

Datasheet for #sbcw27089 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 #sbcw27089 DN (please note that AlN submount numbering is A0X3U)

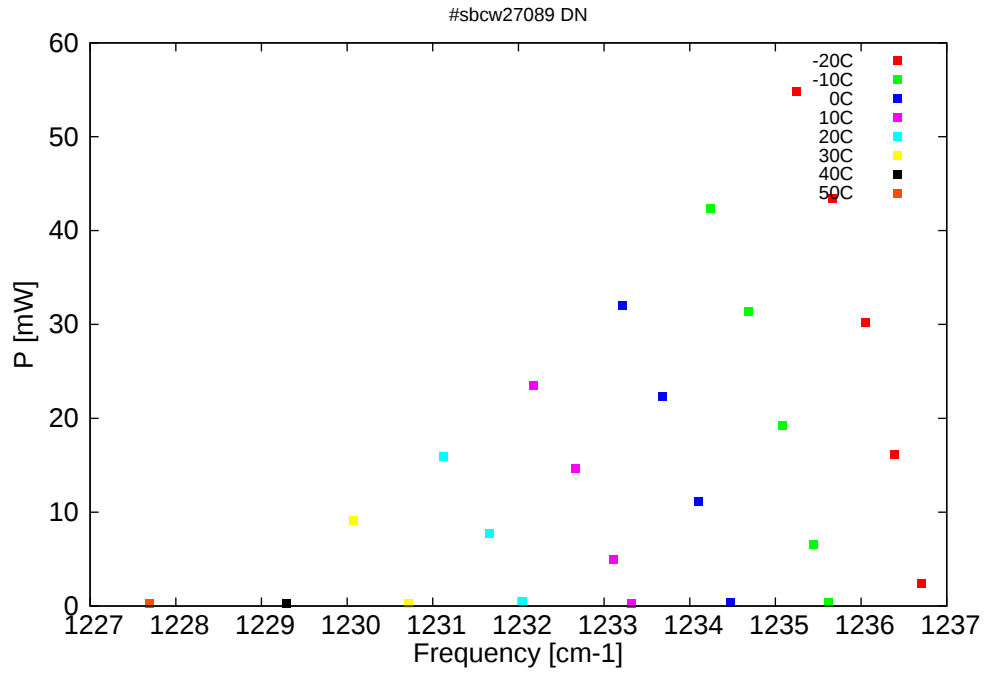


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

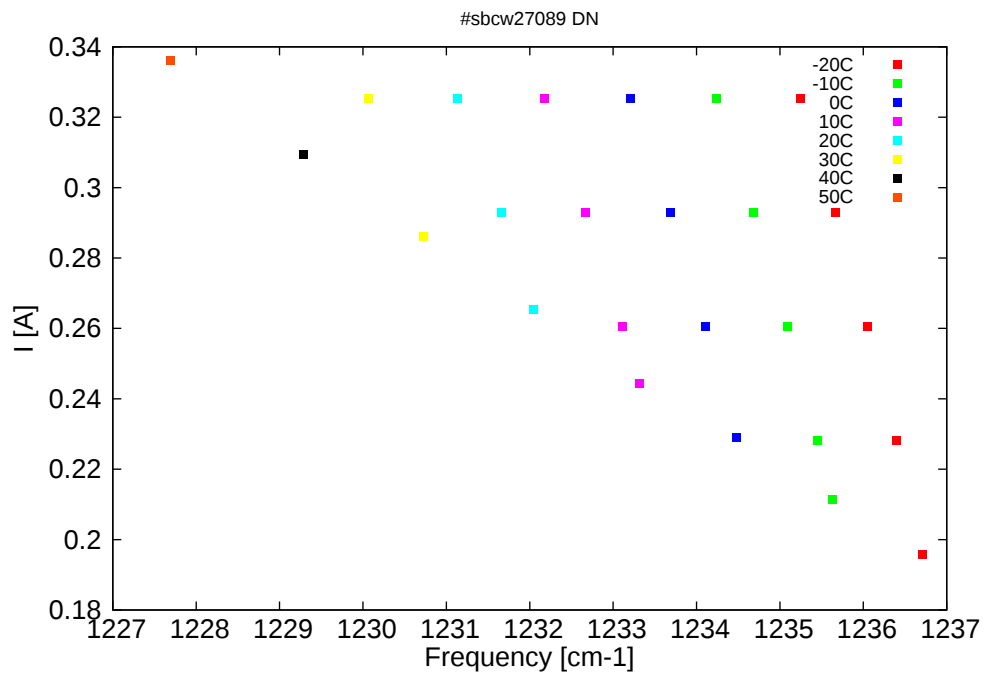


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8086	1236.7	2.4	-20	6.51	0.196
8088	1236.4	16.1	-20	6.84	0.228
8090.3	1236.1	30.2	-20	7.16	0.261
8092.8	1235.7	43.4	-20	7.49	0.293
8095.6	1235.2	54.8	-20	7.84	0.325
8093.1	1235.6	0.4	-10	6.63	0.211
8094.2	1235.4	6.5	-10	6.81	0.228
8096.6	1235.1	19.3	-10	7.14	0.261
8099.2	1234.7	31.4	-10	7.48	0.293
8102.1	1234.2	42.3	-10	7.83	0.325
8100.6	1234.5	0.4	0	6.82	0.229
8103	1234.1	11.1	0	7.14	0.261
8105.8	1233.7	22.3	0	7.48	0.293
8108.9	1233.2	32	0	7.84	0.325
8108.2	1233.3	0.2	10	6.98	0.244
8109.5	1233.1	5	10	7.15	0.261
8112.5	1232.7	14.7	10	7.5	0.293
8115.7	1232.2	23.5	10	7.87	0.325
8116.6	1232	0.4	20	7.19	0.265
8119.1	1231.7	7.7	20	7.51	0.293
8122.6	1231.1	15.9	20	7.89	0.325
8125.3	1230.7	0.3	30	7.44	0.286
8129.6	1230.1	9.1	30	7.9	0.325
8134.8	1229.3	0.3	40	7.73	0.309
8145.3	1227.7	0.2	50	8.08	0.336

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

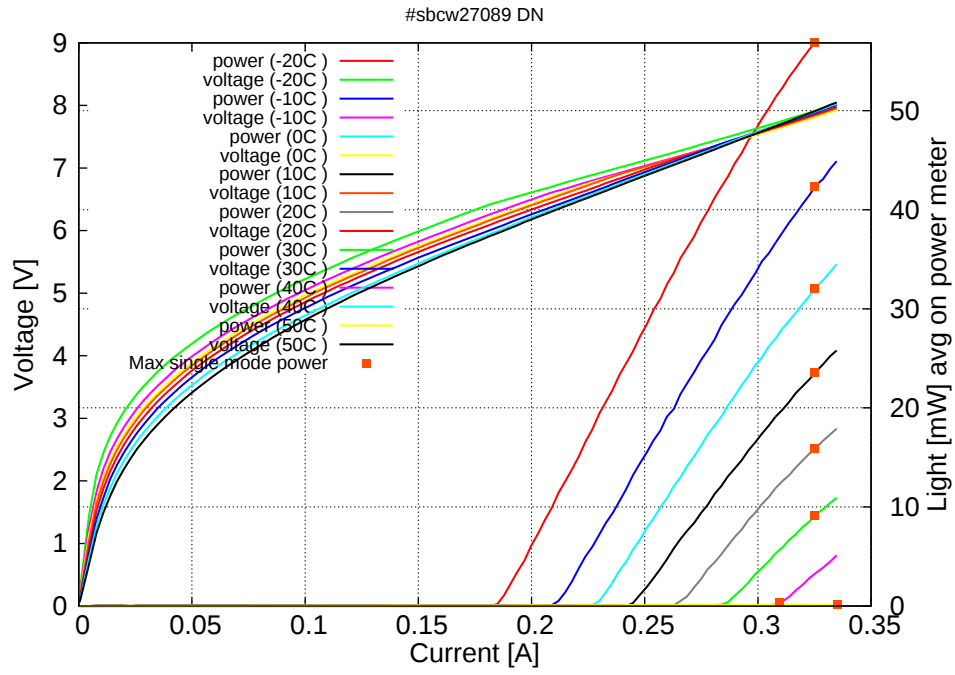


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=6.4V$ (2-wires measurements). Maximum operation current: 0.335A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

