

Datasheet for #sbcw27045 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.

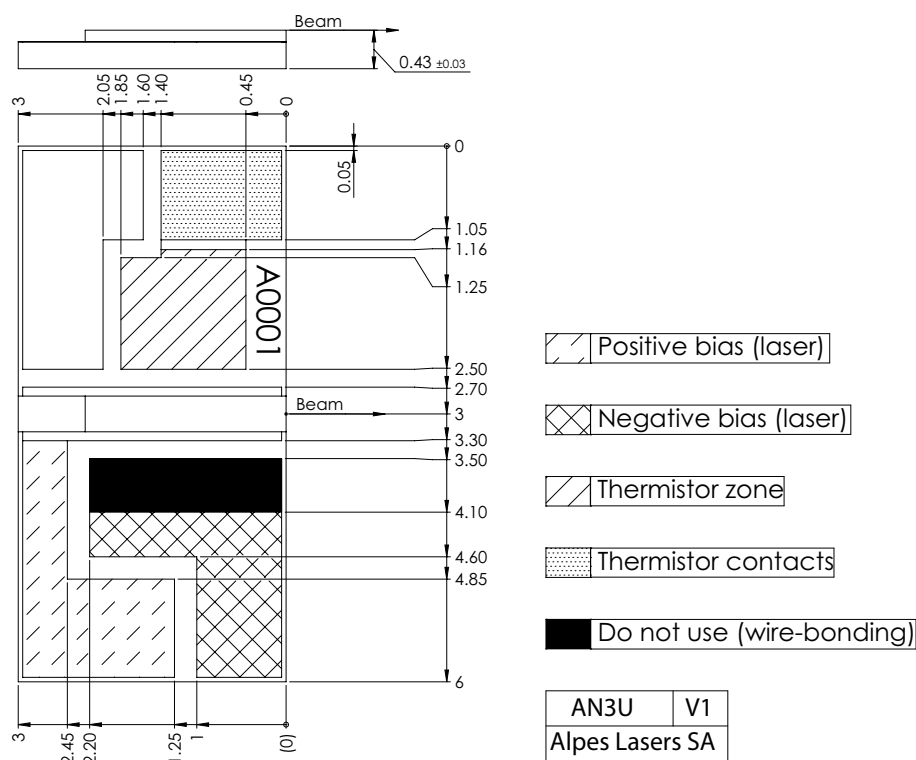


Figure 1: Mechanical and electrical interface for #sbcw27045 DN (please note that AlN submount numbering is A0X4A)

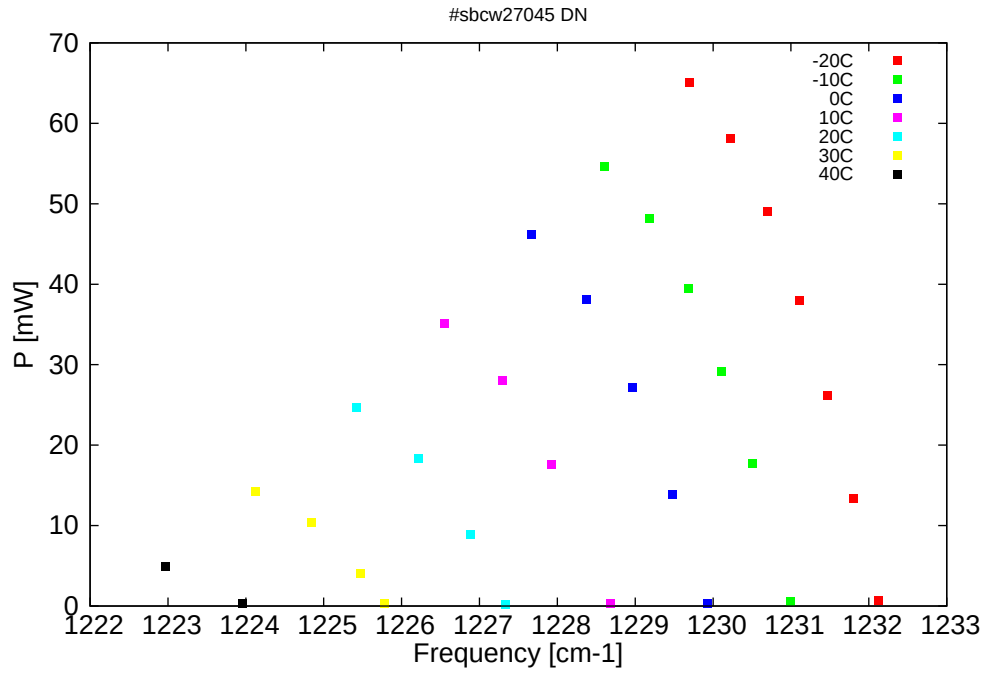


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

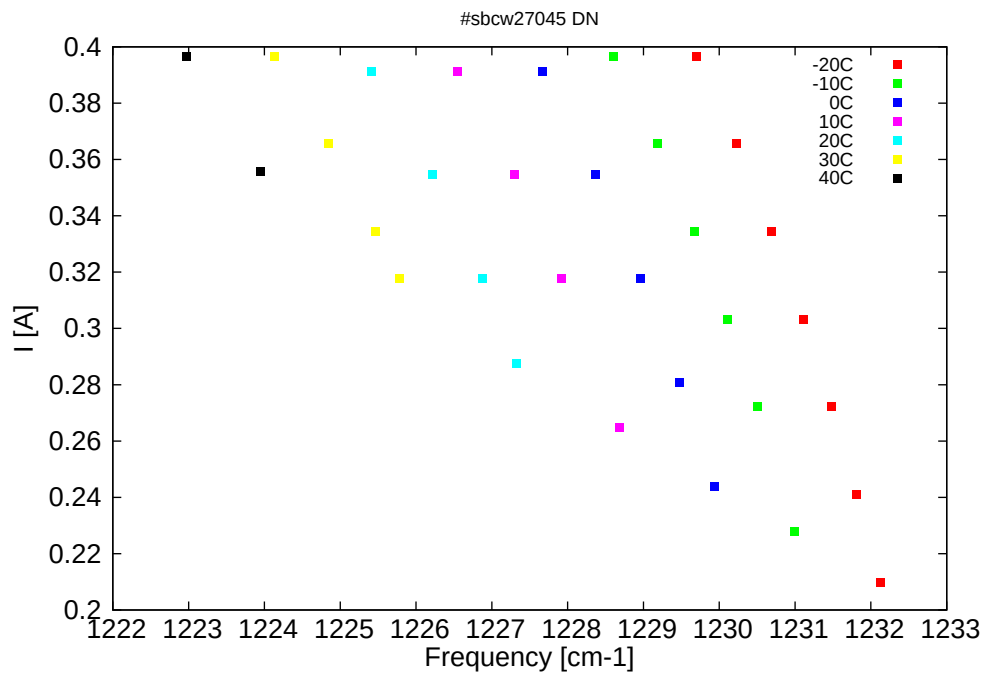


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8116.1	1232.1	0.7	-20	7.04	0.21
8118.1	1231.8	13.4	-20	7.28	0.241
8120.3	1231.5	26.2	-20	7.52	0.272
8122.8	1231.1	38	-20	7.76	0.303
8125.5	1230.7	49	-20	8.03	0.334
8128.6	1230.2	58.2	-20	8.31	0.366
8132.1	1229.7	65	-20	8.62	0.397
8123.5	1231	0.6	-10	7.15	0.228
8126.8	1230.5	17.7	-10	7.5	0.272
8129.3	1230.1	29.1	-10	7.75	0.303
8132.2	1229.7	39.5	-10	8.02	0.334
8135.5	1229.2	48.2	-10	8.31	0.366
8139.3	1228.6	54.6	-10	8.64	0.397
8130.5	1229.9	0.4	0	7.22	0.244
8133.5	1229.5	13.9	0	7.52	0.281
8136.9	1229	27.2	0	7.83	0.318
8140.9	1228.4	38.2	0	8.17	0.355
8145.5	1227.7	46.2	0	8.55	0.391
8138.8	1228.7	0.3	10	7.38	0.265
8143.8	1227.9	17.6	10	7.84	0.318
8148	1227.3	28	10	8.19	0.355
8153	1226.5	35.1	10	8.58	0.391
8147.8	1227.3	0.3	20	7.58	0.288
8150.7	1226.9	8.9	20	7.85	0.318
8155.2	1226.2	18.4	20	8.21	0.355
8160.5	1225.4	24.7	20	8.62	0.391
8158.1	1225.8	0.3	30	7.94	0.318
8160.1	1225.5	4	30	8.11	0.334
8164.3	1224.8	10.4	30	8.43	0.366
8169.1	1224.1	14.3	30	8.79	0.397
8170.2	1224	0.3	40	8.33	0.356
8176.8	1223	4.9	40	8.8	0.397

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

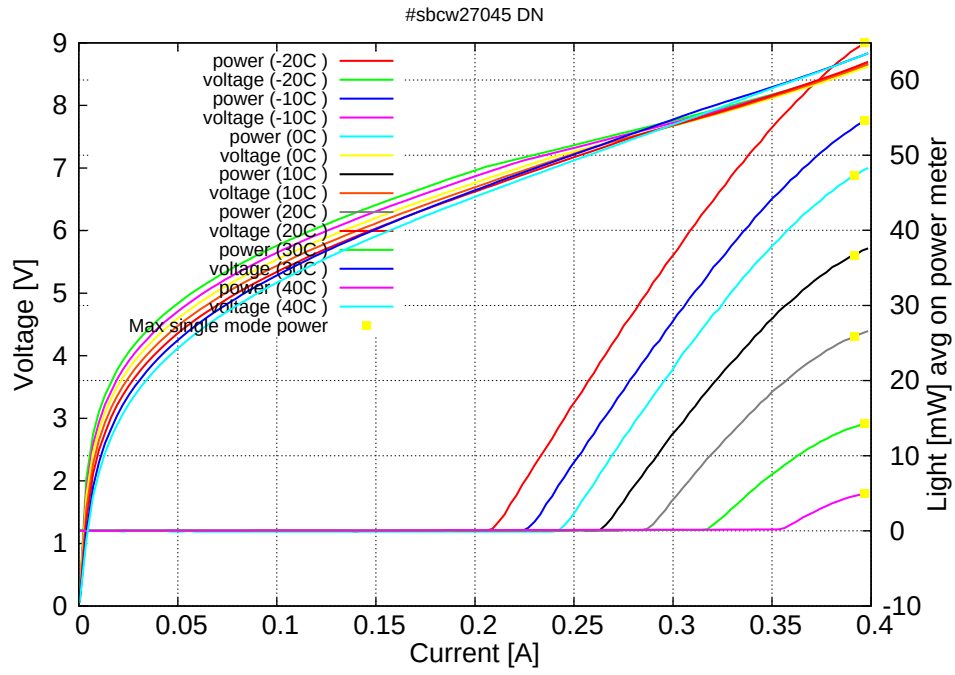


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=7.0V$ (2-wires measurements). Maximum operation current: 0.400A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

