

Datasheet for #sbcw27048 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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.

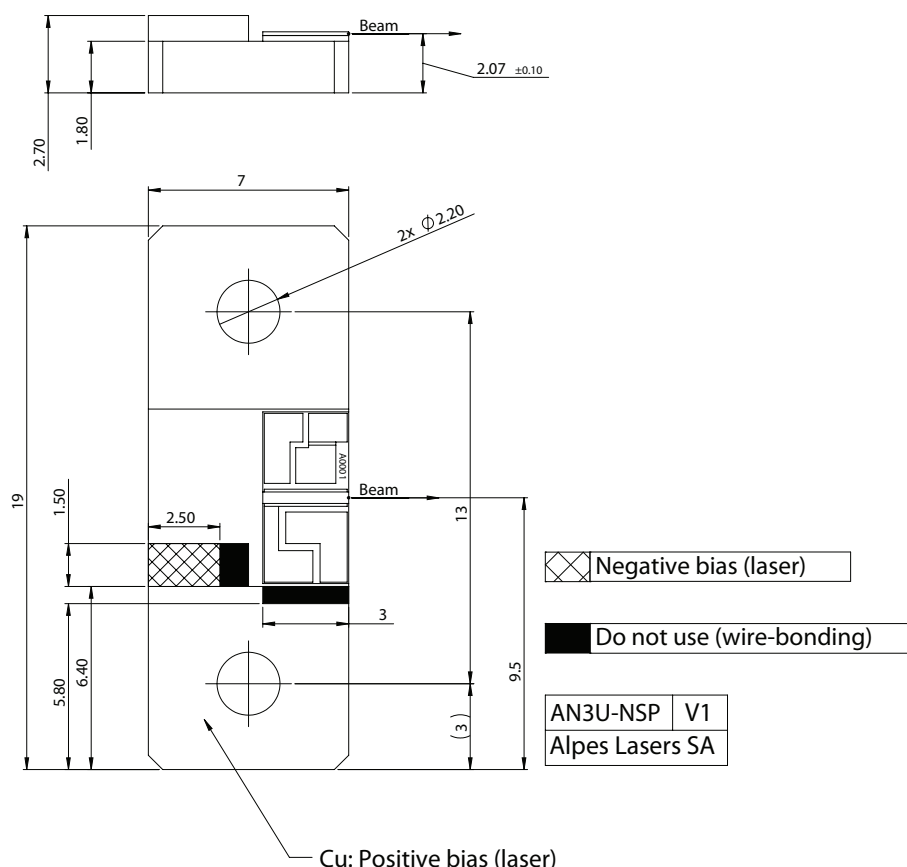


Figure 1: Mechanical and electrical interface for #sbcw27048 DN

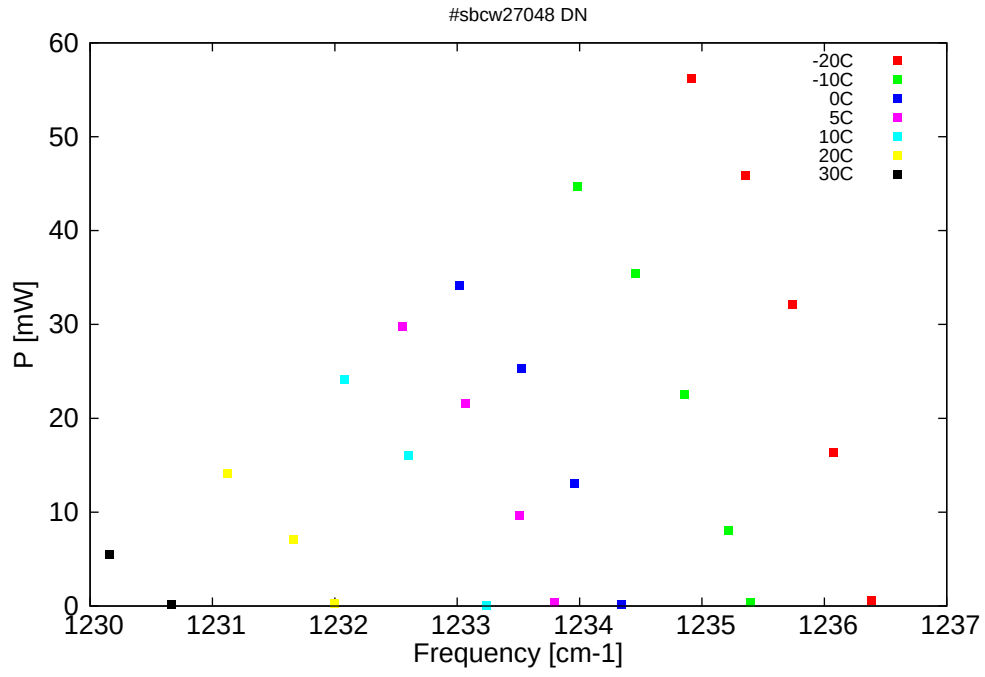


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

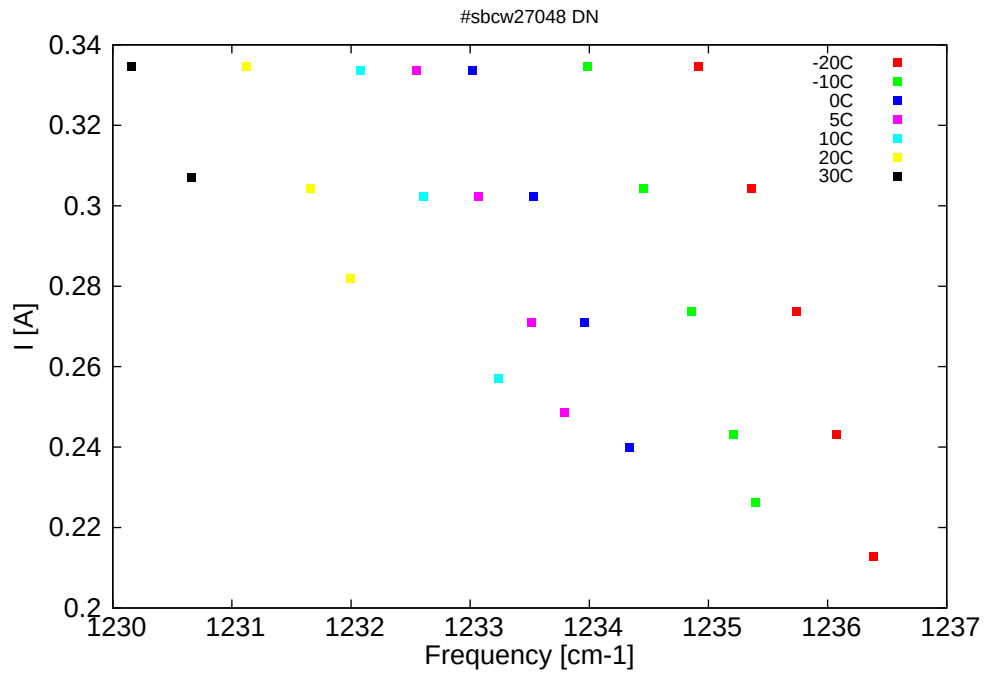


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8088.1	1236.4	0.6	-20	6.69	0.213
8090.1	1236.1	16.4	-20	6.99	0.243
8092.3	1235.7	32.1	-20	7.28	0.274
8094.8	1235.4	45.9	-20	7.61	0.304
8097.7	1234.9	56.2	-20	7.97	0.335
8094.6	1235.4	0.4	-10	6.81	0.226
8095.8	1235.2	8	-10	6.98	0.243
8098.1	1234.9	22.6	-10	7.28	0.274
8100.7	1234.5	35.5	-10	7.62	0.304
8103.8	1234	44.7	-10	7.99	0.335
8101.5	1234.3	0.1	0	6.96	0.24
8104	1234	13	0	7.28	0.271
8106.8	1233.5	25.3	0	7.64	0.302
8110.2	1233	34.2	0	8.03	0.334
8105.1	1233.8	0.4	5	7.05	0.249
8106.9	1233.5	9.6	5	7.28	0.271
8109.9	1233.1	21.6	5	7.64	0.302
8113.3	1232.6	29.8	5	8.04	0.334
8108.7	1233.2	0	10	7.13	0.257
8112.9	1232.6	16	10	7.64	0.302
8116.4	1232.1	24.1	10	8.04	0.334
8116.9	1232	0.3	20	7.38	0.282
8119.1	1231.7	7.1	20	7.64	0.304
8122.6	1231.1	14.1	20	8.03	0.335
8125.7	1230.7	0.2	30	7.67	0.307
8129	1230.2	5.5	30	8.03	0.335

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

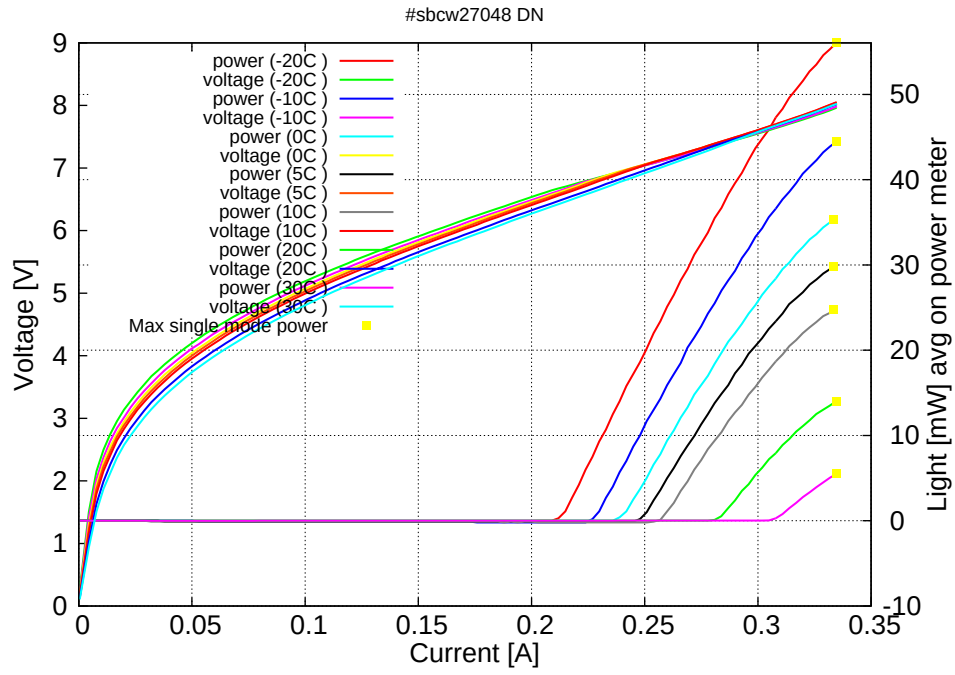


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.21A$ / $V_{th}=6.6V$ (2-wires measurements). Maximum operation current: 0.335A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

