

Datasheet for #sbcw19170 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 #sbcw19170 DN (please note that AlN submount numbering is A0TLV)

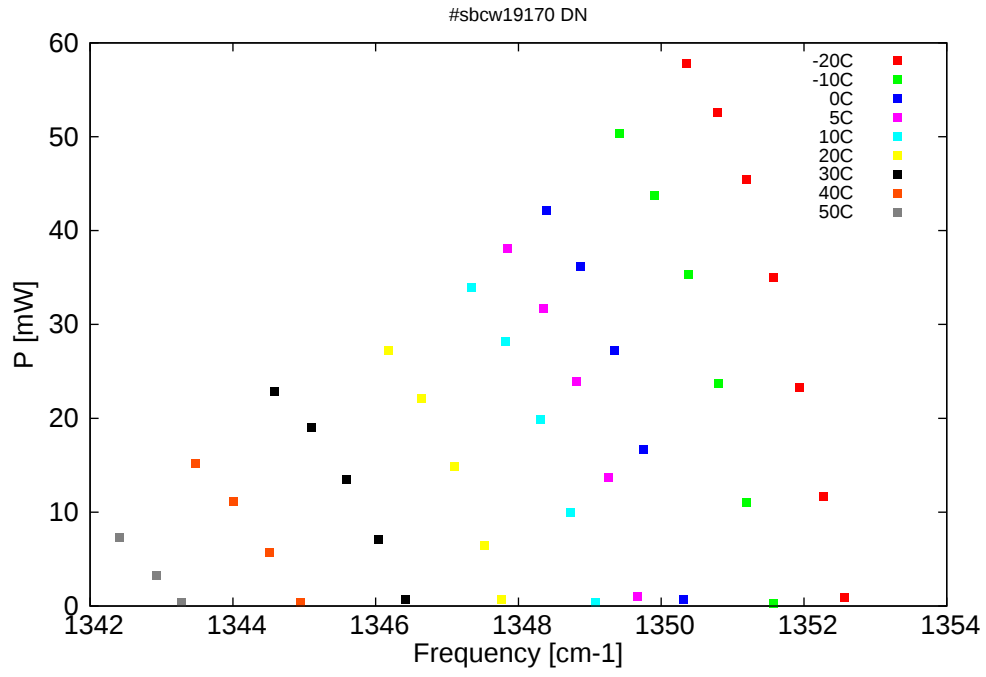


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

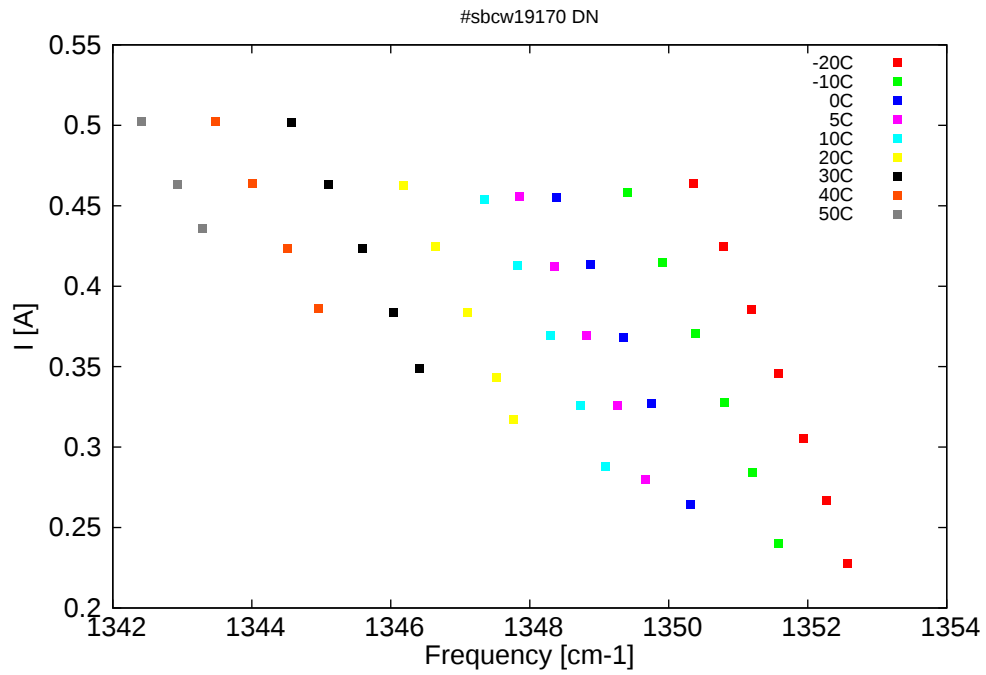


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
7393.4	1352.6	0.9	-20	8.6	0.23
7395	1352.3	11.7	-20	8.9	0.27
7396.8	1351.9	23.3	-20	9.1	0.31
7398.8	1351.6	35	-20	9.4	0.35
7400.9	1351.2	45.4	-20	9.6	0.39
7403.1	1350.8	52.6	-20	9.9	0.42
7405.5	1350.4	57.8	-20	10.1	0.46
7398.8	1351.6	0.2	-10	8.6	0.24
7400.8	1351.2	11	-10	8.9	0.28
7403	1350.8	23.7	-10	9.2	0.33
7405.3	1350.4	35.4	-10	9.4	0.37
7407.9	1349.9	43.7	-10	9.7	0.41
7410.6	1349.4	50.3	-10	10	0.46
7405.7	1350.3	0.7	0	8.6	0.26
7408.7	1349.8	16.7	0	9	0.33
7411	1349.3	27.2	0	9.3	0.37
7413.6	1348.9	36.1	0	9.6	0.41
7416.3	1348.4	42.2	0	9.8	0.46
7409.2	1349.7	1	5	8.7	0.28
7411.5	1349.3	13.7	5	9	0.33
7413.9	1348.8	23.9	5	9.3	0.37
7416.4	1348.4	31.7	5	9.5	0.41
7419.2	1347.9	38	5	9.8	0.46
7412.4	1349.1	0.4	10	8.7	0.29
7414.3	1348.7	9.9	10	8.9	0.33
7416.7	1348.3	19.9	10	9.2	0.37
7419.4	1347.8	28.2	10	9.5	0.41
7422	1347.3	33.9	10	9.7	0.45
7419.7	1347.8	0.7	20	8.8	0.32
7421	1347.5	6.5	20	8.9	0.34
7423.4	1347.1	14.9	20	9.2	0.38
7425.9	1346.6	22.1	20	9.4	0.42
7428.4	1346.2	27.3	20	9.7	0.46
7427.1	1346.4	0.7	30	8.9	0.35
7429.2	1346	7.1	30	9.1	0.38
7431.7	1345.6	13.5	30	9.3	0.42
7434.4	1345.1	19.1	30	9.6	0.46
7437.3	1344.6	22.9	30	9.8	0.5
7435.2	1345	0.3	40	9	0.39
7437.6	1344.5	5.7	40	9.2	0.42
7440.4	1344	11.1	40	9.5	0.46
7443.3	1343.5	15.2	40	9.7	0.5
7444.4	1343.3	0.3	50	9.2	0.44
7446.4	1342.9	3.2	50	9.4	0.46
7449.3	1342.4	7.3	50	9.6	0.5

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

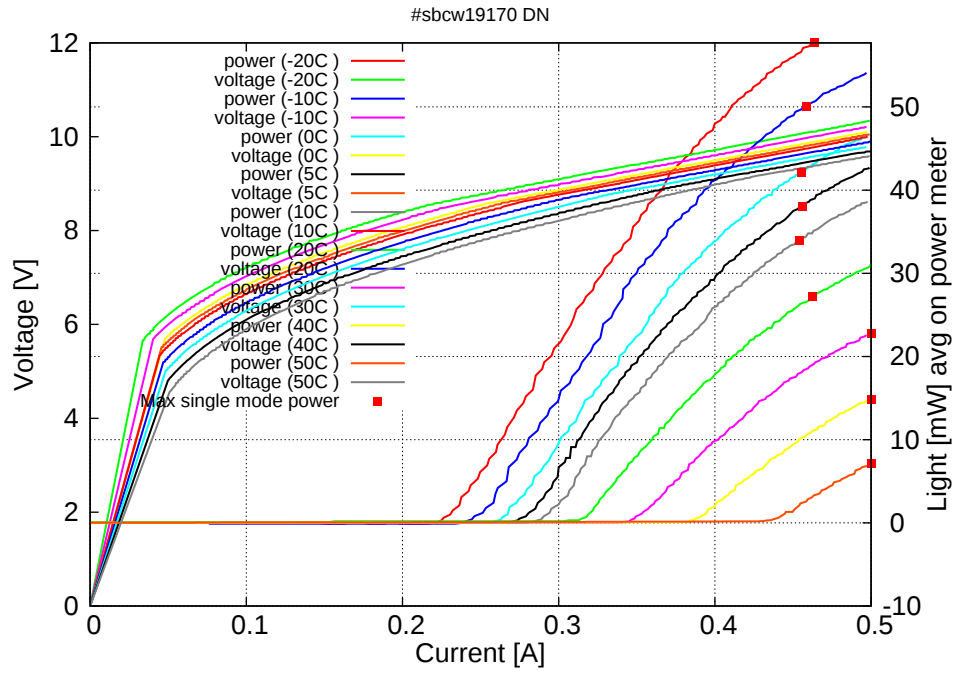


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.23A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.46A between -20C and 20C, 0.50A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

