

**Datasheet for #sbcw22701 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 #sbcw22701 DN

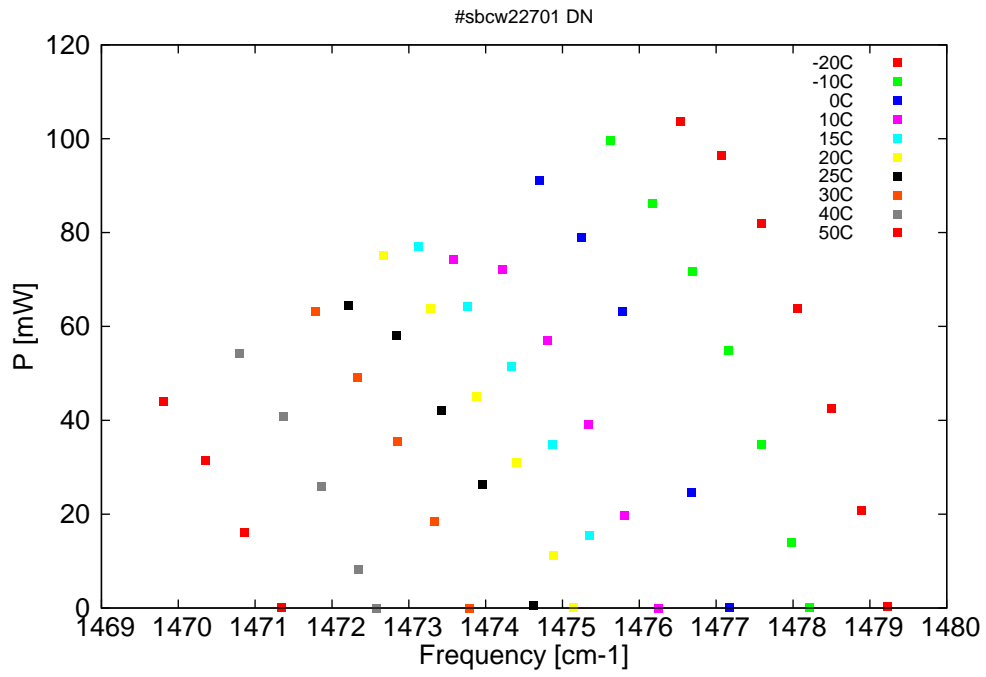


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

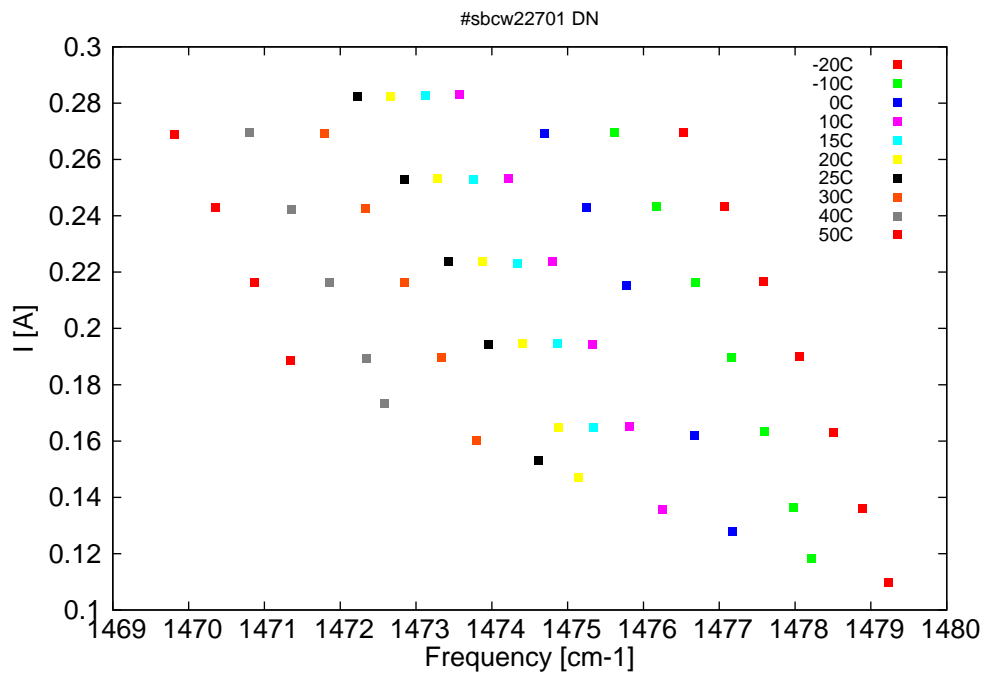


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6760.2	1479.2	0.4	-20	10.97	0.11
6761.8	1478.9	20.8	-20	11.41	0.136
6763.6	1478.5	42.5	-20	11.83	0.163
6765.6	1478.1	63.8	-20	12.25	0.19
6767.8	1477.6	81.9	-20	12.66	0.217
6770.2	1477.1	96.4	-20	13.06	0.243
6772.6	1476.5	103.8	-20	13.45	0.269
6764.9	1478.2	0.1	-10	10.95	0.118
6766	1478	14	-10	11.24	0.136
6767.8	1477.6	34.8	-10	11.66	0.163
6769.8	1477.2	54.9	-10	12.06	0.19
6771.9	1476.7	71.8	-10	12.46	0.216
6774.3	1476.2	86.2	-10	12.86	0.243
6776.8	1475.6	99.6	-10	13.25	0.27
6769.7	1477.2	0.1	0	10.94	0.128
6772	1476.7	24.5	0	11.47	0.162
6776.1	1475.8	63.2	0	12.27	0.215
6778.5	1475.3	78.9	0	12.66	0.243
6781	1474.7	91.1	0	13.05	0.269
6773.9	1476.2	0	10	10.97	0.136
6775.9	1475.8	19.8	10	11.43	0.165
6778.1	1475.3	39.2	10	11.86	0.194
6780.6	1474.8	57.1	10	12.28	0.224
6783.3	1474.2	72.1	10	12.71	0.253
6786.2	1473.6	74.3	10	13.13	0.283
6778.1	1475.3	15.5	15	11.34	0.165
6780.3	1474.9	34.8	15	11.77	0.195
6782.7	1474.3	51.5	15	12.19	0.223
6785.4	1473.8	64.3	15	12.6	0.253
6788.3	1473.1	77.1	15	13.02	0.283
6779	1475.1	0	20	10.98	0.147
6780.2	1474.9	11.1	20	11.25	0.165
6782.4	1474.4	31	20	11.69	0.195
6784.8	1473.9	45	20	12.1	0.224
6787.6	1473.3	63.8	20	12.52	0.253
6790.4	1472.7	75.2	20	12.92	0.282
6781.4	1474.6	0.5	25	11	0.153
6784.4	1474	26.4	25	11.61	0.194
6786.9	1473.4	42.1	25	12.03	0.224
6789.6	1472.8	58.2	25	12.44	0.253
6792.5	1472.2	64.4	25	12.84	0.282
6785.2	1473.8	0	30	10.98	0.16
6787.3	1473.3	18.5	30	11.4	0.19
6789.5	1472.9	35.4	30	11.77	0.216
6791.9	1472.3	49.2	30	12.14	0.243
6794.4	1471.8	63.1	30	12.5	0.269
6790.8	1472.6	0	40	11.04	0.173
6791.9	1472.3	8.3	40	11.24	0.189
6794.1	1471.9	26	40	11.62	0.216

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6796.4	1471.4	40.8	40	11.97	0.242
6799	1470.8	54.3	40	12.32	0.269
6796.5	1471.3	0.2	50	11.09	0.189
6798.7	1470.9	16.1	50	11.45	0.216
6801.1	1470.4	31.5	50	11.81	0.243
6803.6	1469.8	44	50	12.15	0.269

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

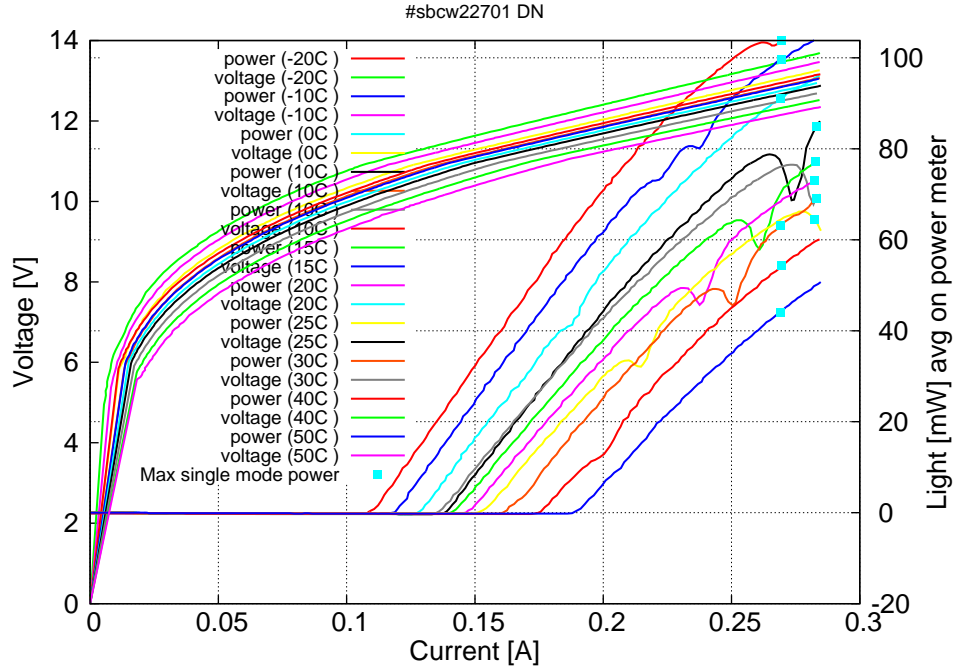


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

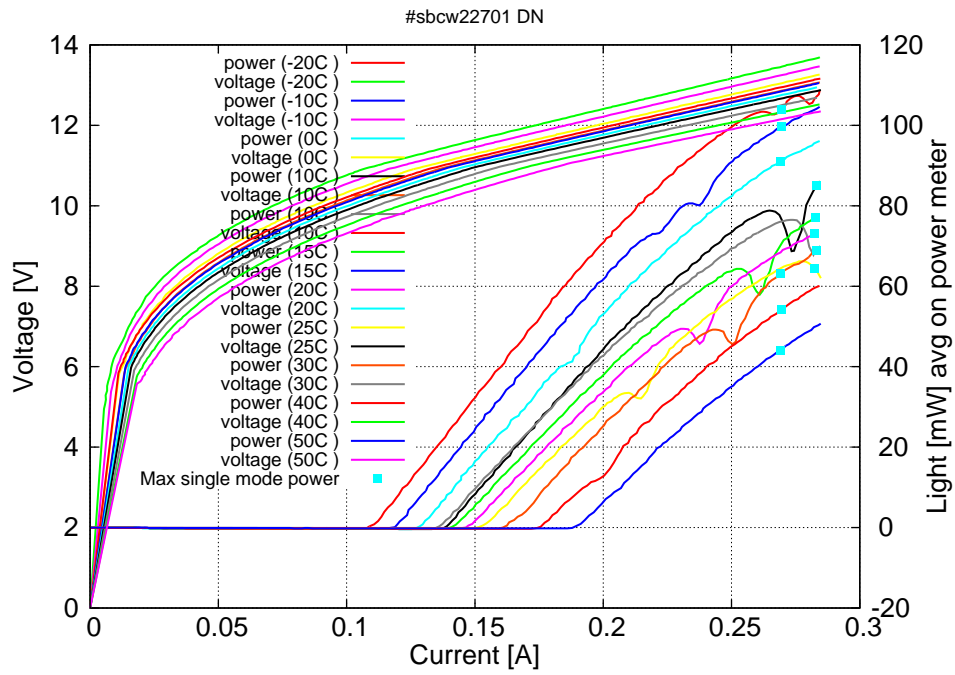


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=10.9V$  (2-wires measurements). Maximum operation current: 0.285A for all temperatures.

