

Datasheet for #sb5712 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 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 on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive bias on the base contact (= submount, corresponding to the label "base" on the LLH).

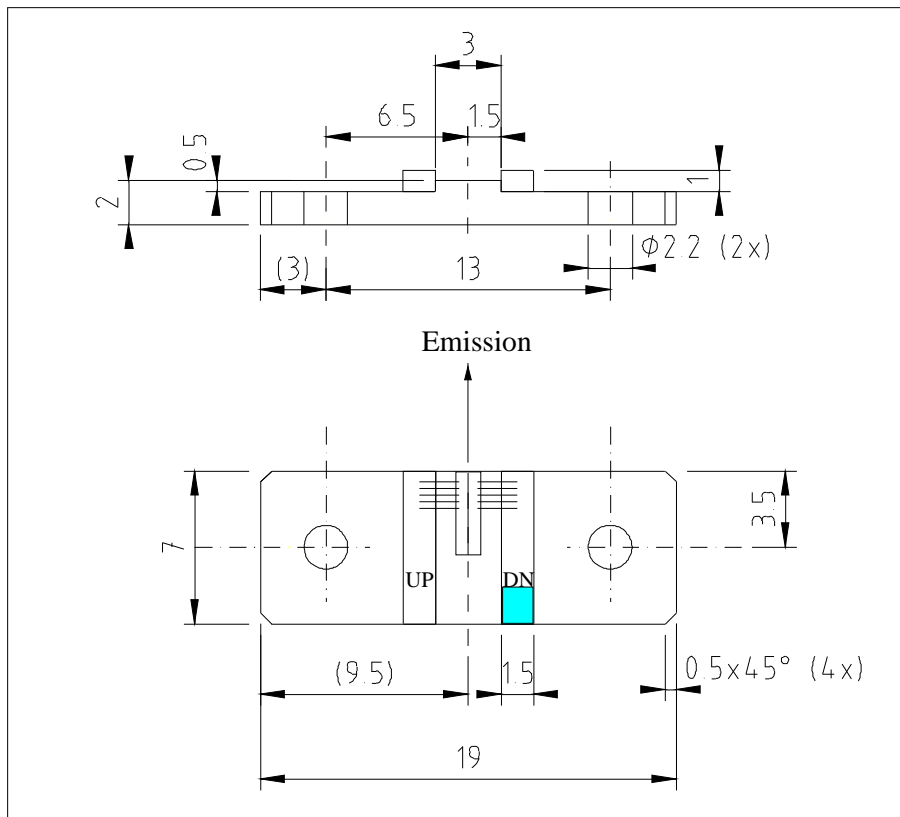


Figure 1: Mechanical and electrical interface for #sb5712 DN (please note that the laser is connected to the DN pad drawn in blue)

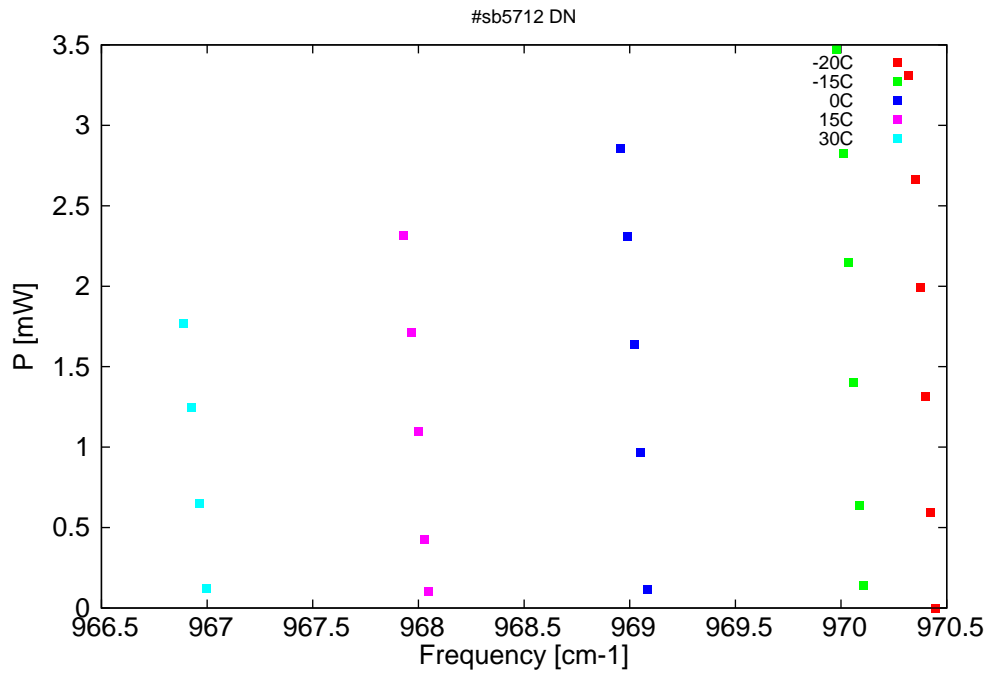


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

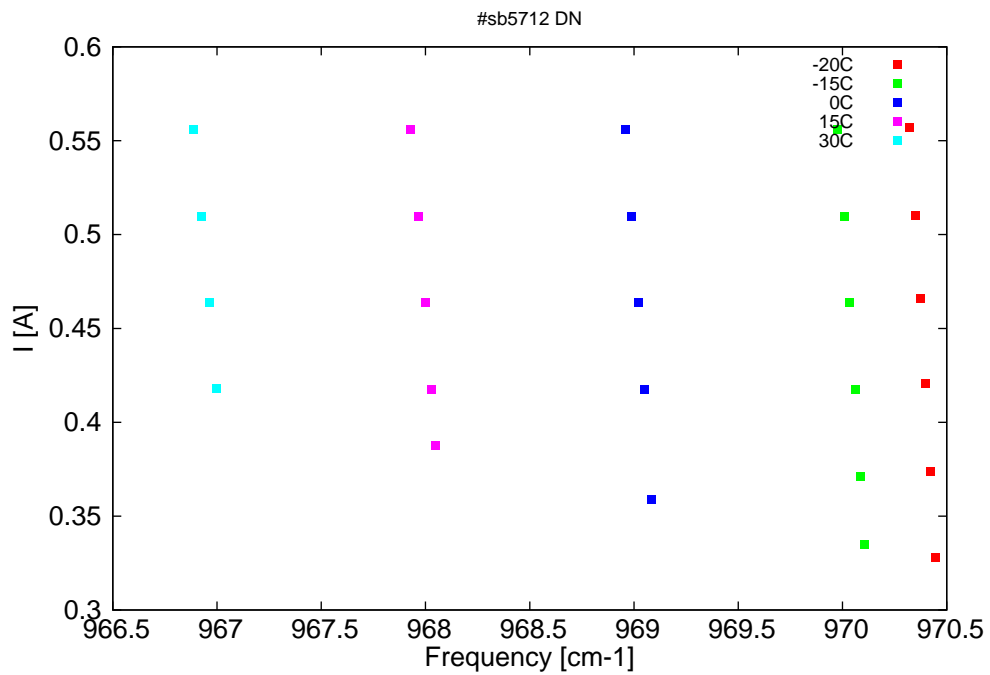


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{pulse}$ [V]	$I_{pulse}$ [A]
10304.5	970.4	0	-20	9.8	0.33
10304.8	970.4	0.6	-20	10	0.37
10305	970.4	1.3	-20	10.3	0.42
10305.3	970.4	2	-20	10.5	0.47
10305.5	970.4	2.7	-20	10.8	0.51
10305.9	970.3	3.3	-20	11.2	0.56
10308.2	970.1	0.1	-15	9.8	0.33
10308.4	970.1	0.6	-15	10	0.37
10308.6	970.1	1.4	-15	10.3	0.42
10308.9	970	2.1	-15	10.5	0.46
10309.2	970	2.8	-15	10.8	0.51
10309.5	970	3.5	-15	11.2	0.56
10319	969.1	0.1	0	9.9	0.36
10319.4	969.1	1	0	10.2	0.42
10319.7	969	1.6	0	10.5	0.46
10320	969	2.3	0	10.8	0.51
10320.4	969	2.9	0	11.1	0.56
10330.1	968	0.1	15	10	0.39
10330.3	968	0.4	15	10.2	0.42
10330.6	968	1.1	15	10.5	0.46
10330.9	968	1.7	15	10.8	0.51
10331.3	967.9	2.3	15	11.1	0.56
10341.3	967	0.1	30	10.2	0.42
10341.6	967	0.7	30	10.5	0.46
10342	966.9	1.2	30	10.8	0.51
10342.5	966.9	1.8	30	11.1	0.56

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

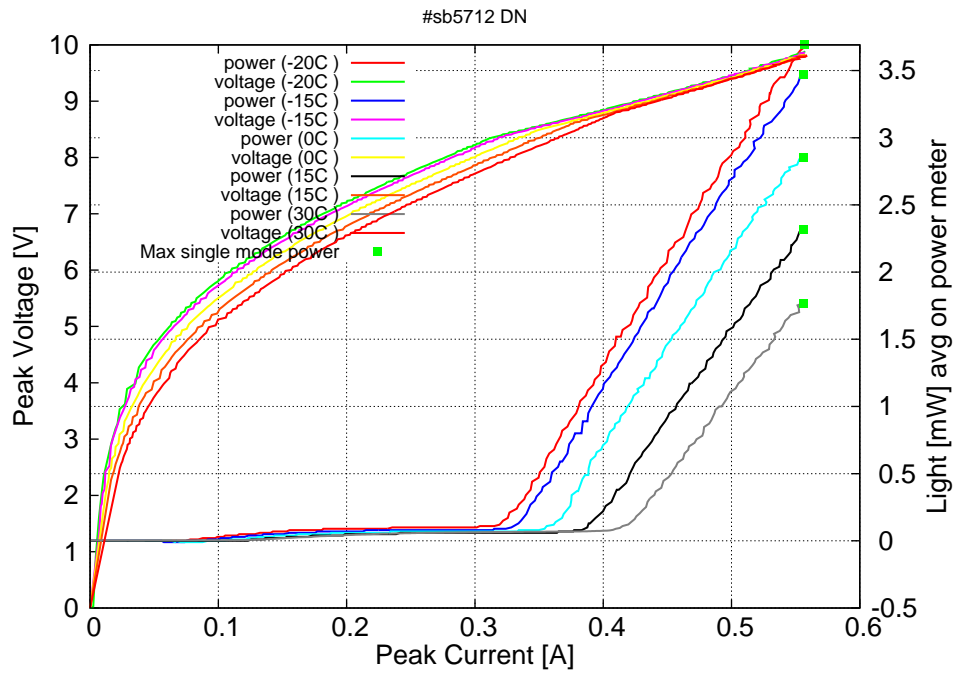


Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (500ns pulses on the laser) (the solid squares indicate the maximum singlemode emitted power)

Figure 3: spectra at different temperatures for various peak currents

