

Datasheet for #sbcw27231 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.

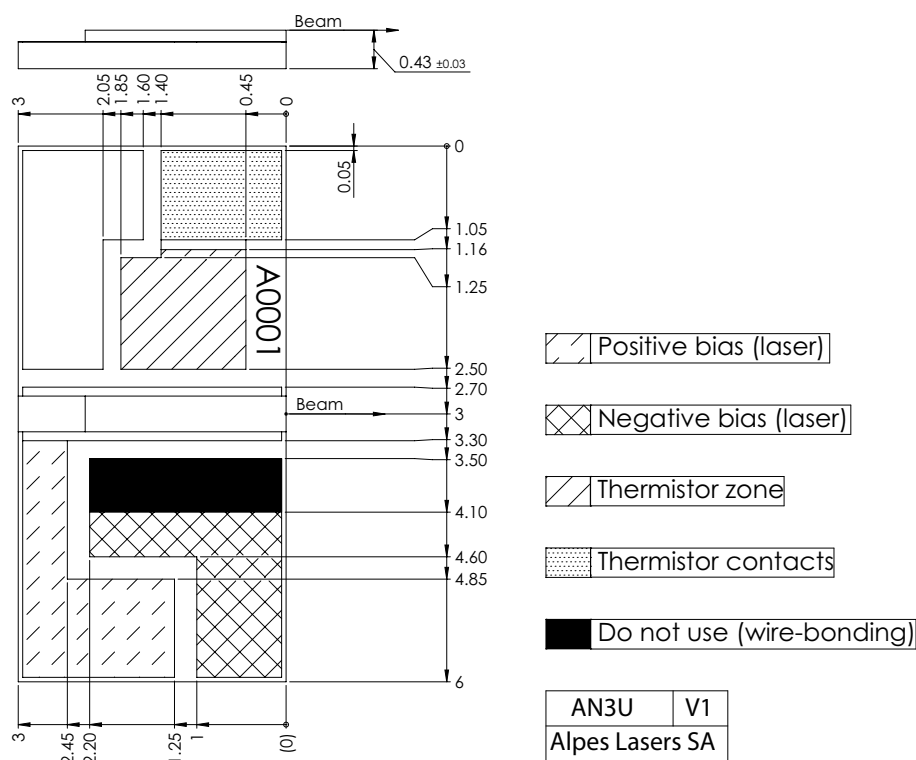


Figure 1: Mechanical and electrical interface for #sbcw27231 DN (please note that AlN submount numbering is A0UL0)

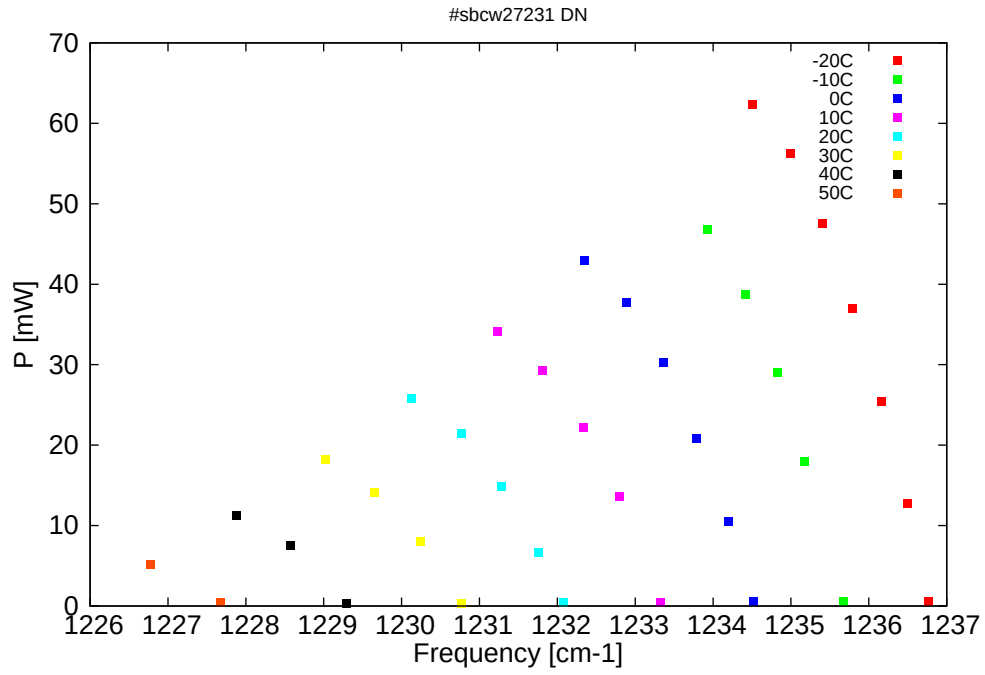


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

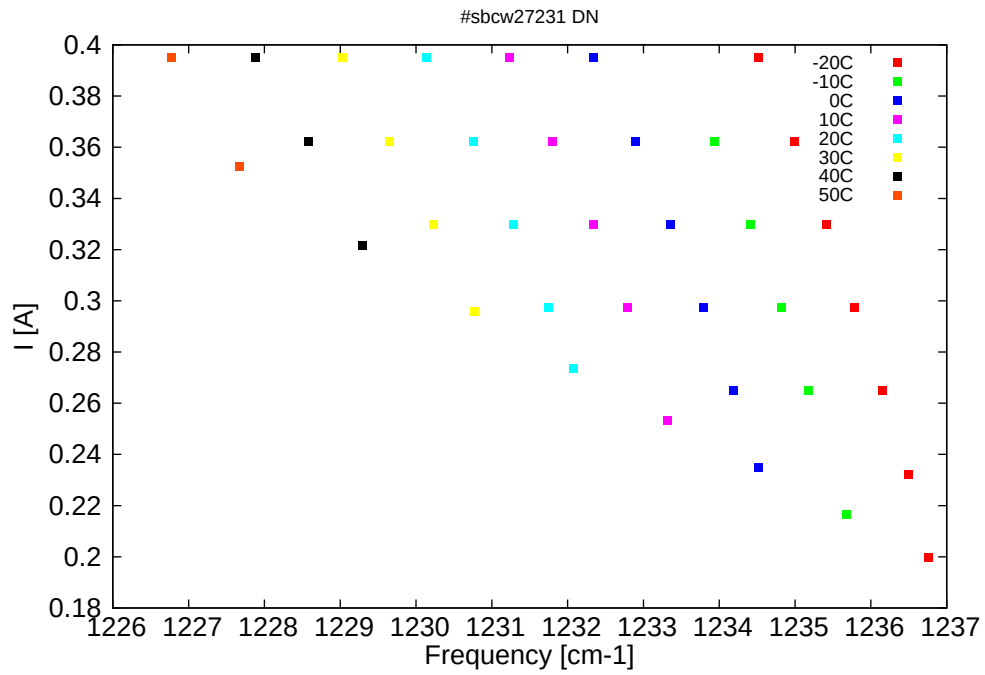


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8085.6	1236.8	0.5	-20	6.94	0.2
8087.4	1236.5	12.8	-20	7.22	0.232
8089.6	1236.2	25.4	-20	7.5	0.265
8092	1235.8	37	-20	7.77	0.297
8094.5	1235.4	47.6	-20	8.05	0.33
8097.2	1235	56.2	-20	8.35	0.362
8100.4	1234.5	62.3	-20	8.67	0.395
8092.7	1235.7	0.6	-10	7.09	0.217
8096	1235.2	17.9	-10	7.51	0.265
8098.3	1234.8	29	-10	7.79	0.297
8101	1234.4	38.8	-10	8.08	0.33
8104.2	1233.9	46.8	-10	8.39	0.362
8100.3	1234.5	0.5	0	7.24	0.235
8102.5	1234.2	10.5	0	7.51	0.265
8105.1	1233.8	20.8	0	7.8	0.297
8107.9	1233.4	30.2	0	8.1	0.33
8111	1232.9	37.7	0	8.41	0.362
8114.6	1232.3	42.9	0	8.74	0.395
8108.2	1233.3	0.5	10	7.38	0.253
8111.7	1232.8	13.6	10	7.79	0.297
8114.6	1232.3	22.2	10	8.1	0.33
8118.2	1231.8	29.3	10	8.42	0.362
8121.9	1231.2	34.2	10	8.77	0.395
8116.4	1232.1	0.4	20	7.58	0.274
8118.5	1231.8	6.7	20	7.81	0.297
8121.6	1231.3	14.9	20	8.15	0.33
8125	1230.8	21.4	20	8.45	0.362
8129.2	1230.1	25.8	20	8.81	0.395
8125	1230.8	0.4	30	7.74	0.296
8128.5	1230.2	8	30	8.1	0.33
8132.4	1229.7	14.2	30	8.44	0.362
8136.5	1229	18.2	30	8.79	0.395
8134.8	1229.3	0.3	40	7.97	0.322
8139.5	1228.6	7.5	40	8.44	0.362
8144.1	1227.9	11.2	40	8.78	0.395
8145.5	1227.7	0.4	50	8.33	0.353
8151.5	1226.8	5.1	50	8.81	0.395

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

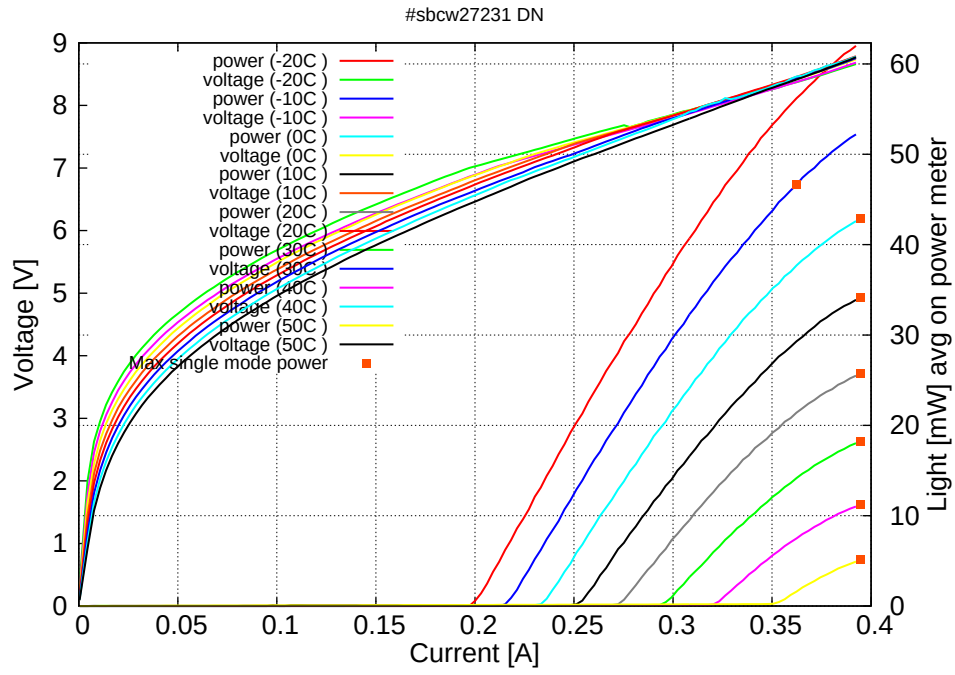


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=7.0V$ (2-wires measurements). Maximum operation current: 0.395A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

