

Datasheet for #sbcw27083 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 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.

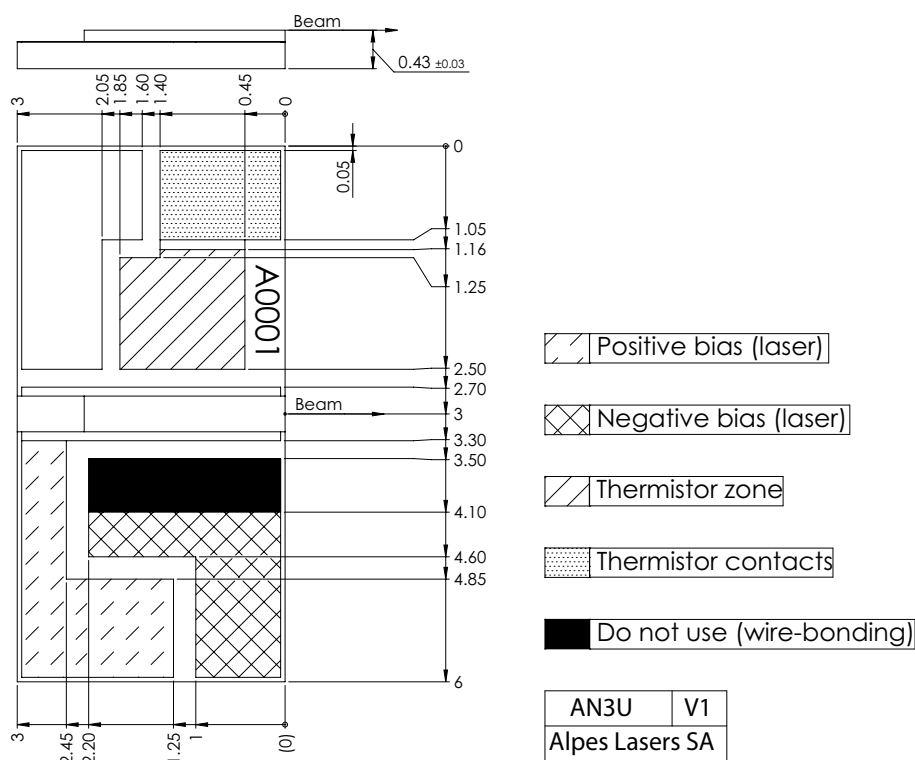


Figure 1: Mechanical and electrical interface for #sbcw27083 DN (please note that AlN submount numbering is A0X6F)

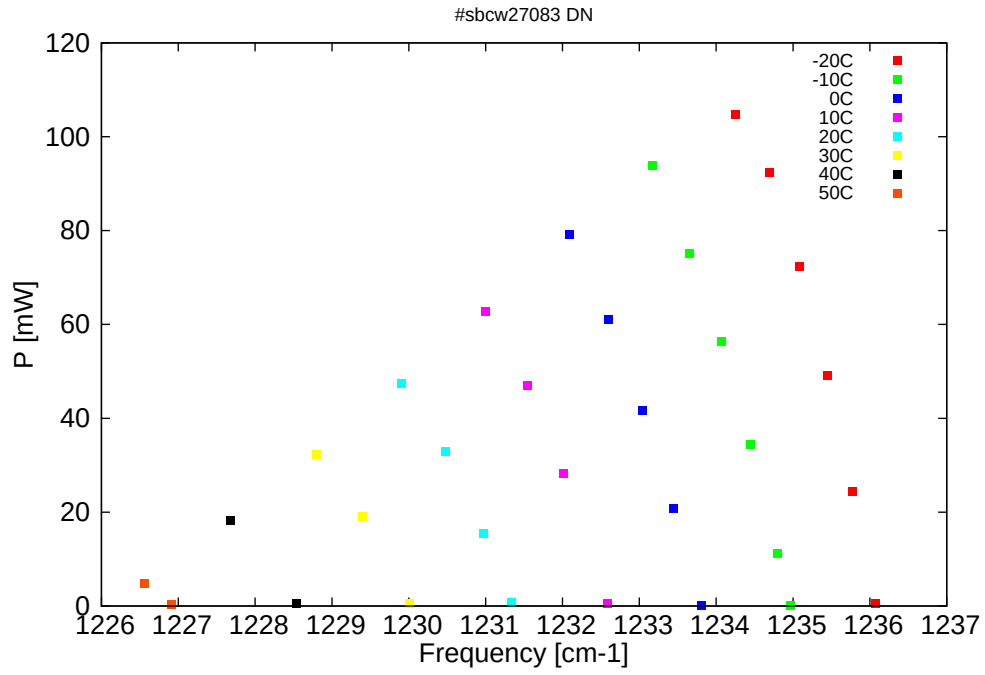


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

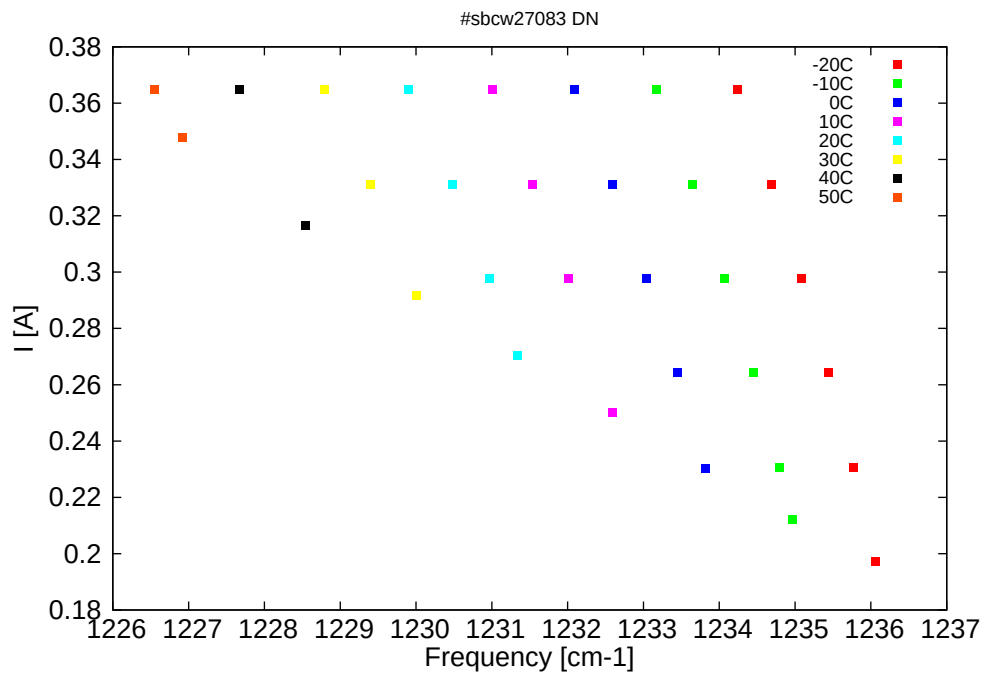


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8090.2	1236.1	0.5	-20	6.88	0.197
8092.1	1235.8	24.4	-20	7.15	0.231
8094.2	1235.4	49.1	-20	7.42	0.264
8096.6	1235.1	72.4	-20	7.69	0.298
8099.2	1234.7	92.4	-20	7.98	0.331
8102.1	1234.2	104.8	-20	8.27	0.365
8097.4	1235	0.1	-10	6.98	0.212
8098.5	1234.8	11.2	-10	7.13	0.231
8100.8	1234.4	34.4	-10	7.41	0.264
8103.3	1234.1	56.3	-10	7.68	0.298
8106	1233.6	75.1	-10	7.98	0.331
8109.2	1233.2	94	-10	8.3	0.365
8105	1233.8	0.2	0	7.11	0.23
8107.4	1233.4	20.7	0	7.4	0.264
8110	1233	41.6	0	7.68	0.298
8112.9	1232.6	61	0	7.99	0.331
8116.3	1232.1	79.1	0	8.32	0.365
8113	1232.6	0.5	10	7.27	0.25
8116.8	1232	28.3	10	7.7	0.298
8119.9	1231.5	47.1	10	8.01	0.331
8123.5	1231	62.8	10	8.35	0.365
8121.2	1231.3	0.8	20	7.46	0.271
8123.7	1231	15.5	20	7.71	0.298
8126.9	1230.5	32.8	20	8.03	0.331
8130.7	1229.9	47.4	20	8.38	0.365
8130	1230	0.6	30	7.65	0.292
8134.1	1229.4	19.1	30	8.05	0.331
8138.1	1228.8	32.3	30	8.4	0.365
8139.7	1228.5	0.6	40	7.9	0.317
8145.5	1227.7	18.3	40	8.42	0.365
8150.5	1226.9	0.4	50	8.26	0.348
8152.9	1226.6	4.9	50	8.45	0.365

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

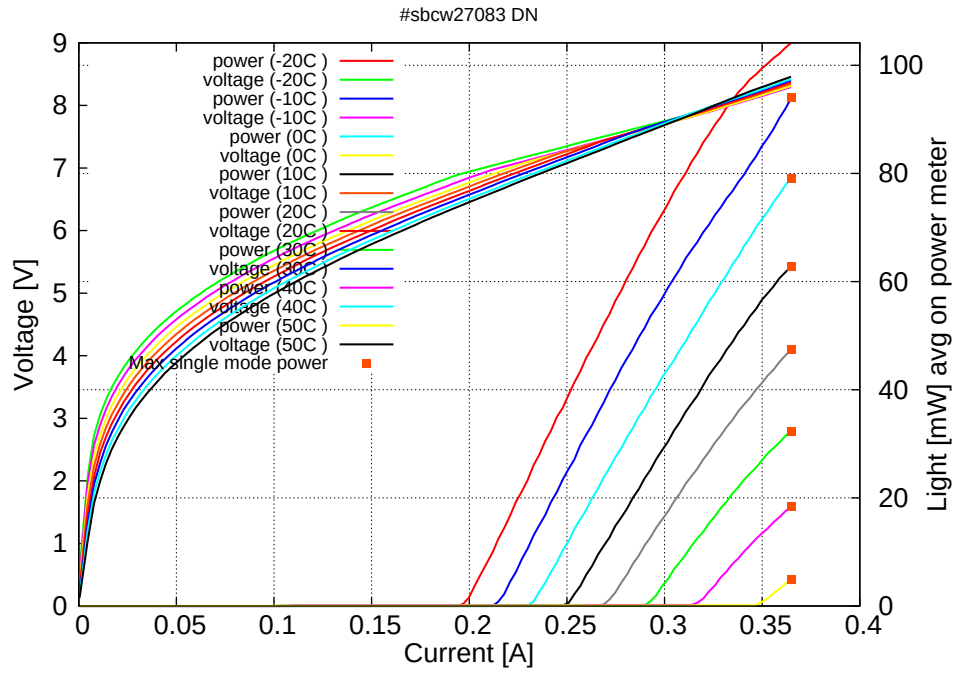


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=6.9V$ (2-wires measurements). Maximum operation current: 0.365A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

