

**Datasheet for #sbcw20194 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 #sbcw20194 DN (please note that AlN submount numbering is A0R8Z)

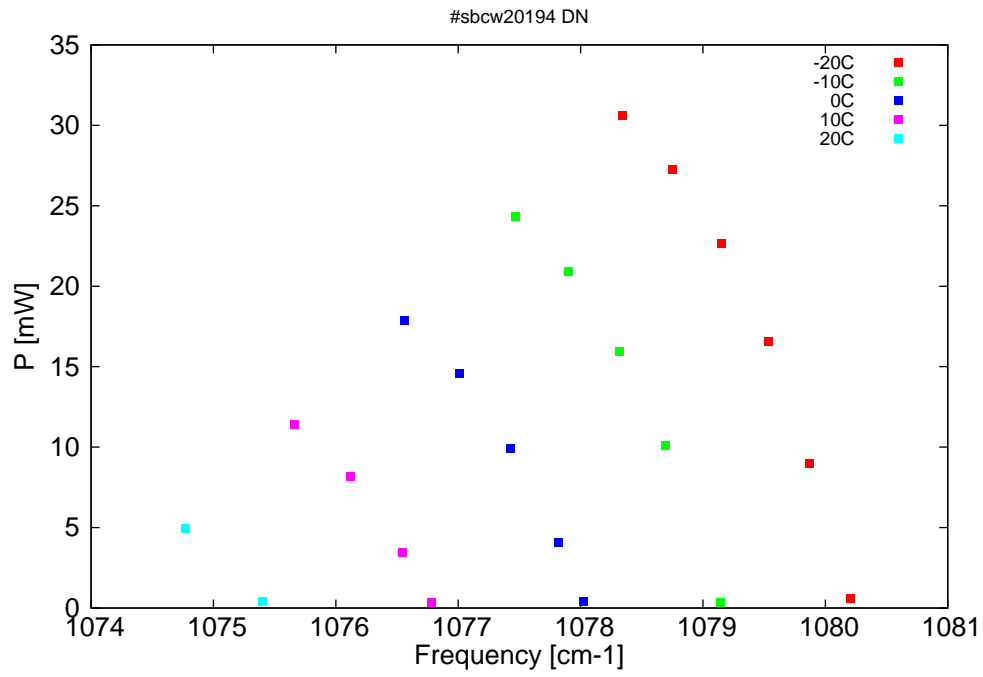


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

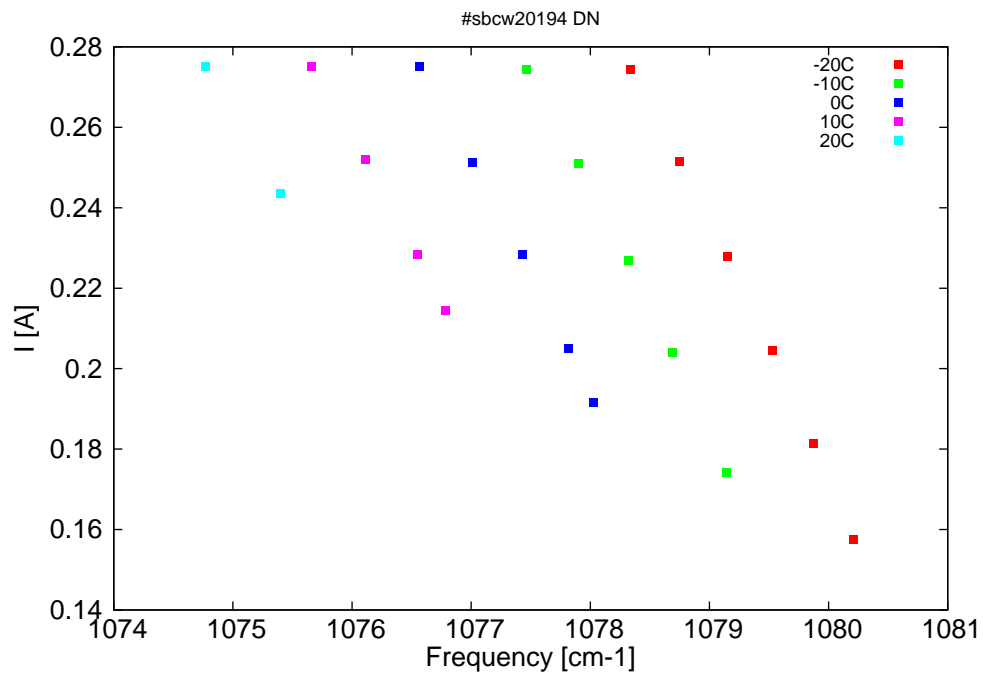


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
9257.5	1080.2	0.6	-20	11.37	0.157
9260.4	1079.9	9	-20	11.81	0.181
9263.3	1079.5	16.6	-20	12.21	0.204
9266.5	1079.2	22.7	-20	12.61	0.228
9270	1078.8	27.3	-20	13	0.252
9273.5	1078.3	30.6	-20	13.36	0.274
9266.6	1079.1	0.4	-10	11.53	0.174
9270.5	1078.7	10.1	-10	12.06	0.204
9273.7	1078.3	15.9	-10	12.44	0.227
9277.3	1077.9	20.9	-10	12.83	0.251
9281	1077.5	24.3	-10	13.19	0.274
9276.2	1078	0.4	0	11.69	0.192
9278	1077.8	4.1	0	11.92	0.205
9281.4	1077.4	9.9	0	12.31	0.228
9285	1077	14.6	0	12.67	0.251
9288.8	1076.6	17.9	0	13.04	0.275
9286.9	1076.8	0.3	10	11.93	0.214
9289	1076.5	3.4	10	12.16	0.228
9292.7	1076.1	8.2	10	12.53	0.252
9296.6	1075.7	11.4	10	12.89	0.275
9298.9	1075.4	0.4	20	12.25	0.243
9304.3	1074.8	4.9	20	12.73	0.275

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

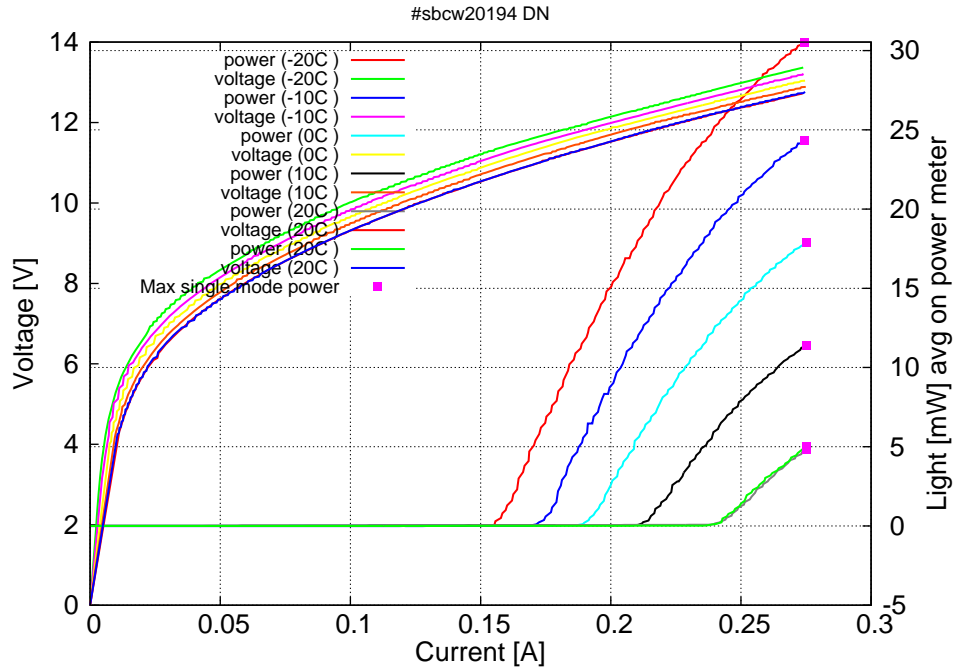


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.15A$  /  $V_{th}=11.3V$  (2-wires measurements). Maximum operation current: 0.275A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

