

## Datasheet for #sbcw22706 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 #sbcw22706 DN (please note that AlN submount numbering is A0Y1J)

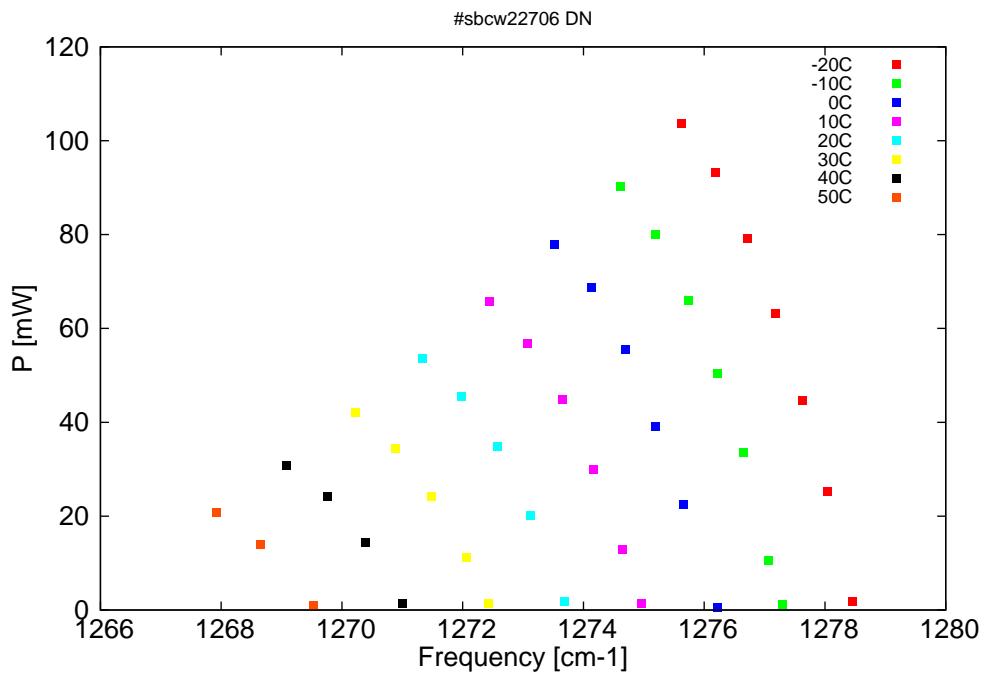


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

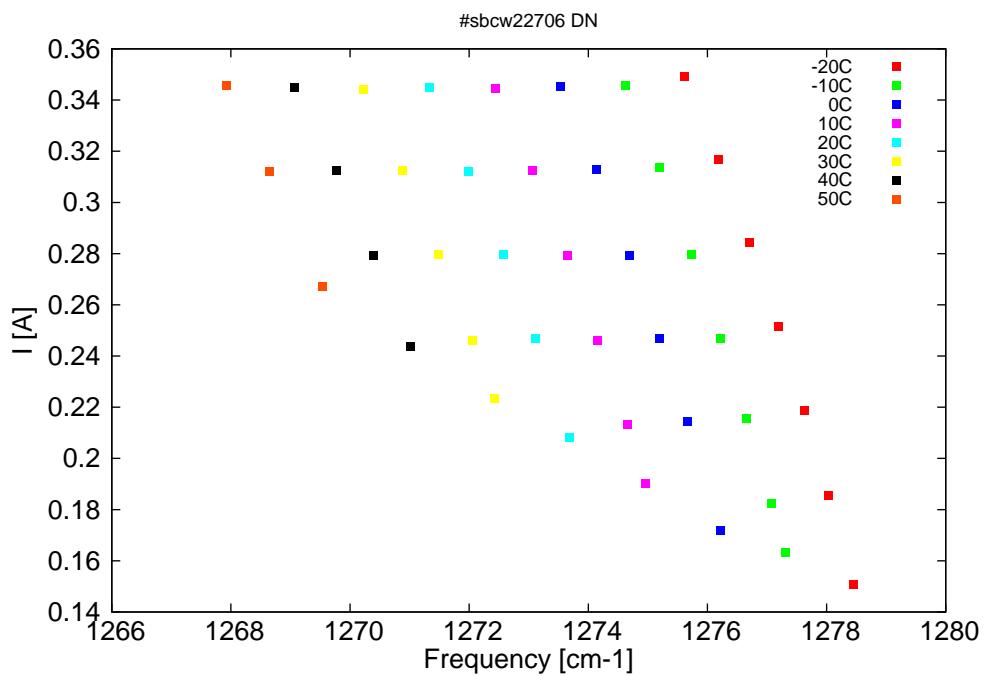


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm $^{-1}$ ]	P[mW]	Temp[°C]	U $_{LASER}$ [V]	I[A]
7822	1278.5	1.9	-20	8.68	0.151
7824.5	1278	25.2	-20	8.96	0.186
7827	1277.6	44.7	-20	9.22	0.219
7829.7	1277.2	63.3	-20	9.45	0.252
7832.6	1276.7	79.2	-20	9.68	0.284
7835.8	1276.2	93.2	-20	9.9	0.317
7839.3	1275.6	103.6	-20	10.12	0.349
7829	1277.3	1.3	-10	8.58	0.163
7830.4	1277.1	10.6	-10	8.75	0.183
7833	1276.7	33.6	-10	9	0.216
7835.6	1276.2	50.5	-10	9.23	0.247
7838.6	1275.7	66	-10	9.46	0.28
7842	1275.2	80	-10	9.7	0.314
7845.5	1274.6	90.3	-10	9.92	0.346
7835.6	1276.2	0.5	0	8.48	0.172
7839.1	1275.7	22.6	0	8.82	0.214
7841.9	1275.2	39.2	0	9.07	0.247
7845	1274.7	55.4	0	9.3	0.279
7848.5	1274.1	68.7	0	9.54	0.313
7852.2	1273.5	77.8	0	9.77	0.345
7843.4	1275	1.3	10	8.47	0.19
7845.3	1274.7	12.8	10	8.66	0.213
7848.3	1274.2	30	10	8.91	0.246
7851.5	1273.6	44.9	10	9.15	0.279
7855	1273.1	56.9	10	9.39	0.312
7858.9	1272.4	65.8	10	9.62	0.345
7851.2	1273.7	1.8	20	8.46	0.208
7854.7	1273.1	20.1	20	8.76	0.247
7858.1	1272.6	34.9	20	9.01	0.279
7861.7	1272	45.6	20	9.25	0.312
7865.7	1271.3	53.7	20	9.48	0.345
7859	1272.4	1.4	30	8.46	0.224
7861.3	1272.1	11.2	30	8.63	0.246
7864.8	1271.5	24.2	30	8.88	0.28
7868.5	1270.9	34.5	30	9.12	0.312
7872.6	1270.2	42.1	30	9.36	0.344
7867.8	1271	1.5	40	8.49	0.244
7871.6	1270.4	14.4	40	8.76	0.279
7875.5	1269.8	24.1	40	9.01	0.312
7879.8	1269.1	30.8	40	9.25	0.345
7876.9	1269.5	0.9	50	8.57	0.267
7882.4	1268.6	14	50	8.9	0.312
7886.9	1267.9	20.9	50	9.15	0.346

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

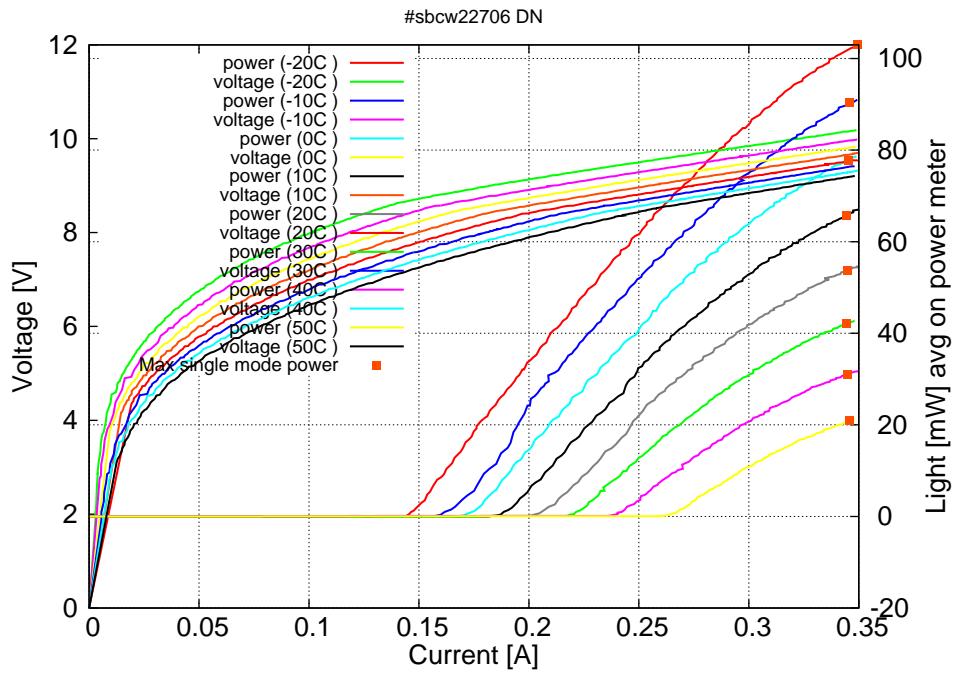


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum single mode emitted power)

Note: at -20C:  $I_{th}=0.15A$  /  $V_{th}=8.65V$  (2-wires measurements). Maximum operation current: 0.350A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

