

Datasheet for #sbcw24961 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.

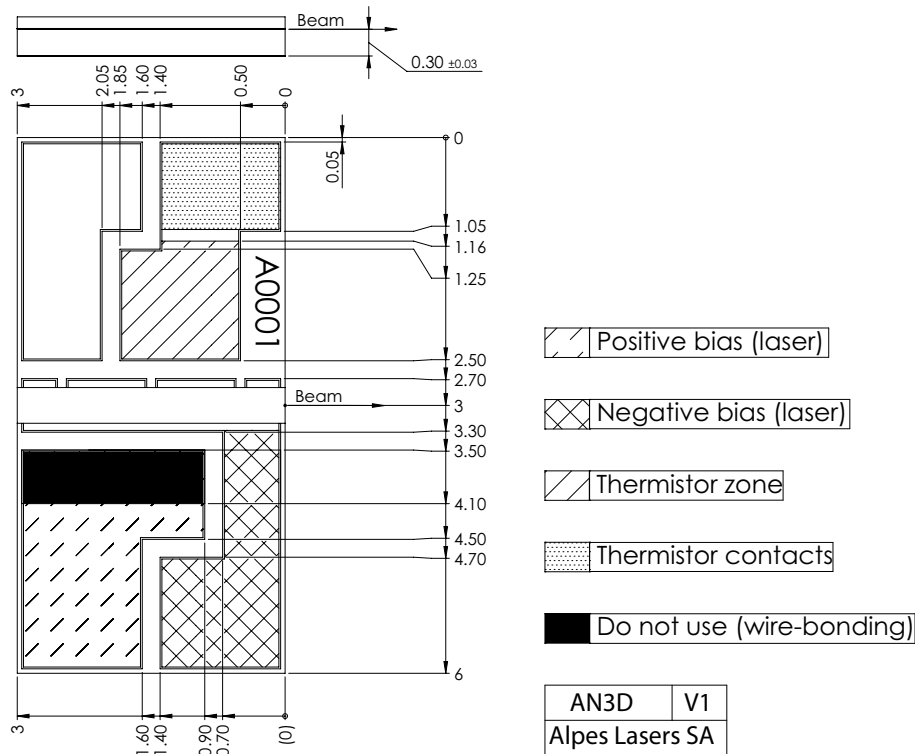


Figure 1: Mechanical and electrical interface for #sbcw24961 DN (please note that AlN submount numbering is P3016)

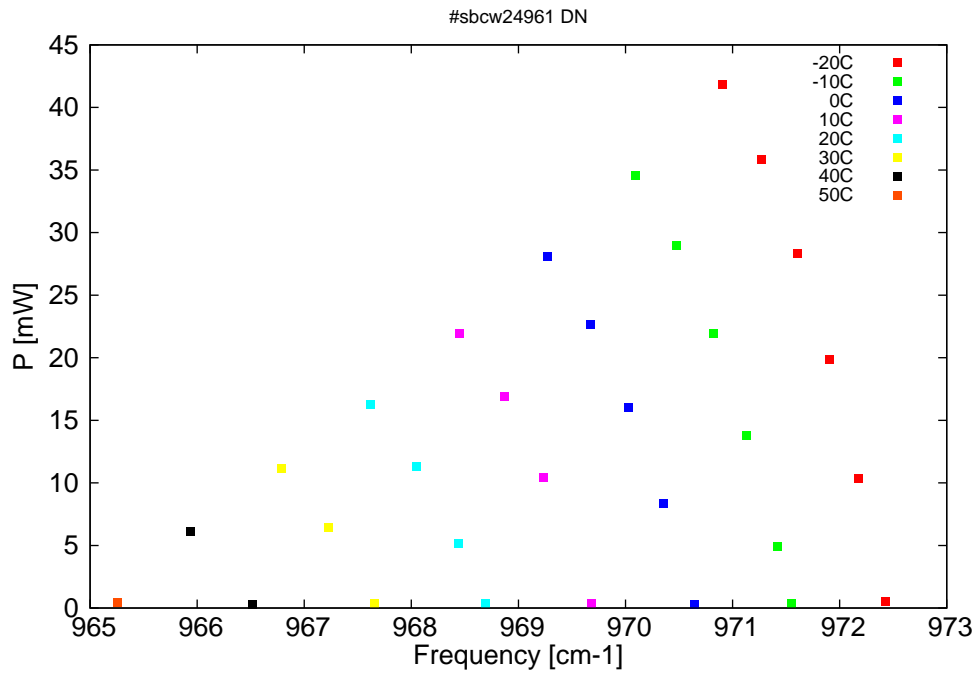


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

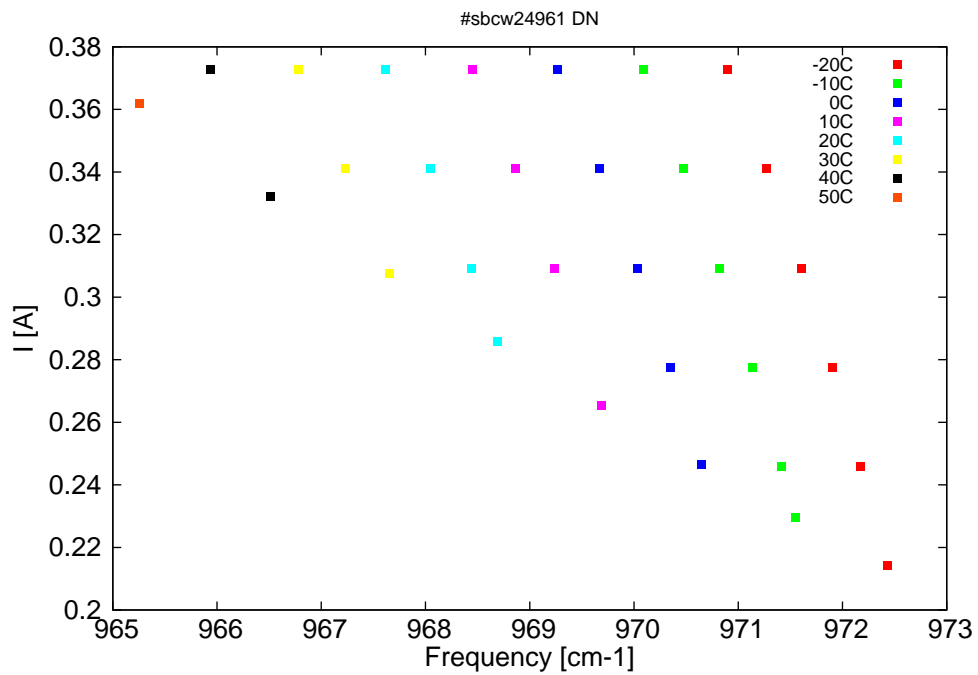


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10283.5	972.4	0.5	-20	8.3	0.214
10286.2	972.2	10.3	-20	8.57	0.246
10289.1	971.9	19.9	-20	8.84	0.278
10292.3	971.6	28.3	-20	9.13	0.309
10295.8	971.3	35.8	-20	9.44	0.341
10299.7	970.9	41.9	-20	9.77	0.373
10292.8	971.6	0.4	-10	8.41	0.23
10294.2	971.4	4.9	-10	8.55	0.246
10297.3	971.1	13.8	-10	8.83	0.278
10300.6	970.8	21.9	-10	9.13	0.309
10304.2	970.5	29	-10	9.44	0.341
10308.3	970.1	34.6	-10	9.79	0.373
10302.4	970.6	0.3	0	8.55	0.246
10305.5	970.4	8.4	0	8.84	0.278
10309	970	16.1	0	9.14	0.309
10312.8	969.7	22.7	0	9.47	0.341
10317	969.3	28.1	0	9.83	0.373
10312.6	969.7	0.3	10	8.72	0.266
10317.4	969.2	10.5	10	9.15	0.309
10321.3	968.9	16.9	10	9.48	0.341
10325.8	968.4	21.9	10	9.84	0.373
10323.2	968.7	0.3	20	8.92	0.286
10325.9	968.4	5.1	20	9.16	0.309
10330	968.1	11.3	20	9.5	0.341
10334.6	967.6	16.2	20	9.87	0.373
10334.3	967.7	0.4	30	9.21	0.308
10338.8	967.2	6.4	30	9.58	0.341
10343.6	966.8	11.1	30	9.96	0.373
10346.4	966.5	0.3	40	9.51	0.332
10352.7	965.9	6.1	40	10	0.373
10359.9	965.3	0.4	50	9.87	0.362

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

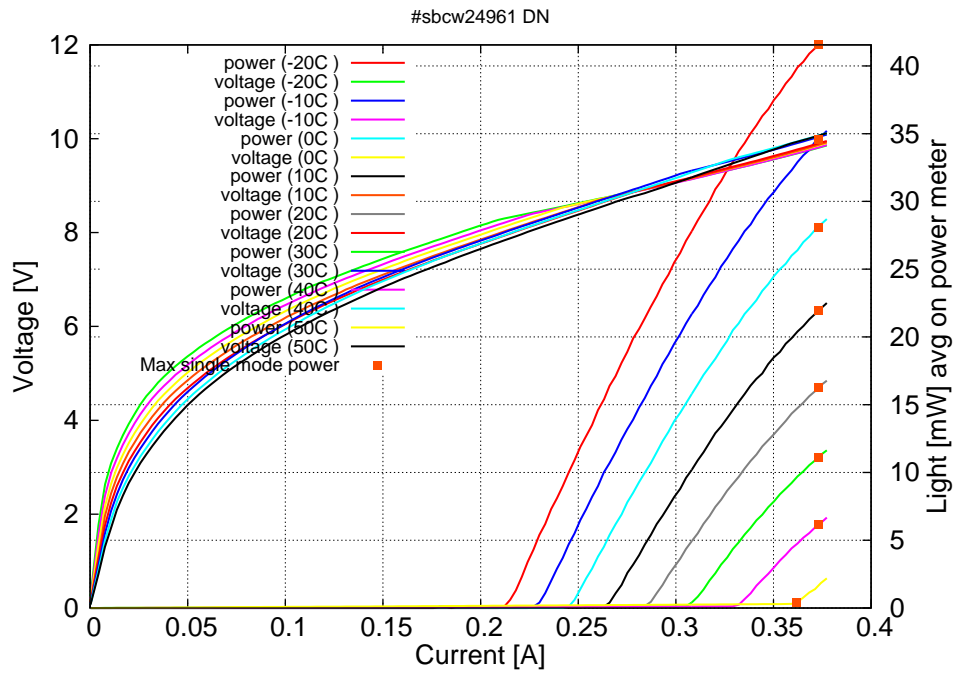


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=8.3V$ (2-wires measurements). Maximum operation current: 0.380A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

