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Datasheet for #sb25904 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at
`https://www.alpeslasers.ch/resources/#faq`

WARNING: Operating the laser with longer pulses, higher repetition rate, higher voltage or higher current than specified in this document may cause damage. It will result in loss of warranty, unless agreed upon with Alpes Lasers!

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.

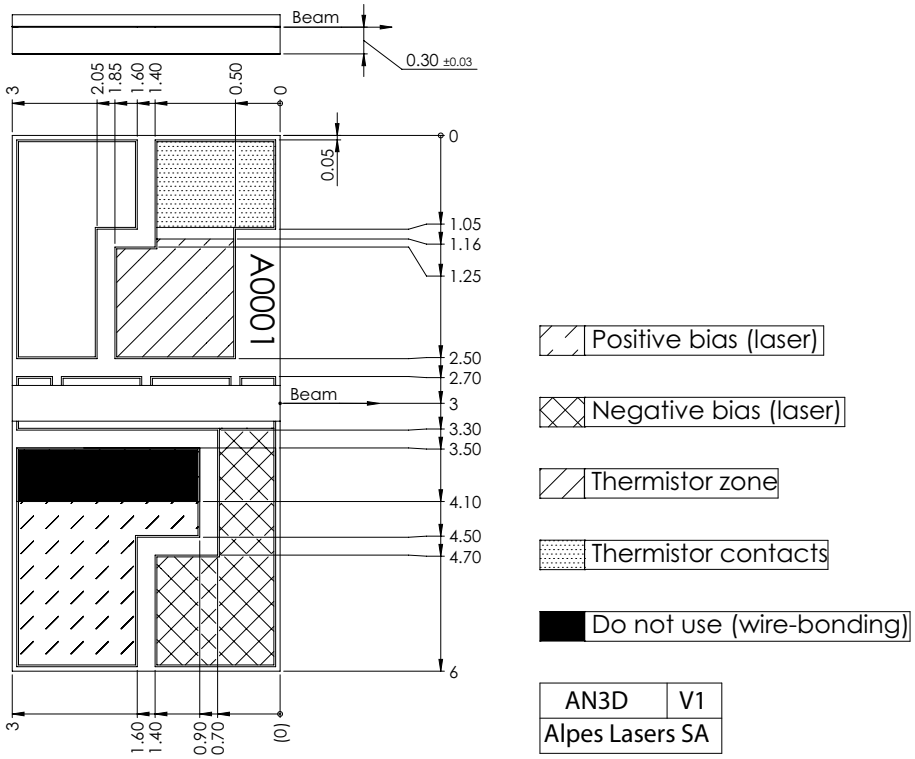

Figure 1: Mechanical and electrical interface for #sb25904 DN (please note that AlN submount numbering is P4142)

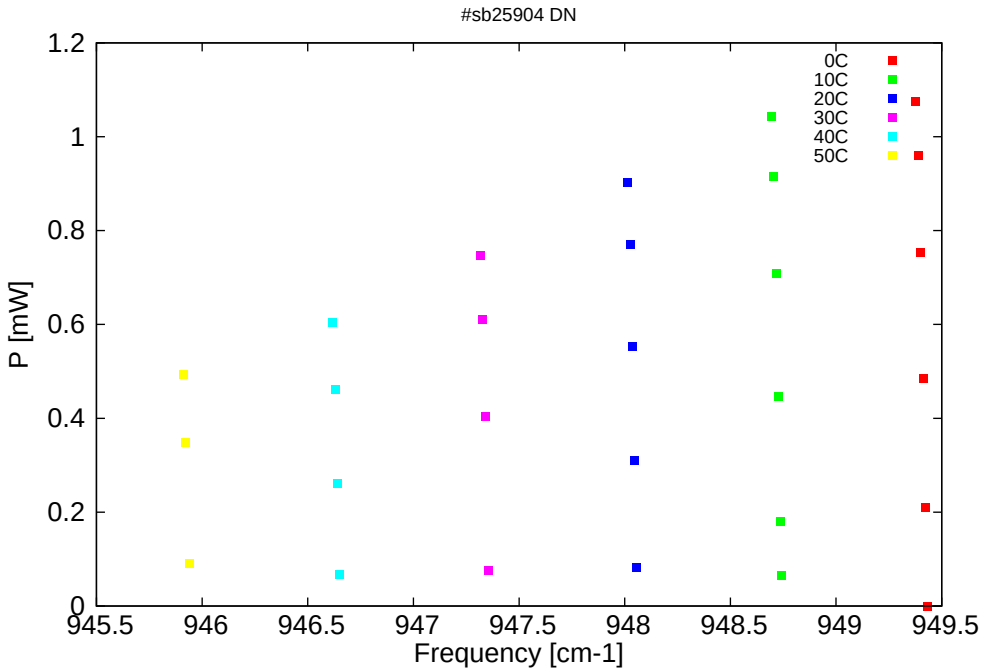

Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

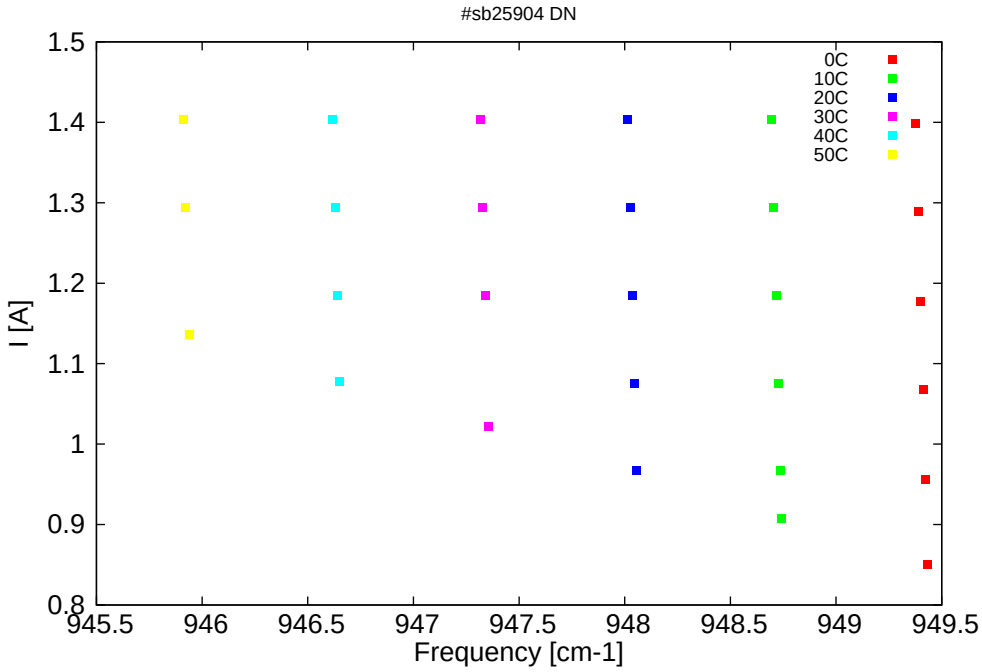

Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

λ[nm]	ν[cm^{-1}]	P[mW]	Temp[°C]	U$_{pulse}$[V]	I$_{pulse}$[A]
10532.6	949.4	0	0	9.23	0.851
10532.7	949.4	0.2	0	9.57	0.956
10532.8	949.4	0.5	0	9.94	1.068
10533	949.4	0.8	0	10.37	1.178
10533.1	949.4	1	0	10.88	1.289
10533.2	949.4	1.1	0	11.48	1.399
10540.3	948.7	0.1	10	9.38	0.907
10540.3	948.7	0.2	10	9.57	0.967
10540.4	948.7	0.4	10	9.94	1.076
10540.5	948.7	0.7	10	10.37	1.185
10540.7	948.7	0.9	10	10.86	1.294
10540.8	948.7	1	10	11.45	1.403
10547.9	948.1	0.1	20	9.56	0.967
10548	948	0.3	20	9.93	1.076
10548.1	948	0.6	20	10.35	1.185
10548.2	948	0.8	20	10.85	1.294
10548.4	948	0.9	20	11.41	1.403
10555.7	947.4	0.1	30	9.77	1.022
10555.9	947.3	0.4	30	10.37	1.185
10556	947.3	0.6	30	10.86	1.294
10556.1	947.3	0.7	30	11.41	1.403
10563.5	946.7	0.1	40	9.93	1.078
10563.7	946.6	0.3	40	10.36	1.185
10563.8	946.6	0.5	40	10.84	1.294
10563.9	946.6	0.6	40	11.38	1.403
10571.5	945.9	0.1	50	10.2	1.136
10571.7	945.9	0.3	50	10.89	1.294
10571.8	945.9	0.5	50	11.43	1.403

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

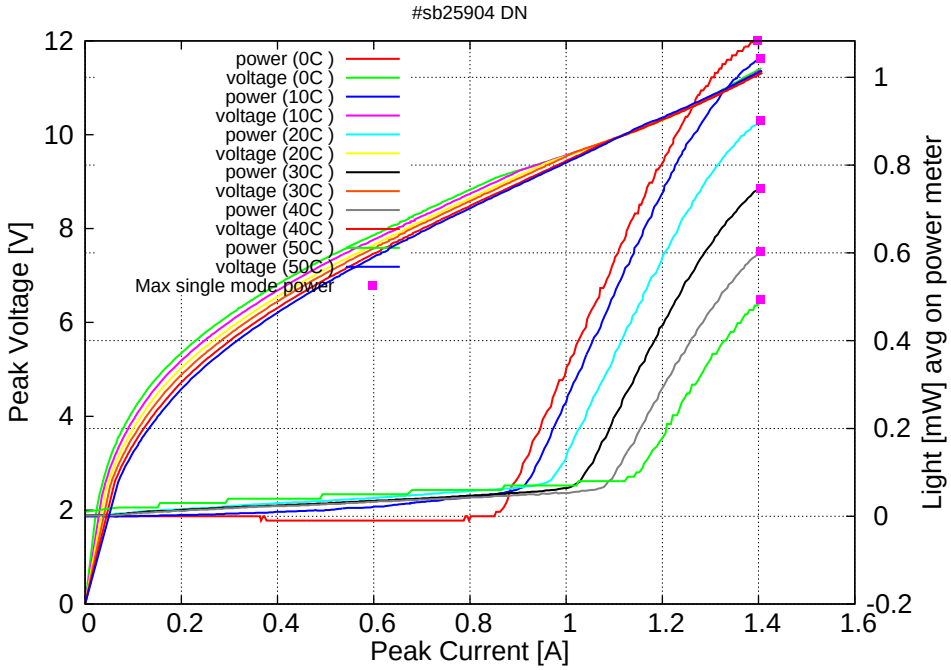

Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (500ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

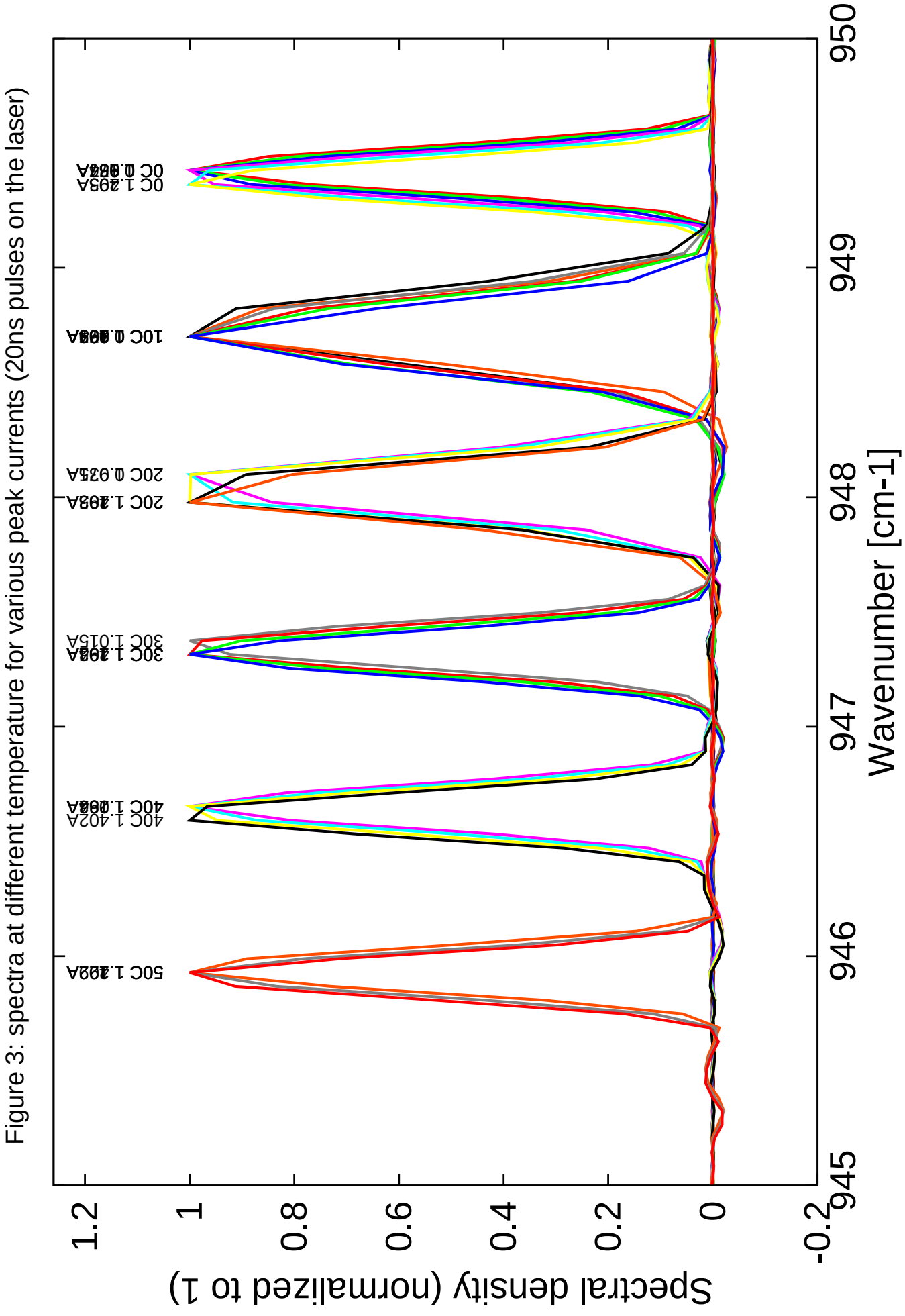

Figure 3: spectra at different temperature for various peak currents (20ns pulses on the laser)