

Datasheet for #sb2027 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).

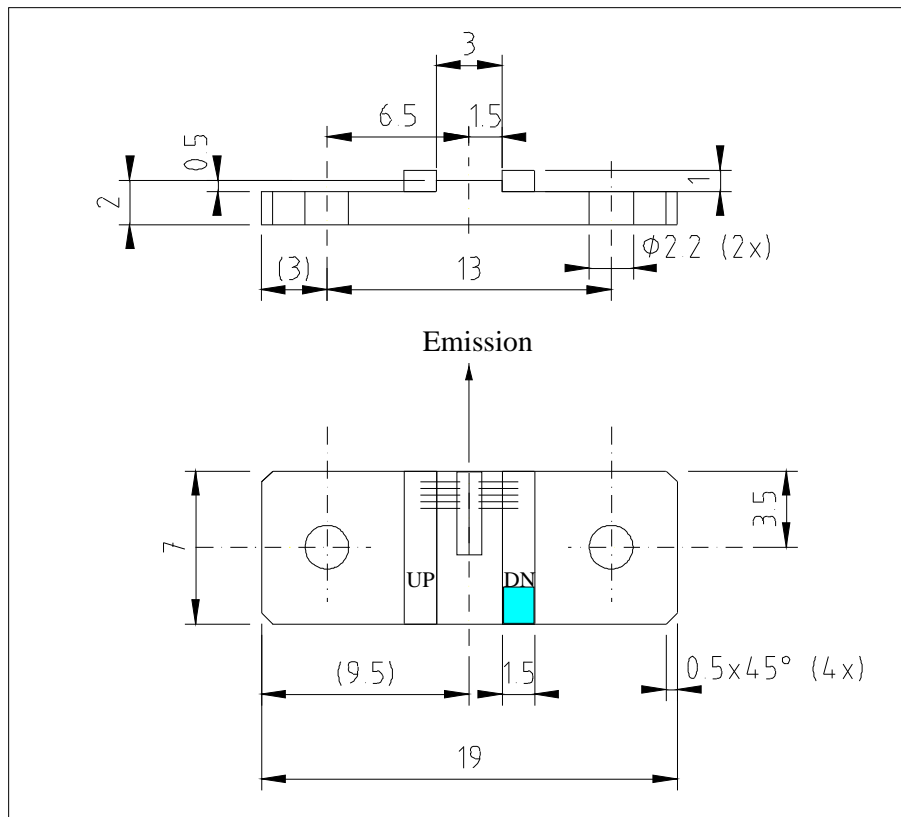


Figure 1: Mechanical and electrical interface for #sb2027 DN (please note that the laser is connected to the DN pad drawn in blue)

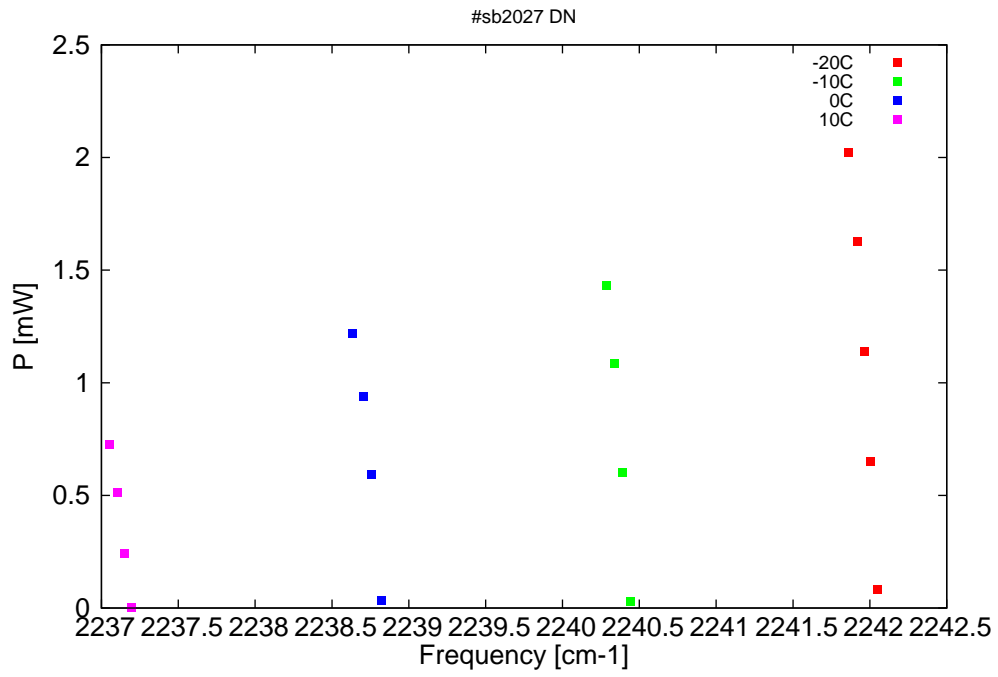


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

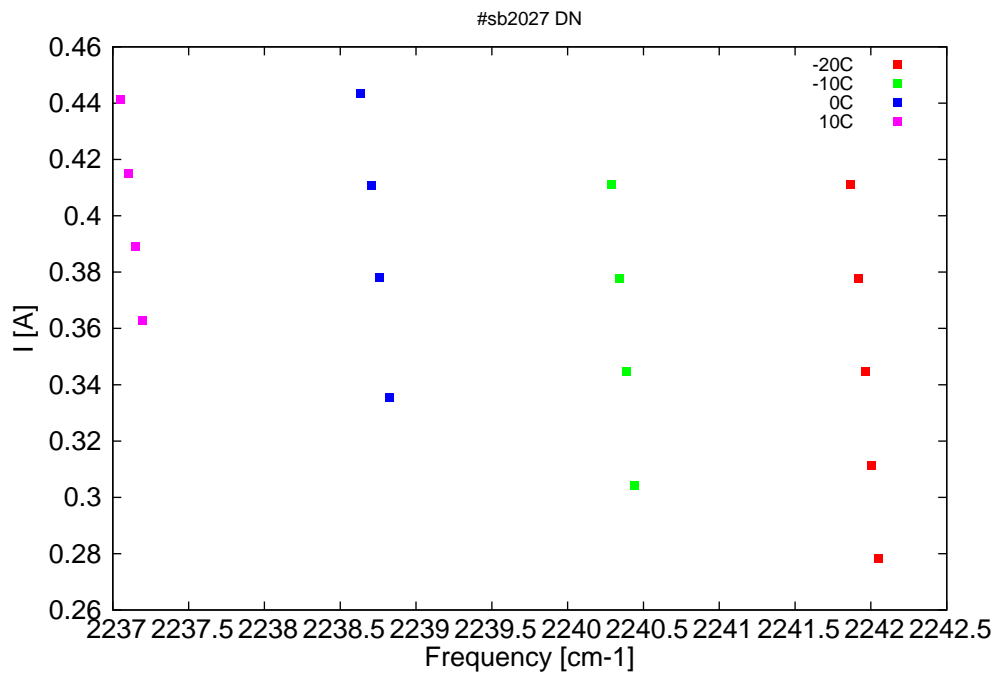


Figure 3: Peak current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{pulse} [V]	I_{pulse} [A]
4460.2	2242	0.1	-20	9.6	0.278
4460.3	2242	0.7	-20	9.86	0.311
4460.4	2242	1.1	-20	10.08	0.345
4460.5	2241.9	1.6	-20	10.33	0.378
4460.6	2241.9	2	-20	10.59	0.411
4463.4	2240.4	0	-10	9.78	0.304
4463.5	2240.4	0.6	-10	10.07	0.345
4463.6	2240.3	1.1	-10	10.34	0.378
4463.7	2240.3	1.4	-10	10.57	0.411
4466.6	2238.8	0	0	9.97	0.335
4466.8	2238.8	0.6	0	10.31	0.378
4466.9	2238.7	0.9	0	10.55	0.411
4467	2238.6	1.2	0	10.81	0.444
4469.9	2237.2	0	10	10.15	0.363
4470	2237.2	0.2	10	10.37	0.389
4470.1	2237.1	0.5	10	10.57	0.415
4470.2	2237.1	0.7	10	10.78	0.441

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

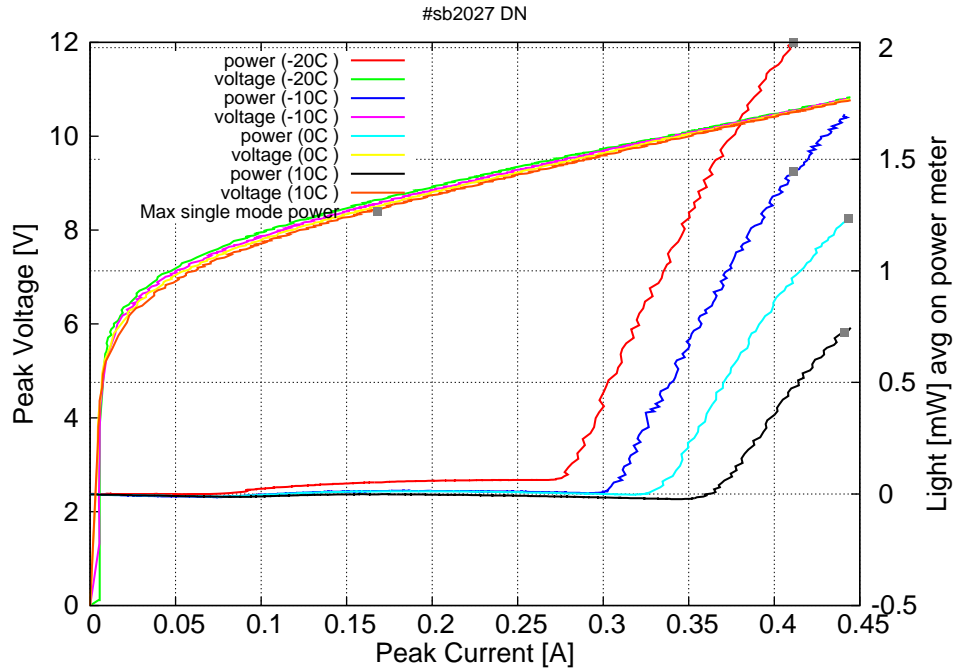


Figure 4: Peak voltage and average power vs peak current at 2% duty-cycle (500ns pulses on the laser) / $I_{max} = 0.41A$ between -20C and -10C, $I_{max} = 0.445A$ between 0C and 10C (the solid squares indicate the maximum singlemode emitted power)

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

