

Datasheet for #sbcw24921 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.

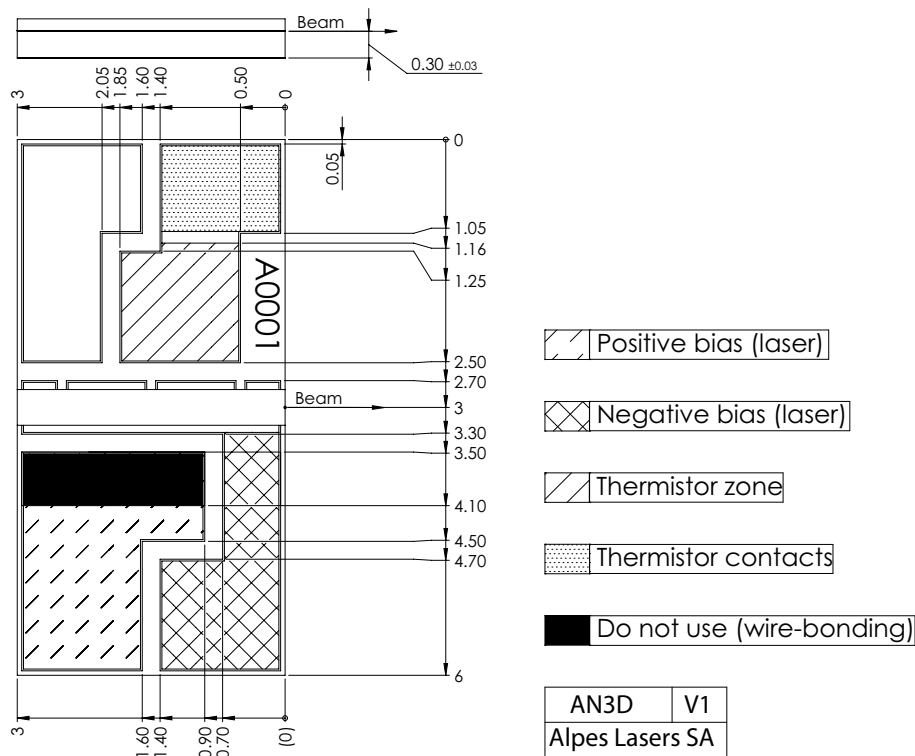


Figure 1: Mechanical and electrical interface for #sbcw24921 DN (please note that AlN submount numbering is P3774)

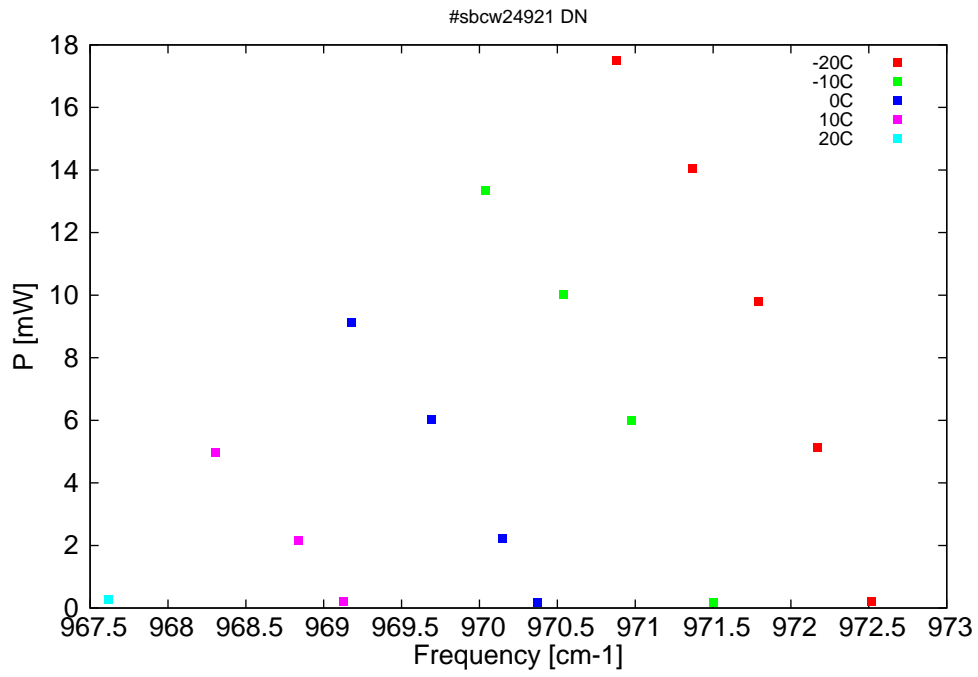


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

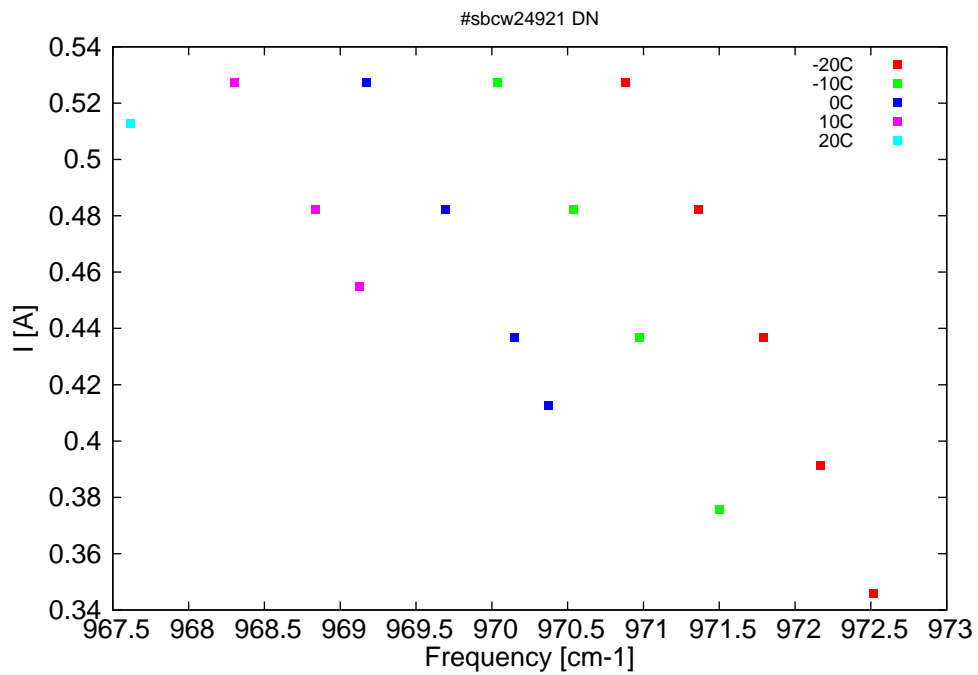


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10282.6	972.5	0.2	-20	8.86	0.346
10286.3	972.2	5.1	-20	9.19	0.391
10290.3	971.8	9.8	-20	9.54	0.437
10294.8	971.4	14	-20	9.93	0.482
10299.9	970.9	17.5	-20	10.36	0.528
10293.3	971.5	0.2	-10	9.05	0.376
10298.9	971	6	-10	9.52	0.437
10303.6	970.5	10	-10	9.91	0.482
10308.9	970	13.3	-10	10.34	0.528
10305.3	970.4	0.2	0	9.28	0.413
10307.7	970.1	2.2	0	9.48	0.437
10312.5	969.7	6	0	9.87	0.482
10318	969.2	9.1	0	10.3	0.528
10318.6	969.1	0.2	10	9.62	0.455
10321.6	968.8	2.2	10	9.87	0.482
10327.3	968.3	5	10	10.3	0.528
10334.7	967.6	0.3	20	10.15	0.513

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

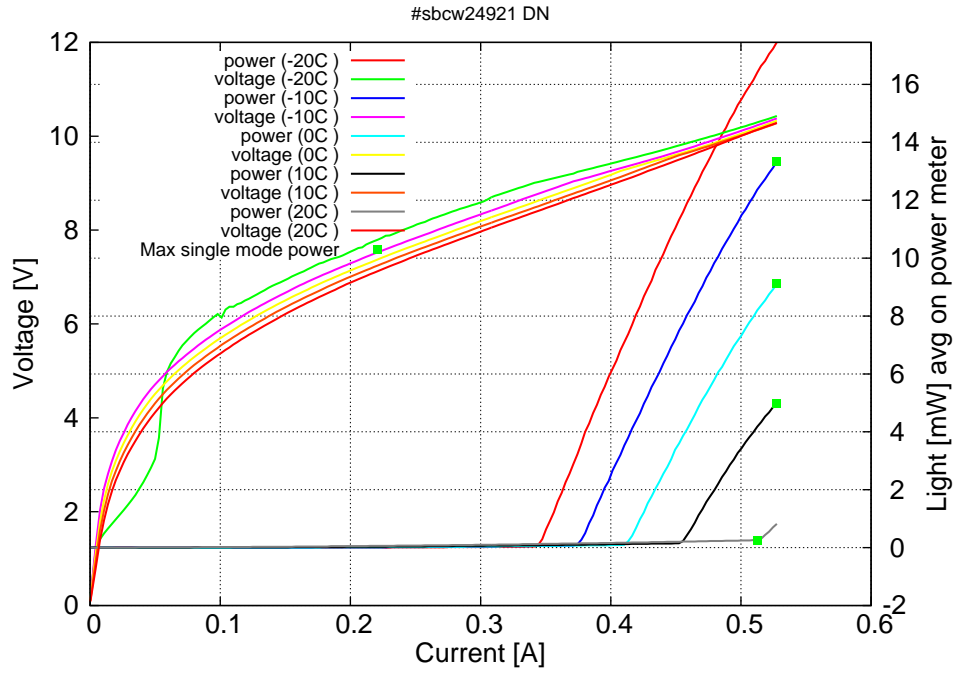


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.34A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.530A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

