

Datasheet for #sbcw22704 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.

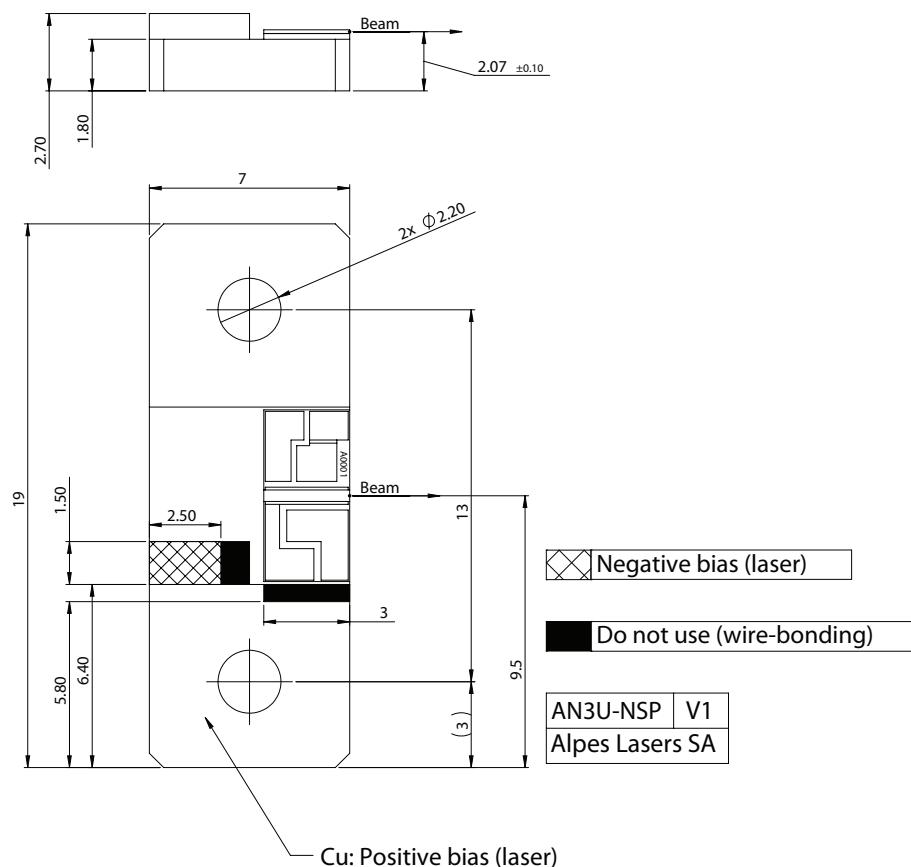


Figure 1: Mechanical and electrical interface for #sbcw22704 DN

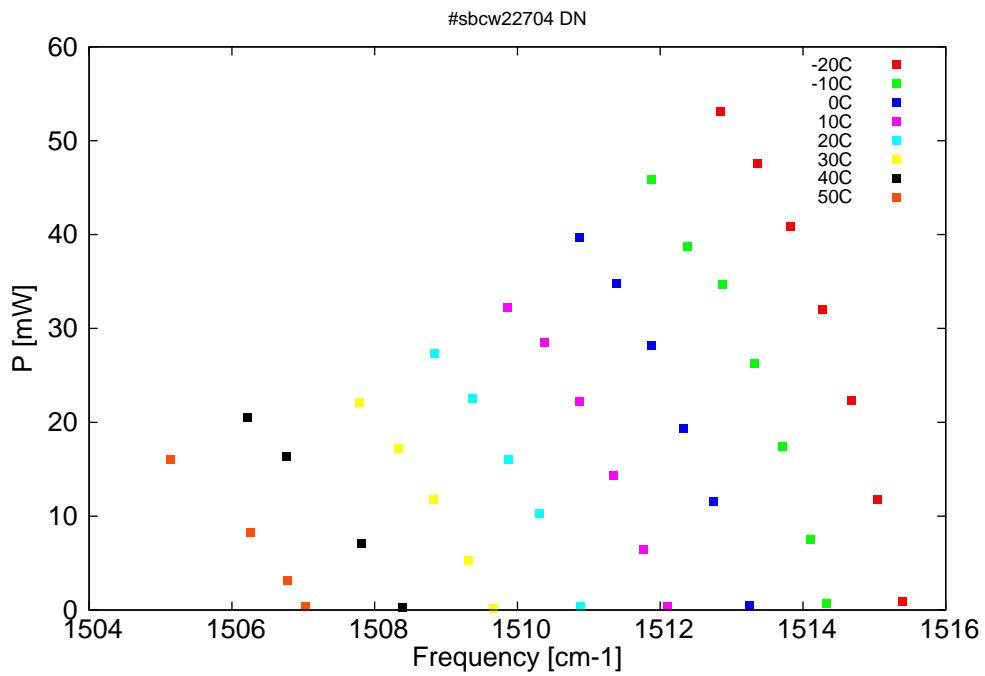


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

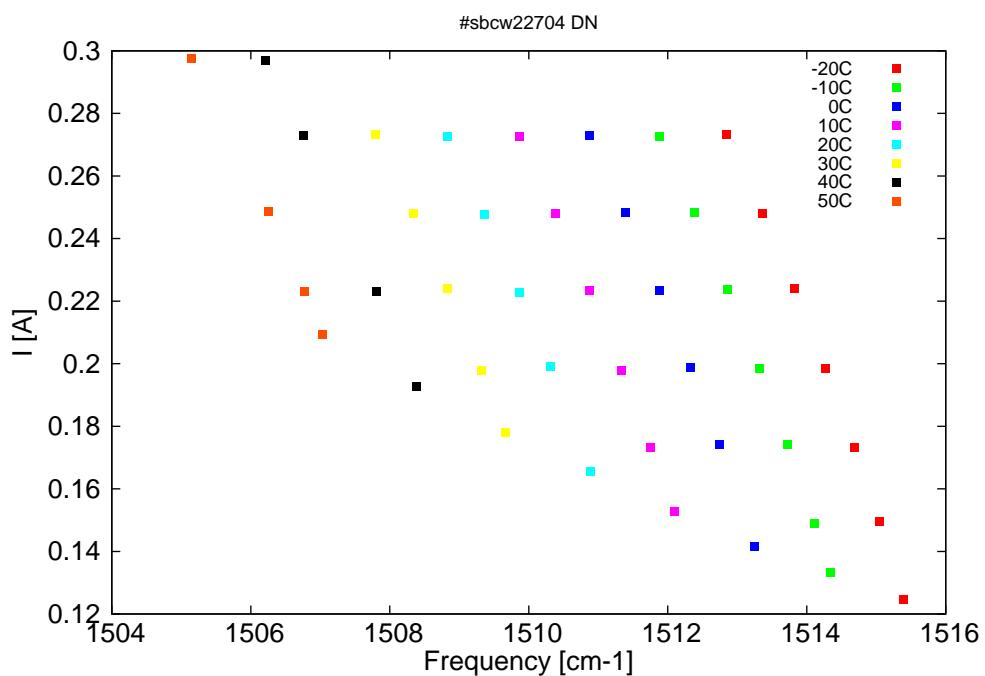


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6598.9	1515.4	0.9	-20	11.12	0.125
6600.4	1515.1	11.7	-20	11.53	0.149
6602	1514.7	22.3	-20	11.9	0.173
6603.8	1514.3	32	-20	12.27	0.198
6605.8	1513.8	40.9	-20	12.65	0.224
6607.8	1513.4	47.6	-20	13	0.248
6610.1	1512.8	53.1	-20	13.38	0.273
6603.6	1514.3	0.7	-10	11.1	0.133
6604.5	1514.1	7.5	-10	11.36	0.149
6606.2	1513.7	17.4	-10	11.75	0.174
6608	1513.3	26.3	-10	12.11	0.199
6610	1512.9	34.7	-10	12.48	0.224
6612.1	1512.4	38.8	-10	12.84	0.248
6614.3	1511.9	45.9	-10	13.2	0.273
6608.3	1513.2	0.5	0	11.09	0.142
6610.5	1512.7	11.6	0	11.6	0.174
6612.3	1512.3	19.3	0	11.96	0.199
6614.3	1511.9	28.2	0	12.32	0.223
6616.4	1511.4	34.7	0	12.68	0.248
6618.7	1510.9	39.7	0	13.04	0.273
6613.3	1512.1	0.3	10	11.12	0.153
6614.8	1511.8	6.5	10	11.44	0.173
6616.6	1511.3	14.3	10	11.8	0.198
6618.7	1510.9	22.2	10	12.17	0.223
6620.8	1510.4	28.4	10	12.52	0.248
6623.1	1509.9	32.3	10	12.87	0.273
6618.6	1510.9	0.3	20	11.18	0.166
6621.1	1510.3	10.3	20	11.67	0.199
6623.1	1509.9	16	20	12.01	0.223
6625.3	1509.4	22.5	20	12.37	0.248
6627.6	1508.8	27.4	20	12.71	0.273
6624	1509.7	0.2	30	11.21	0.178
6625.5	1509.3	5.3	30	11.51	0.198
6627.7	1508.8	11.7	30	11.88	0.224
6629.8	1508.3	17.2	30	12.21	0.248
6632.2	1507.8	22.1	30	12.56	0.273
6629.6	1508.4	0.3	40	11.29	0.193
6632.1	1507.8	7	40	11.72	0.223
6636.7	1506.8	16.4	40	12.4	0.273
6639.2	1506.2	20.5	40	12.72	0.297
6635.6	1507	0.4	50	11.39	0.209
6636.7	1506.8	3.2	50	11.57	0.223
6639	1506.3	8.2	50	11.92	0.249
6643.9	1505.1	16	50	12.57	0.298

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

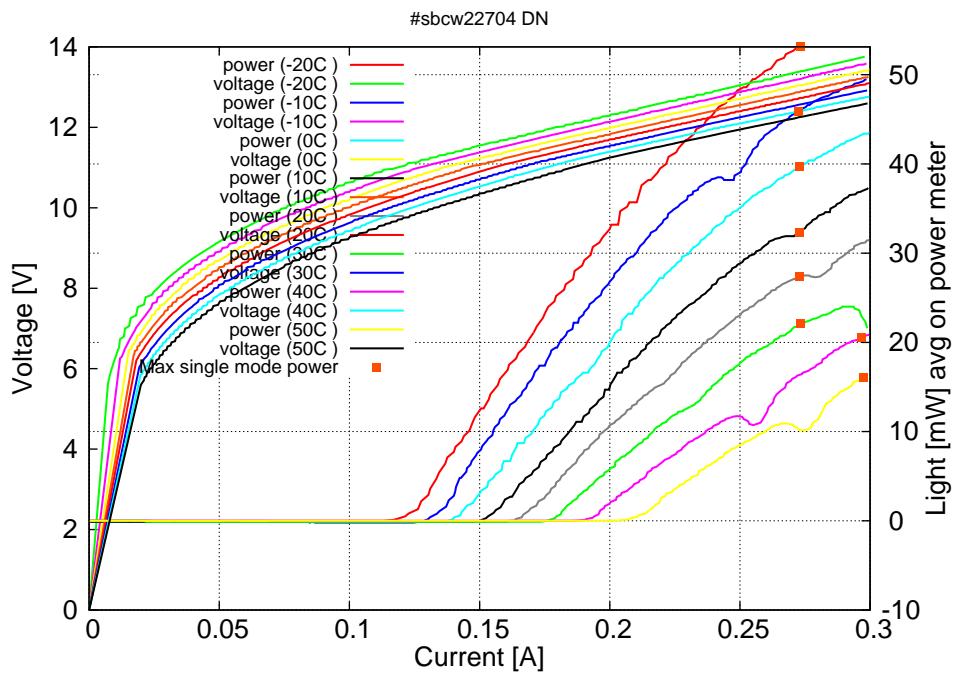


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: I_{th}=0.12A / V_{th}=11.0V (2-wires measurements). Maximum operation current: 0.275A between -20C and 30C, 0.30A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

