

Datasheet for #sbcw22705 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.

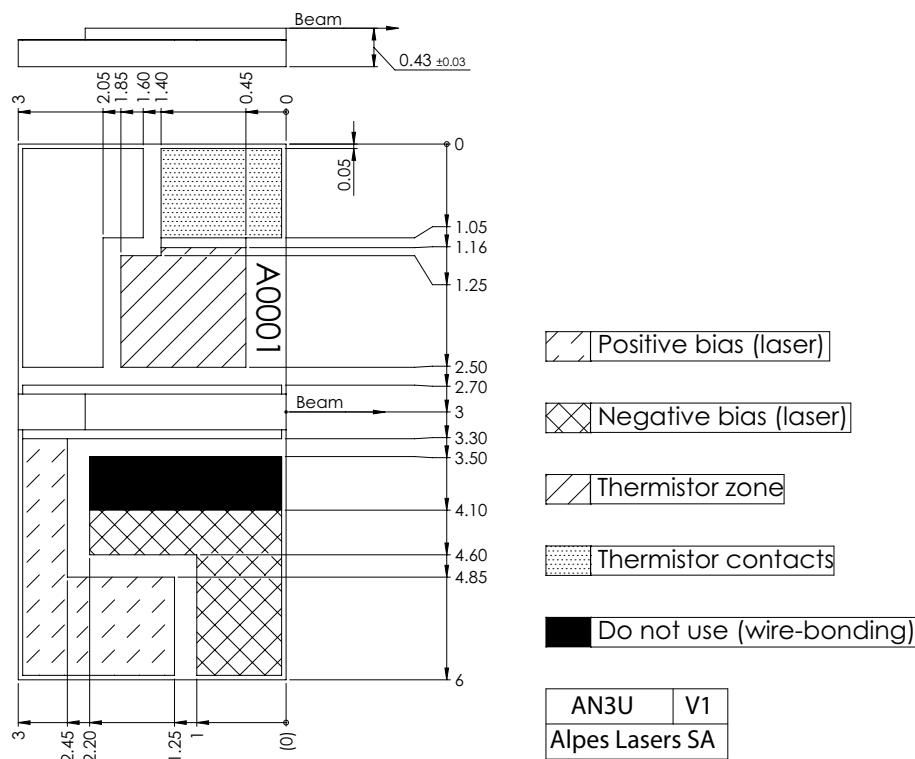


Figure 1: Mechanical and electrical interface for #sbcw22705 DN (please note that AlN submount numbering is A0XDE)

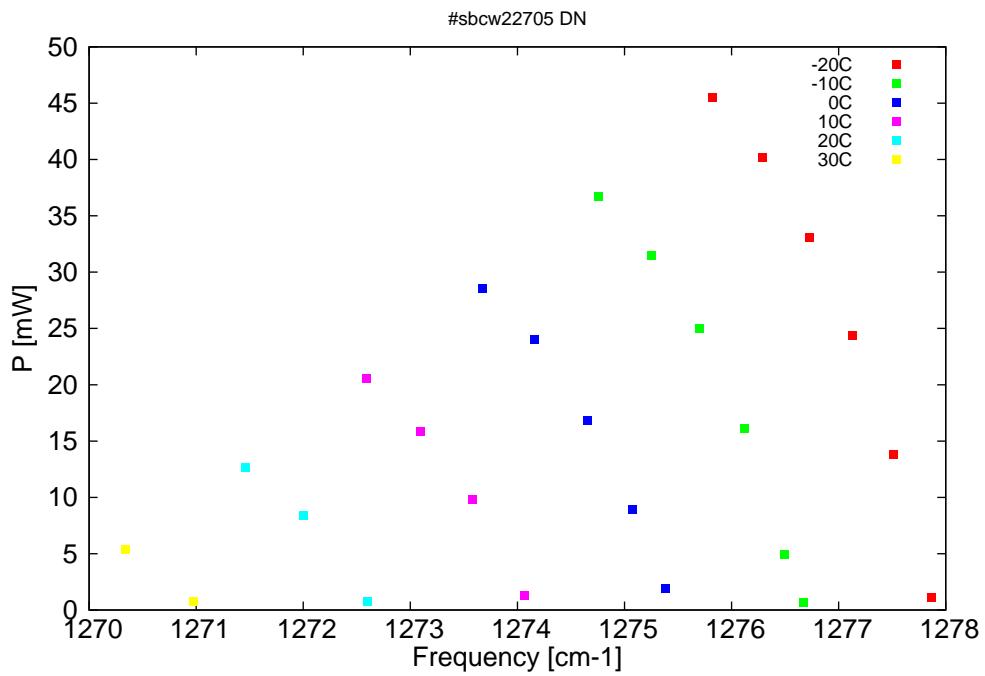


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

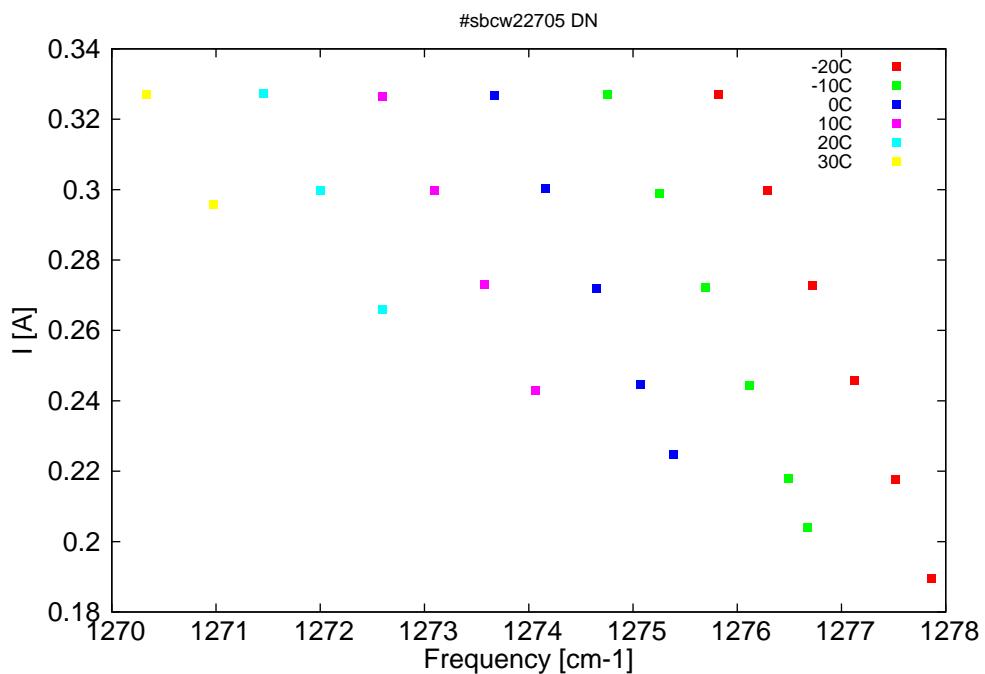


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm $^{-1}$]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7825.6	1277.9	1.1	-20	9.14	0.19
7827.7	1277.5	13.8	-20	9.36	0.218
7830.1	1277.1	24.4	-20	9.57	0.246
7832.5	1276.7	33	-20	9.76	0.273
7835.2	1276.3	40.2	-20	9.95	0.3
7838.1	1275.8	45.5	-20	10.15	0.327
7832.9	1276.7	0.6	-10	9.07	0.204
7834	1276.5	5	-10	9.19	0.218
7836.3	1276.1	16.1	-10	9.38	0.244
7838.8	1275.7	25	-10	9.59	0.272
7841.6	1275.3	31.4	-10	9.78	0.299
7844.6	1274.8	36.7	-10	9.98	0.327
7840.8	1275.4	1.9	0	9.07	0.225
7842.7	1275.1	8.9	0	9.22	0.245
7845.3	1274.7	16.9	0	9.42	0.272
7848.3	1274.2	24	0	9.63	0.3
7851.3	1273.7	28.6	0	9.82	0.327
7848.9	1274.1	1.3	10	9.05	0.243
7851.9	1273.6	9.8	10	9.28	0.273
7854.9	1273.1	15.9	10	9.48	0.3
7858	1272.6	20.6	10	9.67	0.326
7857.9	1272.6	0.8	20	9.08	0.266
7861.6	1272	8.4	20	9.34	0.3
7865	1271.5	12.6	20	9.55	0.327
7868	1271	0.7	30	9.19	0.296
7871.9	1270.3	5.4	30	9.43	0.327

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

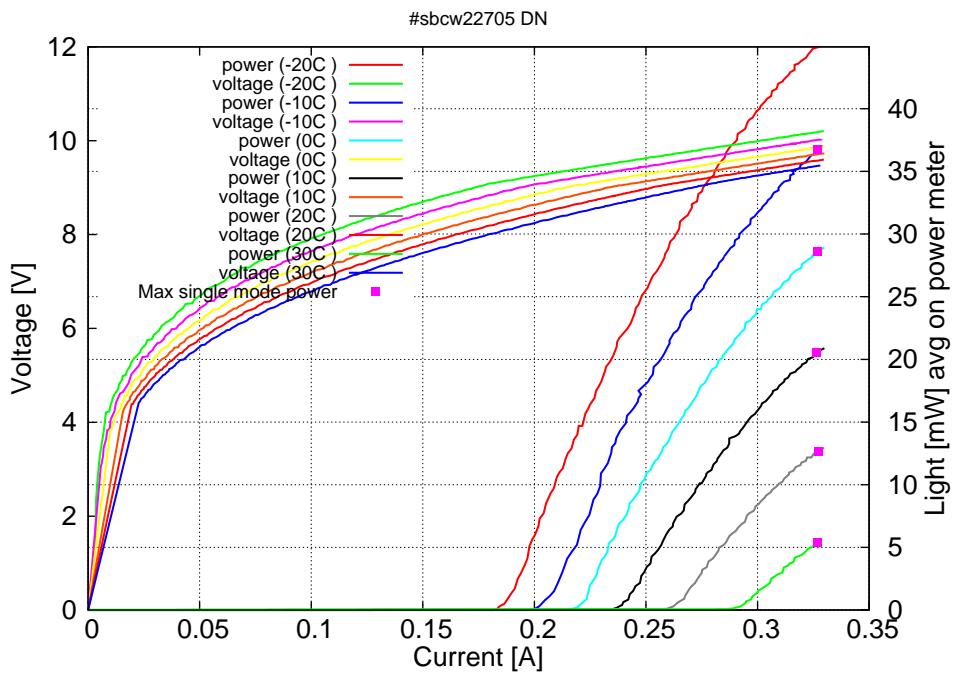


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.330A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

