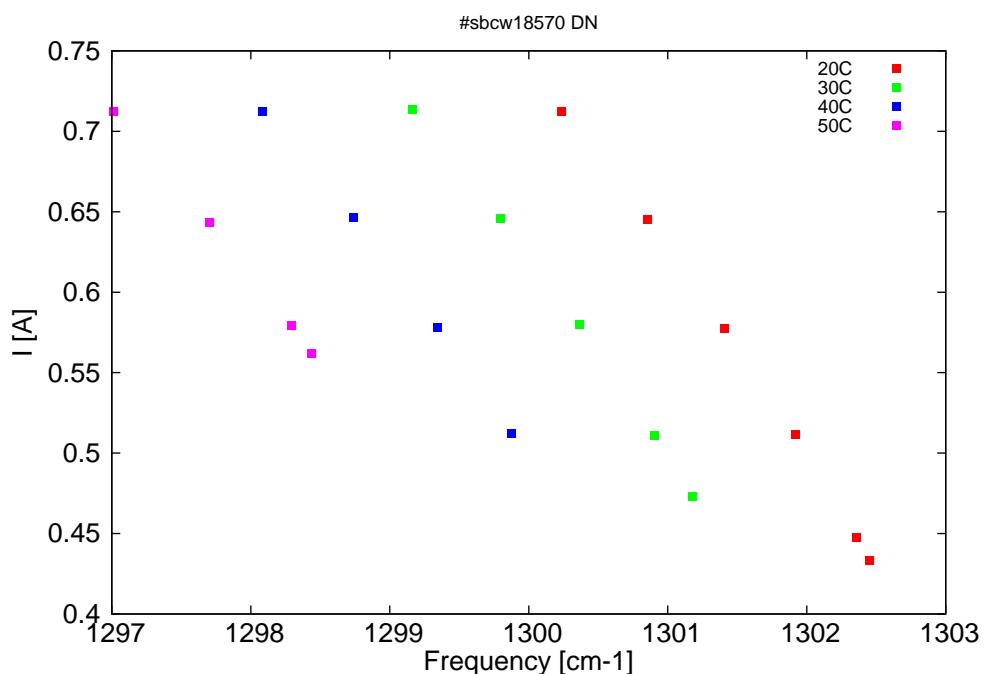


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm $^{-1}$ ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7677.8	1302.4	1.2	20	7.78	0.433
7678.4	1302.4	5.9	20	7.82	0.448
7681	1301.9	57.1	20	8.03	0.512
7684	1301.4	104.1	20	8.23	0.578
7687.3	1300.9	152.1	20	8.45	0.645
7690.9	1300.2	193.3	20	8.66	0.712
7685.3	1301.2	3.5	30	7.86	0.473
7686.9	1300.9	26.1	30	7.98	0.511
7690.2	1300.4	73.5	30	8.2	0.58
7693.5	1299.8	116.3	30	8.41	0.646
7697.3	1299.2	154.5	30	8.63	0.714
7693	1299.9	1.8	40	7.94	0.512
7696.2	1299.3	41.2	40	8.15	0.578
7699.8	1298.7	81.8	40	8.37	0.646
7703.6	1298.1	115.8	40	8.59	0.712
7701.6	1298.4	2.3	50	8.06	0.562
7702.4	1298.3	11.5	50	8.12	0.579
7705.9	1297.7	45	50	8.32	0.643
7710	1297	77.8	50	8.55	0.712

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

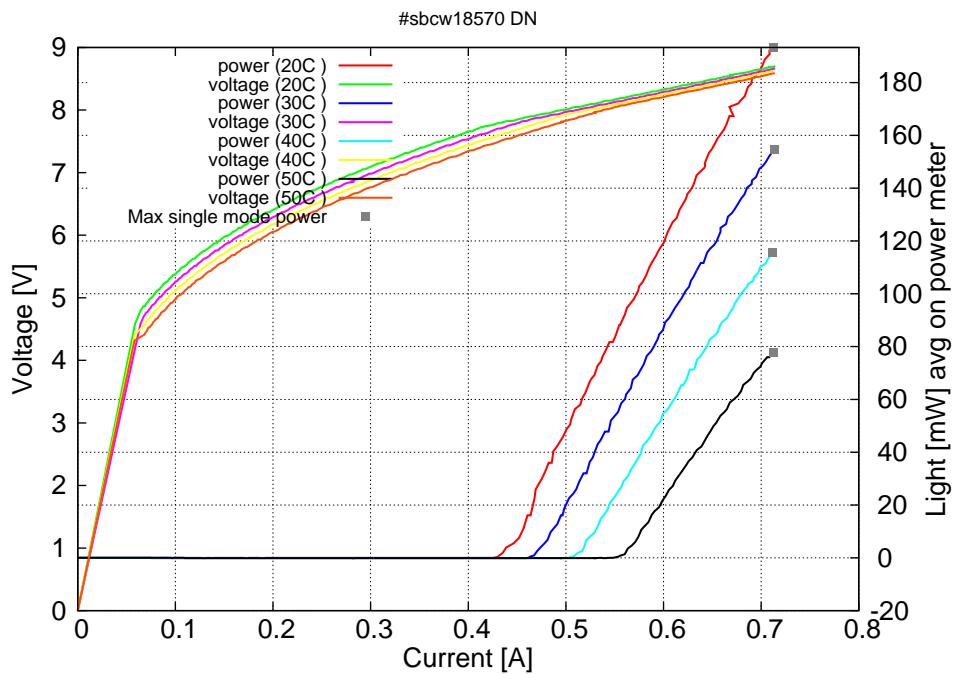


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 20C:  $I_{th}=0.42A$  /  $V_{th}=7.8V$  (2-wires measurements). Maximum operation current: 0.715A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

