

Datasheet for #sbcw24942 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.

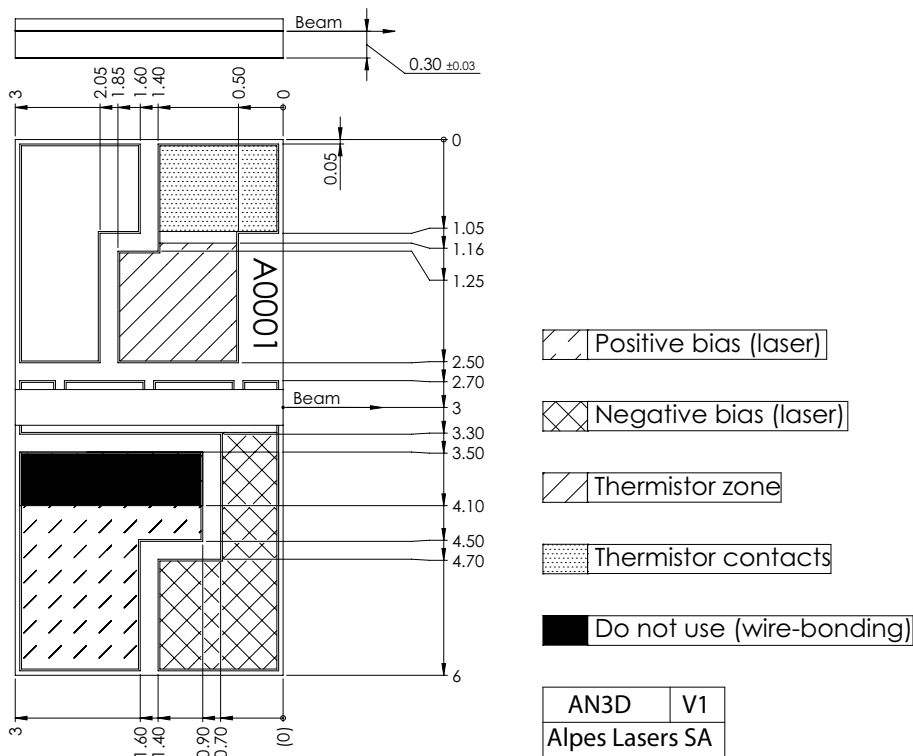


Figure 1: Mechanical and electrical interface for #sbcw24942 DN (please note that AlN submount numbering is P2796)

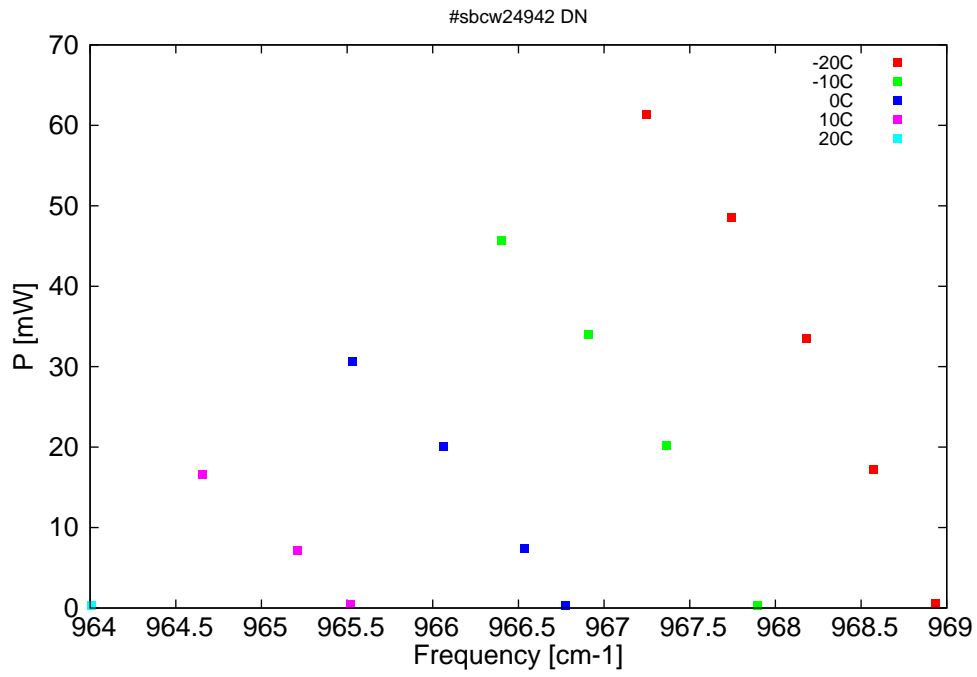


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

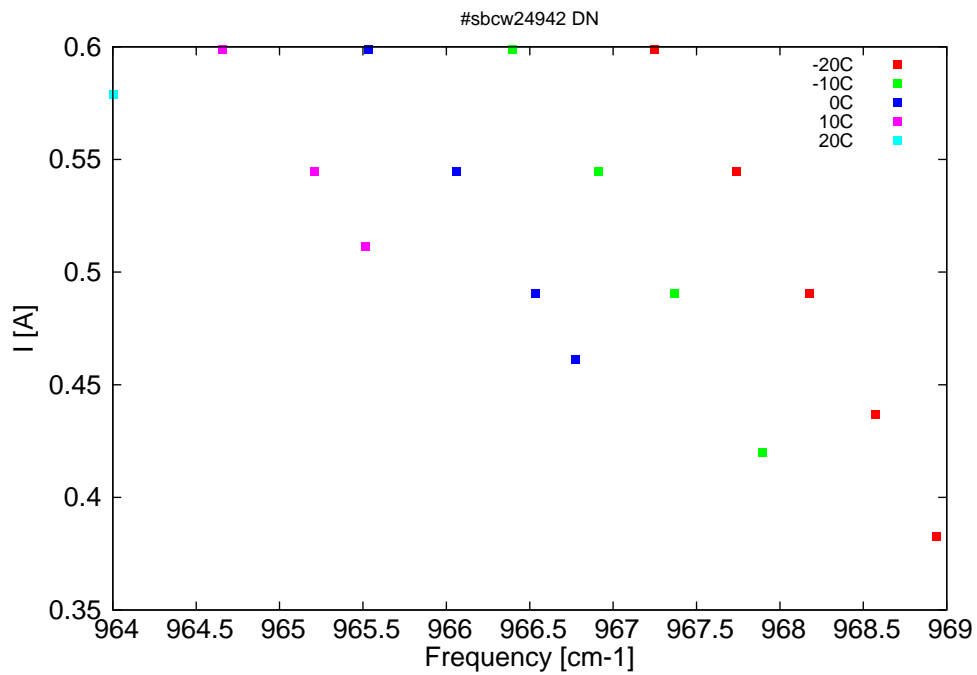


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10320.6	968.9	0.6	-20	8.27	0.383
10324.4	968.6	17.3	-20	8.56	0.437
10328.7	968.2	33.5	-20	8.86	0.491
10333.3	967.7	48.5	-20	9.18	0.545
10338.6	967.2	61.4	-20	9.5	0.599
10331.7	967.9	0.4	-10	8.44	0.42
10337.3	967.4	20.2	-10	8.82	0.491
10342.2	966.9	34	-10	9.14	0.545
10347.7	966.4	45.7	-10	9.48	0.599
10343.7	966.8	0.3	0	8.63	0.461
10346.2	966.5	7.4	0	8.79	0.491
10351.3	966.1	20.1	0	9.11	0.545
10357	965.5	30.7	0	9.46	0.599
10357.1	965.5	0.4	10	8.85	0.511
10360.5	965.2	7.1	10	9.05	0.545
10366.4	964.7	16.6	10	9.4	0.599
10373.4	964	0.3	20	9.24	0.579

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

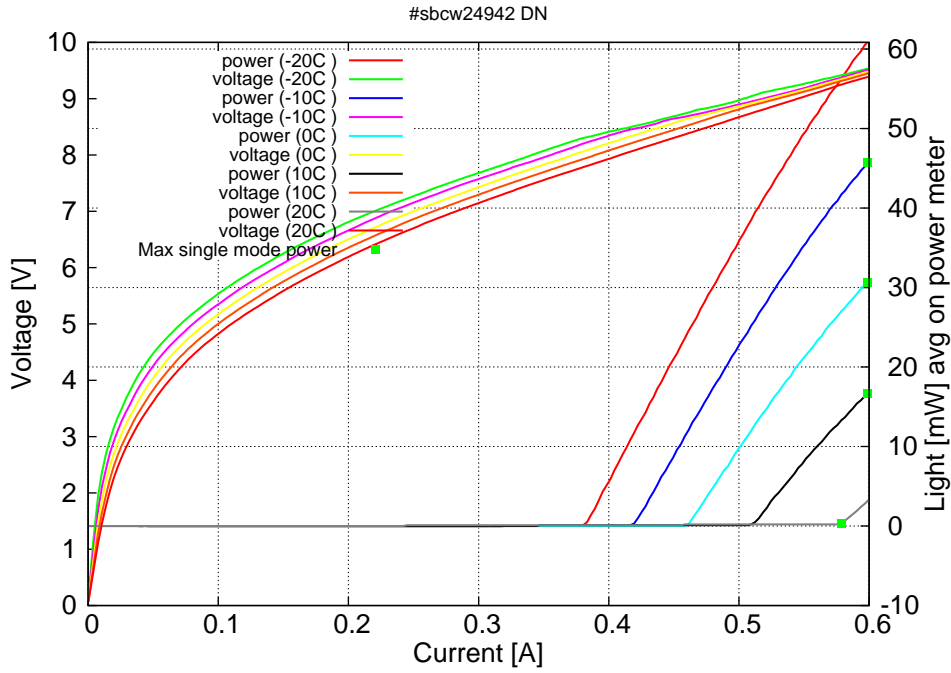


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.37A$ / $V_{th}=8.2V$ (2-wires measurements). Maximum operation current: 0.600A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

