

**Datasheet for #sbcw20501 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 #sbcw20501 DN (please note that AlN submount numbering is A0TTF)

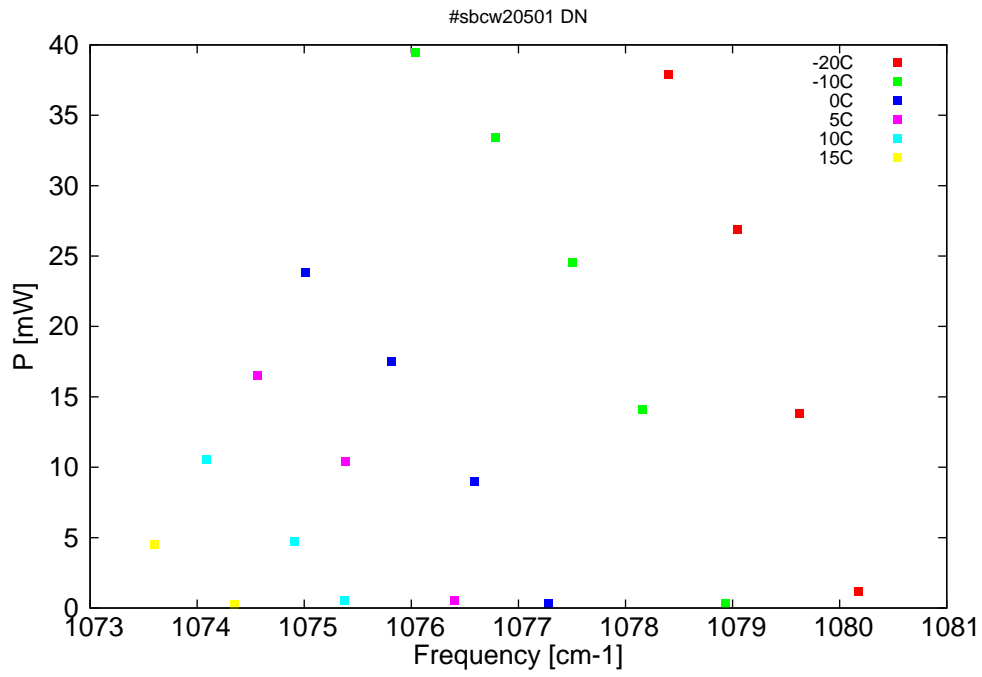


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

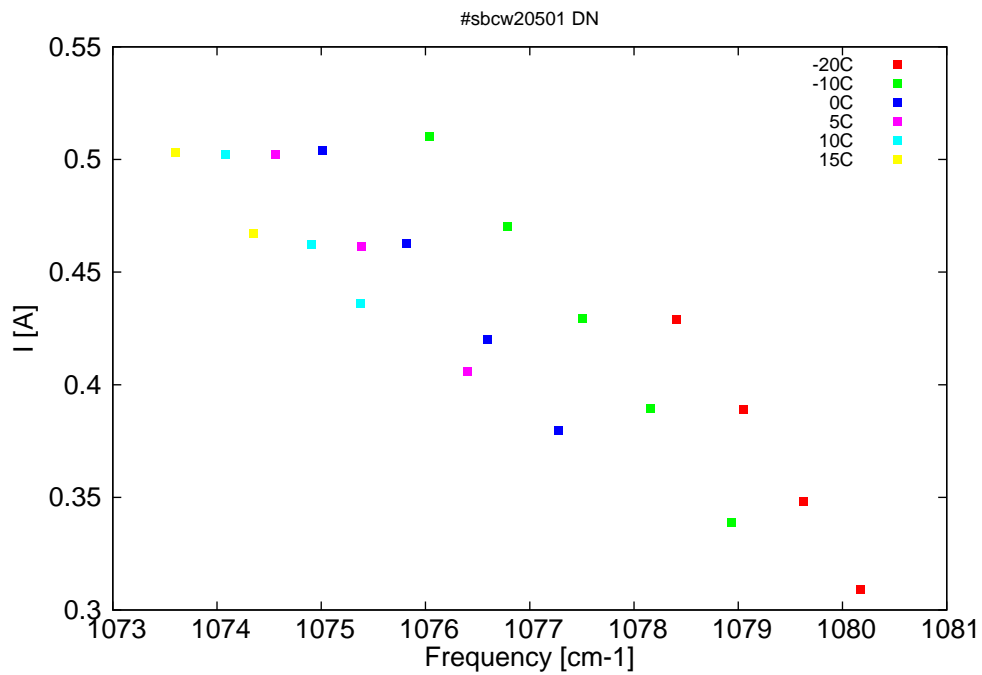


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9257.7	1080.2	1.2	-20	10.15	0.309
9262.5	1079.6	13.8	-20	10.46	0.348
9267.4	1079	26.9	-20	10.78	0.389
9273	1078.4	37.9	-20	11.09	0.429
9268.4	1078.9	0.3	-10	10.29	0.339
9275.1	1078.2	14.1	-10	10.68	0.389
9280.7	1077.5	24.5	-10	11	0.429
9286.9	1076.8	33.4	-10	11.32	0.47
9293.3	1076	39.5	-10	11.64	0.51
9282.7	1077.3	0.3	0	10.48	0.38
9288.6	1076.6	9	0	10.8	0.42
9295.3	1075.8	17.5	0	11.13	0.463
9302.2	1075	23.9	0	11.44	0.504
9290.2	1076.4	0.5	5	10.64	0.406
9299	1075.4	10.4	5	11.07	0.461
9306.1	1074.6	16.5	5	11.39	0.502
9299	1075.4	0.6	10	10.83	0.436
9303.1	1074.9	4.7	10	11.03	0.462
9310.2	1074.1	10.6	10	11.35	0.502
9308	1074.3	0.3	15	11.03	0.467
9314.5	1073.6	4.5	15	11.31	0.503

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

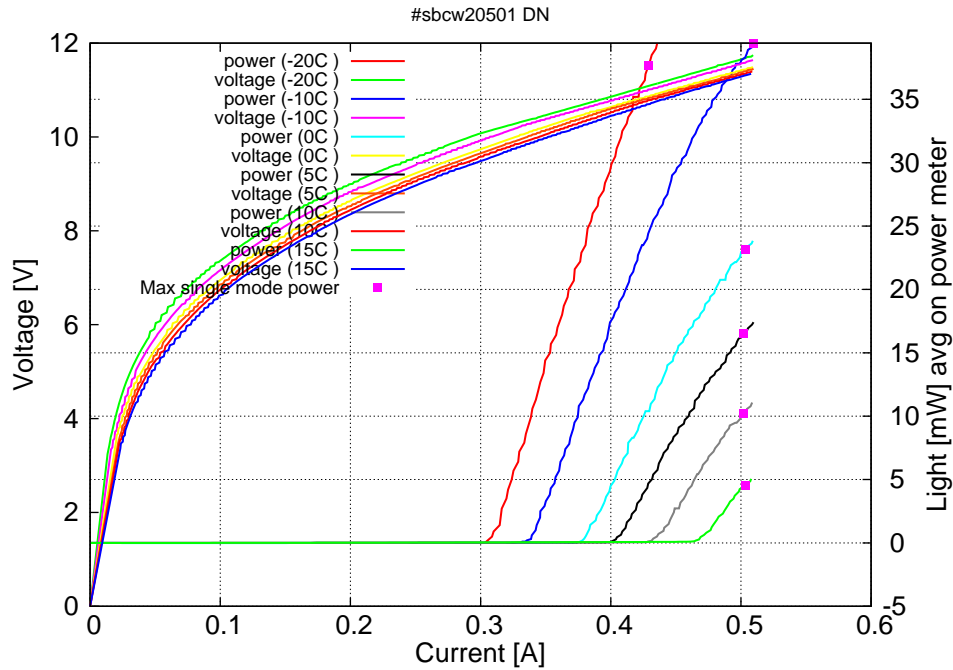


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.30A$  /  $V_{th}=10.1V$  (2-wires measurements). Maximum operation

current: 0.51A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

