

Datasheet for #sb2000 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).

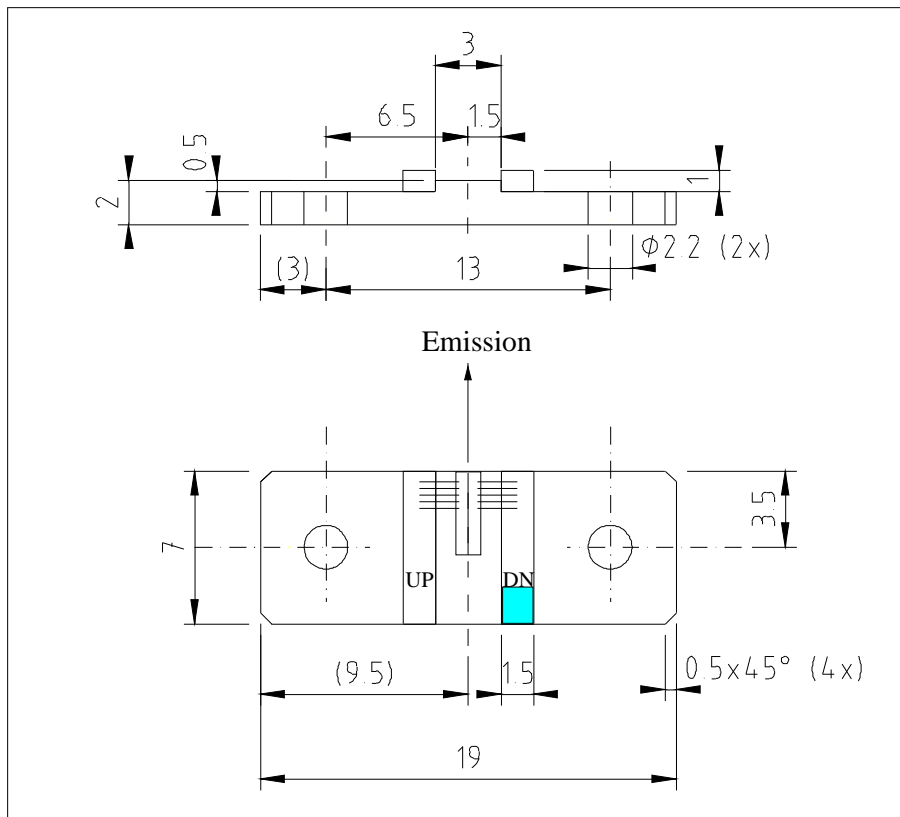


Figure 1: Mechanical and electrical interface for #sb2000 DN (please note that the laser is connected to the DN pad drawn in blue)

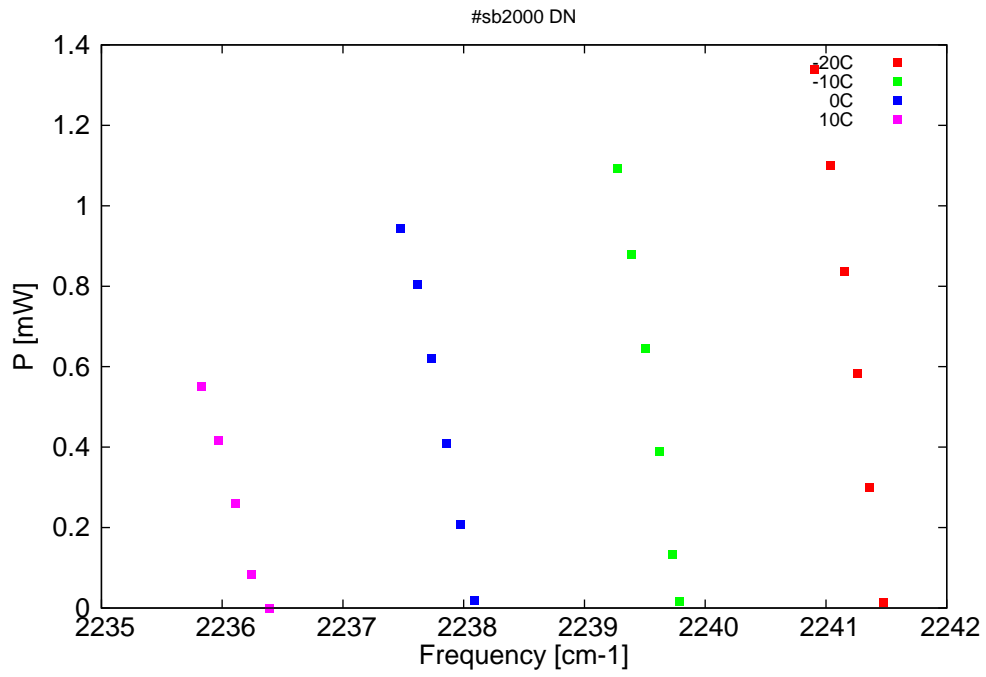


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

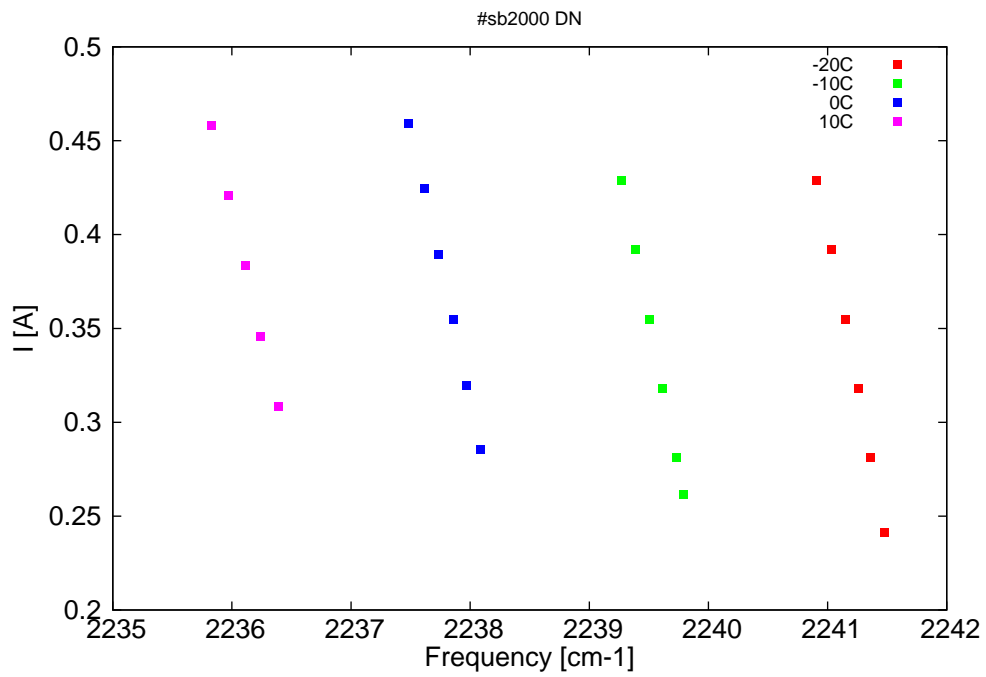


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{pulse} [V]	I_{pulse} [A]
4461.3	2241.5	0	-20	9.42	0.241
4461.6	2241.4	0.3	-20	9.74	0.281
4461.8	2241.3	0.6	-20	10	0.318
4462	2241.2	0.8	-20	10.27	0.355
4462.2	2241	1.1	-20	10.56	0.392
4462.5	2240.9	1.3	-20	10.87	0.429
4464.7	2239.8	0	-10	9.53	0.262
4464.8	2239.7	0.1	-10	9.68	0.281
4465	2239.6	0.4	-10	9.96	0.318
4465.3	2239.5	0.6	-10	10.24	0.355
4465.5	2239.4	0.9	-10	10.51	0.392
4465.7	2239.3	1.1	-10	10.8	0.429
4468.1	2238.1	0	0	9.68	0.286
4468.3	2238	0.2	0	9.95	0.32
4468.6	2237.9	0.4	0	10.21	0.355
4468.8	2237.7	0.6	0	10.49	0.389
4469	2237.6	0.8	0	10.77	0.424
4469.3	2237.5	0.9	0	11.04	0.459
4471.5	2236.4	0	10	9.8	0.308
4471.8	2236.2	0.1	10	10.11	0.346
4472	2236.1	0.3	10	10.39	0.383
4472.3	2236	0.4	10	10.68	0.421
4472.6	2235.8	0.6	10	11	0.458

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

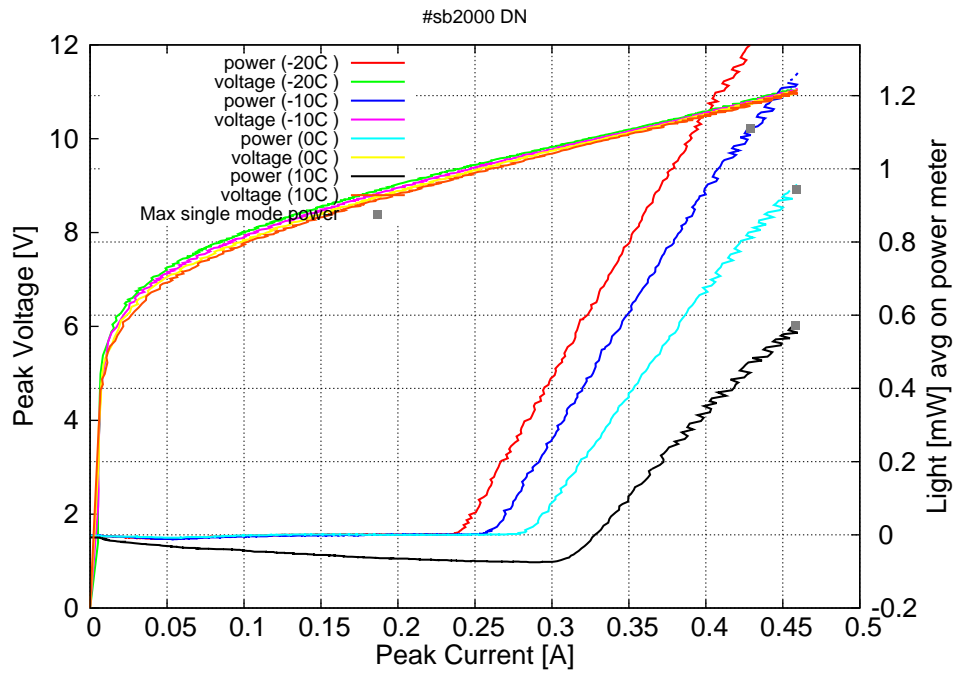


Figure 4: Peak voltage and average power vs peak current at 5% duty-cycle (500ns pulses on the laser) / $I_{max} = 0.43A$ between -20C and -10C, $I_{max} = 0.46A$ between 0C and 10C (the solid squares indicate the maximum singlemode emitted power)

Figure 3: spectra at different temperatures for various peak currents (40ns pulses on the laser)

