

Datasheet for #sbcw27085 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 #sbcw27085 DN (please note that AlN submount numbering is A0YML)

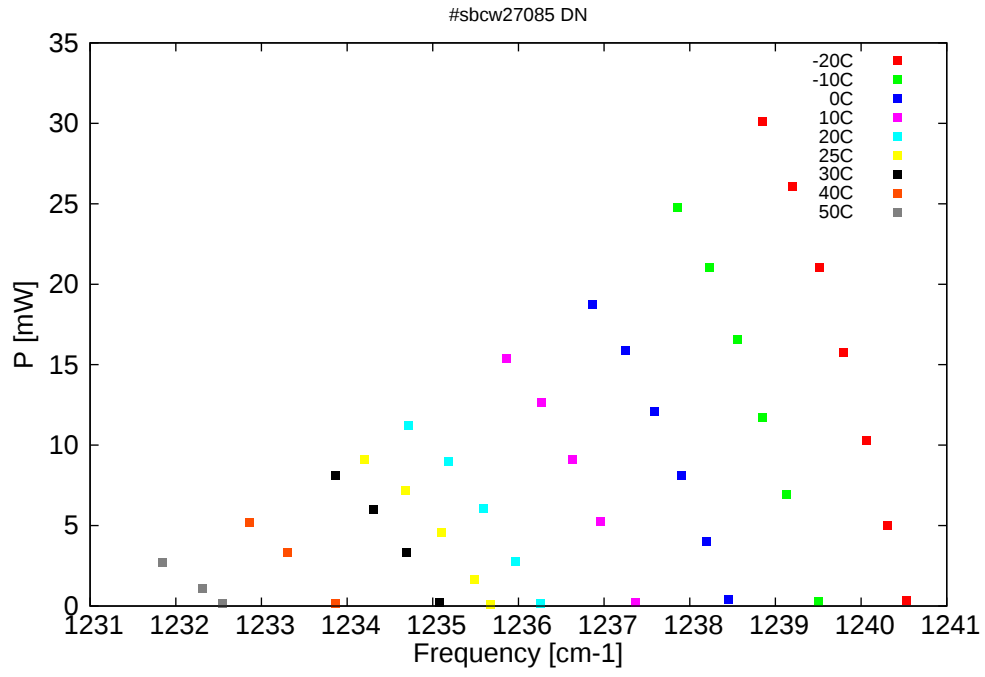


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

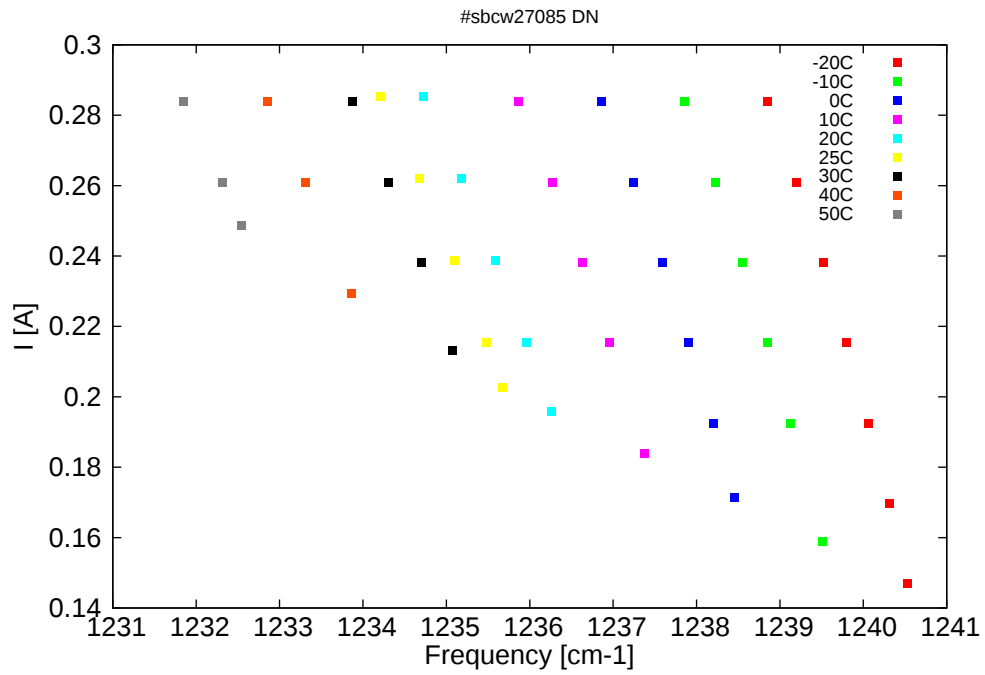


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
8061	1240.5	0.3	-20	6.21	0.147
8062.5	1240.3	5	-20	6.48	0.17
8064.1	1240.1	10.3	-20	6.76	0.193
8065.8	1239.8	15.8	-20	7.03	0.215
8067.7	1239.5	21.1	-20	7.31	0.238
8069.7	1239.2	26	-20	7.6	0.261
8072	1238.9	30.1	-20	7.91	0.284
8067.7	1239.5	0.3	-10	6.31	0.159
8070.2	1239.1	7	-10	6.72	0.193
8072	1238.9	11.7	-10	7	0.215
8073.9	1238.6	16.6	-10	7.28	0.238
8076.1	1238.2	21.1	-10	7.59	0.261
8078.5	1237.9	24.8	-10	7.91	0.284
8074.6	1238.4	0.4	0	6.44	0.171
8076.2	1238.2	4	0	6.7	0.193
8078.2	1237.9	8.1	0	6.99	0.215
8080.2	1237.6	12.1	0	7.28	0.238
8082.5	1237.2	15.9	0	7.59	0.261
8085	1236.9	18.7	0	7.92	0.284
8081.6	1237.4	0.2	10	6.57	0.184
8084.3	1237	5.3	10	6.98	0.215
8086.5	1236.6	9.1	10	7.27	0.238
8088.9	1236.3	12.6	10	7.59	0.261
8091.5	1235.9	15.4	10	7.92	0.284
8088.9	1236.3	0.2	20	6.56	0.196
8090.8	1236	2.8	20	6.81	0.216
8093.3	1235.6	6.1	20	7.1	0.239
8096	1235.2	9	20	7.41	0.262
8099	1234.7	11.2	20	7.74	0.285
8092.7	1235.7	0.1	25	6.64	0.203
8094	1235.5	1.7	25	6.8	0.216
8096.5	1235.1	4.6	25	7.09	0.239
8099.3	1234.7	7.2	25	7.4	0.262
8102.4	1234.2	9.1	25	7.74	0.285
8096.6	1235.1	0.2	30	6.94	0.213
8099.2	1234.7	3.3	30	7.28	0.238
8101.7	1234.3	6	30	7.6	0.261
8104.6	1233.9	8.1	30	7.95	0.284
8104.7	1233.9	0.2	40	7.15	0.229
8108.3	1233.3	3.4	40	7.61	0.261
8111.2	1232.9	5.2	40	7.96	0.284
8113.3	1232.5	0.2	50	7.41	0.249
8114.8	1232.3	1.1	50	7.59	0.261
8117.9	1231.8	2.7	50	7.95	0.284

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

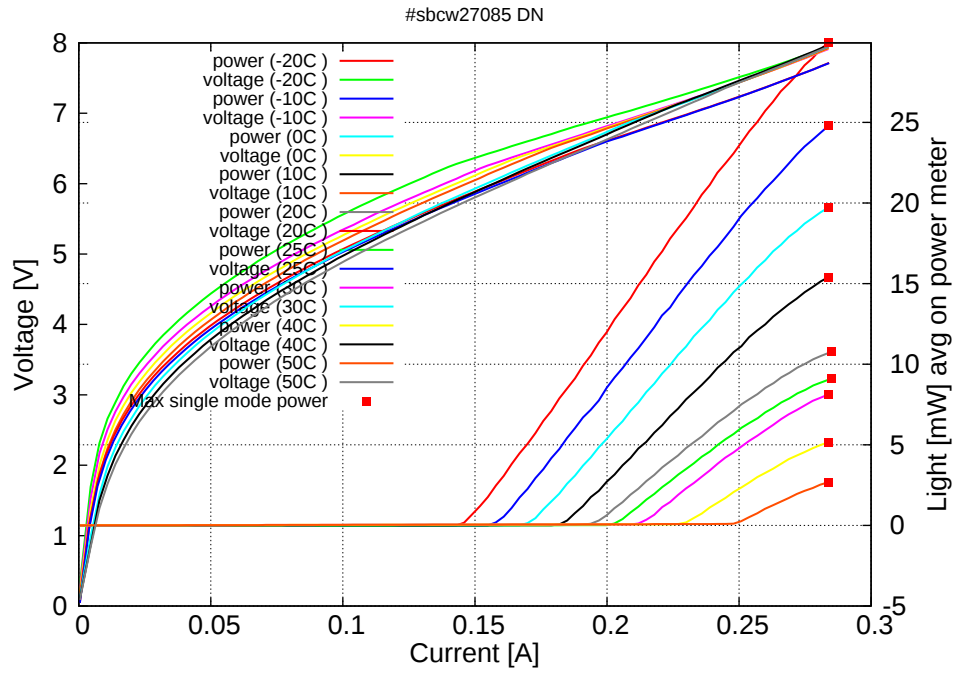


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=6.2V$ (2-wires measurements). Maximum operation current: 0.285A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

