

Datasheet for #sbcw27230 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.

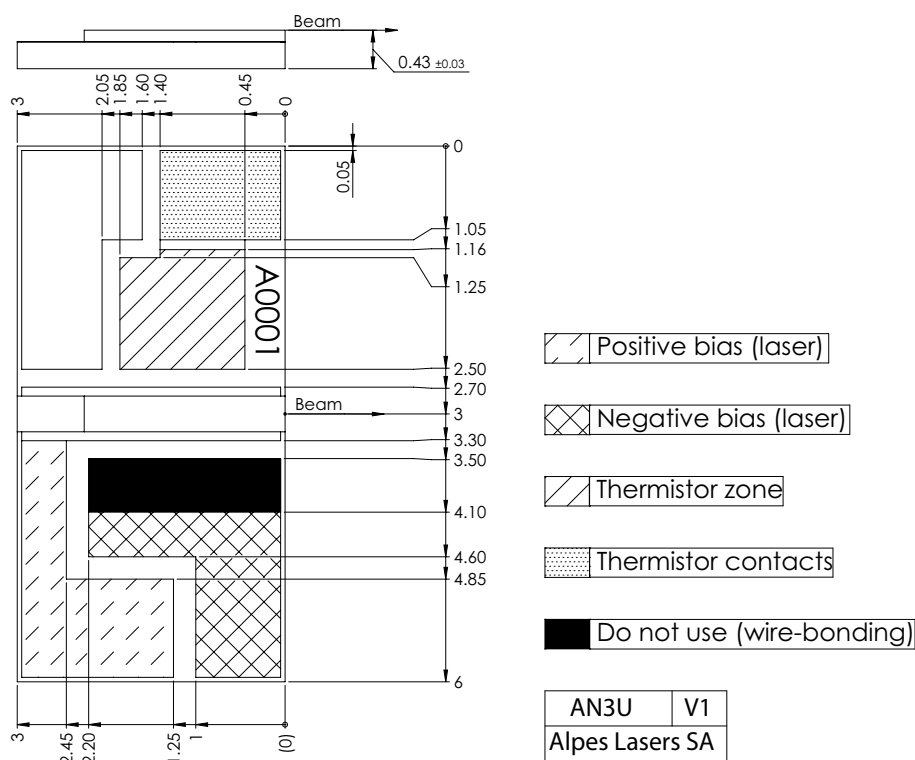


Figure 1: Mechanical and electrical interface for #sbcw27230 DN (please note that AlN submount numbering is A0UP4)

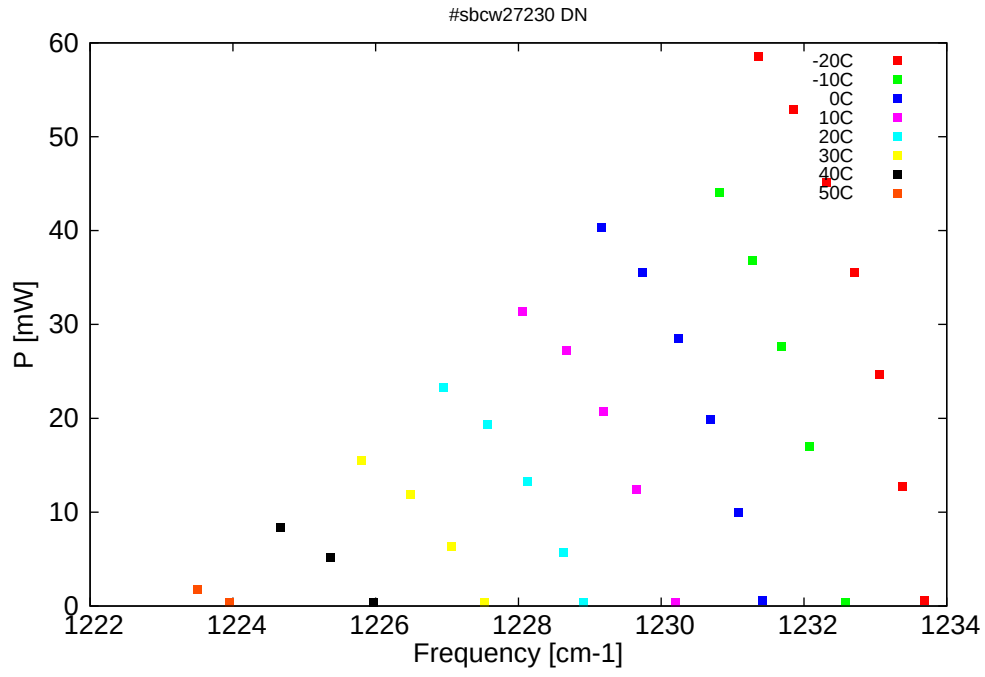


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

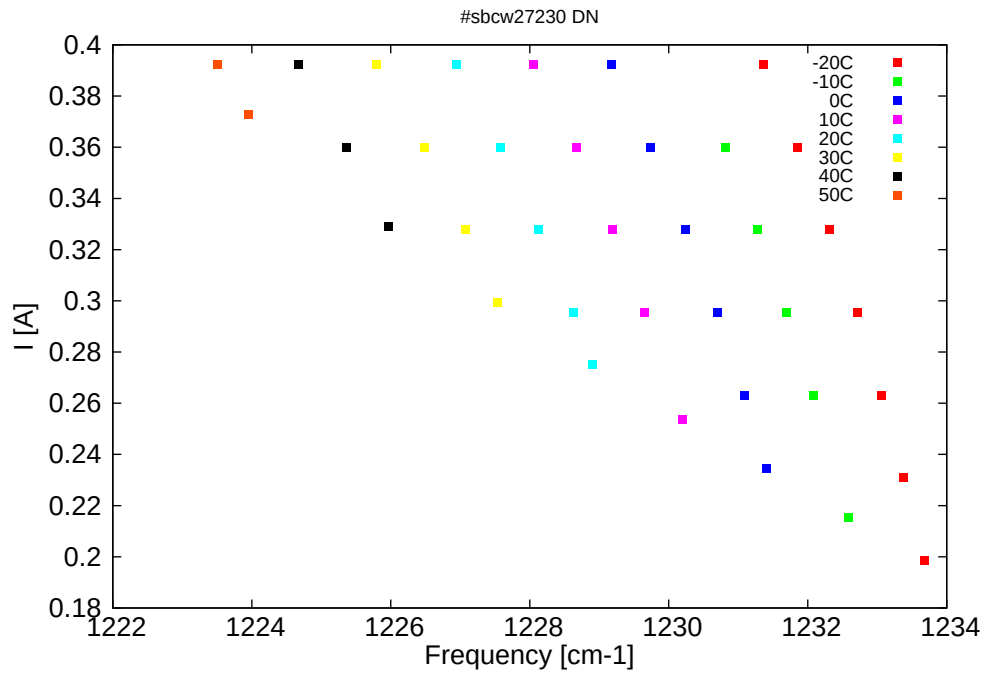


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8105.8	1233.7	0.6	-20	7.05	0.199
8107.8	1233.4	12.7	-20	7.3	0.231
8109.9	1233.1	24.7	-20	7.57	0.263
8112.2	1232.7	35.5	-20	7.82	0.295
8114.8	1232.3	45.1	-20	8.09	0.328
8117.8	1231.9	52.9	-20	8.38	0.36
8121.1	1231.4	58.5	-20	8.69	0.392
8113	1232.6	0.4	-10	7.16	0.215
8116.4	1232.1	17	-10	7.55	0.263
8118.9	1231.7	27.6	-10	7.81	0.296
8121.7	1231.3	36.8	-10	8.09	0.328
8124.6	1230.8	44	-10	8.38	0.36
8120.8	1231.4	0.5	0	7.32	0.234
8122.9	1231.1	10	0	7.56	0.263
8125.5	1230.7	19.9	0	7.84	0.296
8128.5	1230.2	28.5	0	8.12	0.328
8131.8	1229.7	35.5	0	8.42	0.36
8135.6	1229.2	40.4	0	8.76	0.392
8128.8	1230.2	0.3	10	7.49	0.254
8132.4	1229.7	12.4	10	7.85	0.296
8135.4	1229.2	20.7	10	8.15	0.328
8138.8	1228.7	27.2	10	8.47	0.36
8143	1228.1	31.4	10	8.8	0.392
8137.3	1228.9	0.4	20	7.66	0.275
8139.1	1228.6	5.7	20	7.85	0.296
8142.4	1228.1	13.3	20	8.16	0.328
8146.2	1227.6	19.4	20	8.48	0.36
8150.3	1226.9	23.3	20	8.84	0.392
8146.4	1227.5	0.3	30	7.91	0.3
8149.5	1227.1	6.3	30	8.2	0.328
8153.4	1226.5	11.9	30	8.52	0.36
8158	1225.8	15.5	30	8.89	0.392
8156.8	1226	0.3	40	8.19	0.329
8160.8	1225.4	5.1	40	8.52	0.36
8165.5	1224.7	8.4	40	8.86	0.392
8170.2	1224	0.3	50	8.63	0.373
8173.2	1223.5	1.8	50	8.87	0.392

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

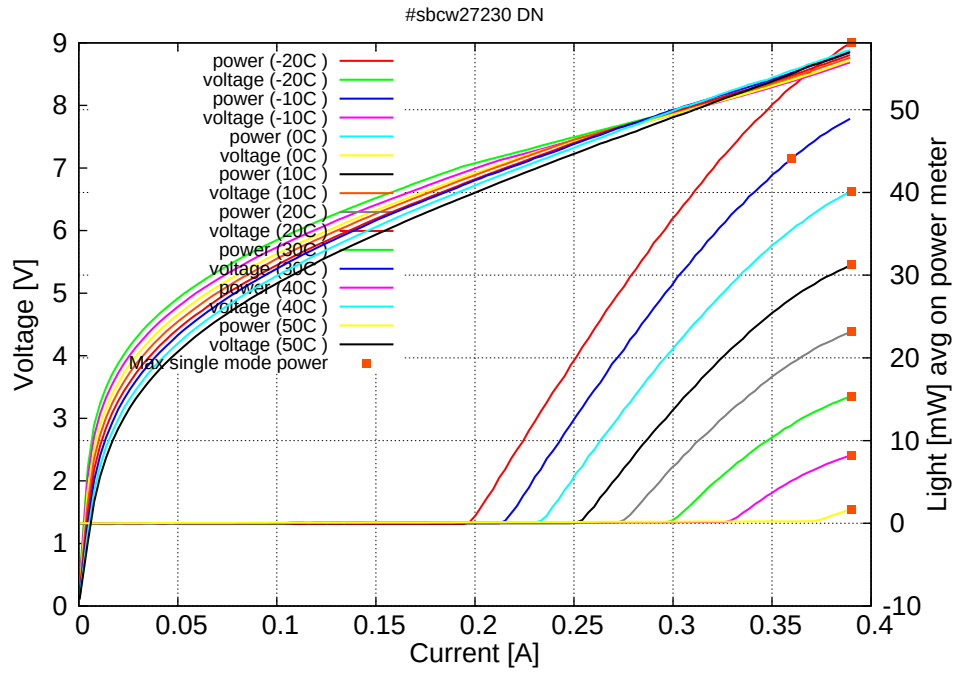


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=7.0V$ (2-wires measurements). Maximum operation current: 0.39A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

