

Datasheet for #sbcw27684 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 #sbcw27684 DN (please note that AlN submount numbering is A0WTL)

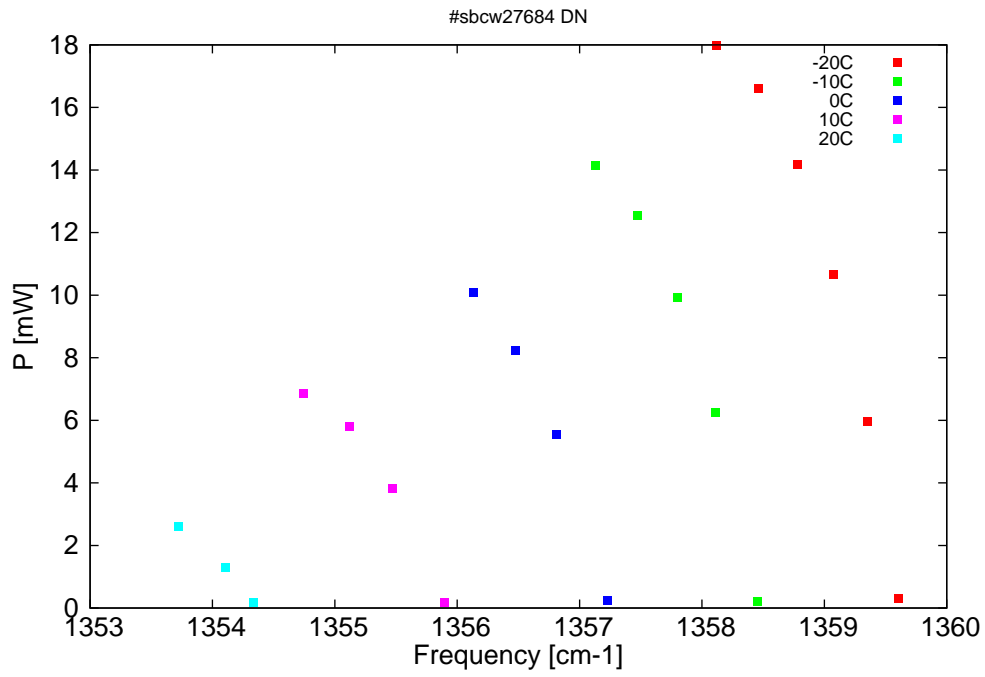


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

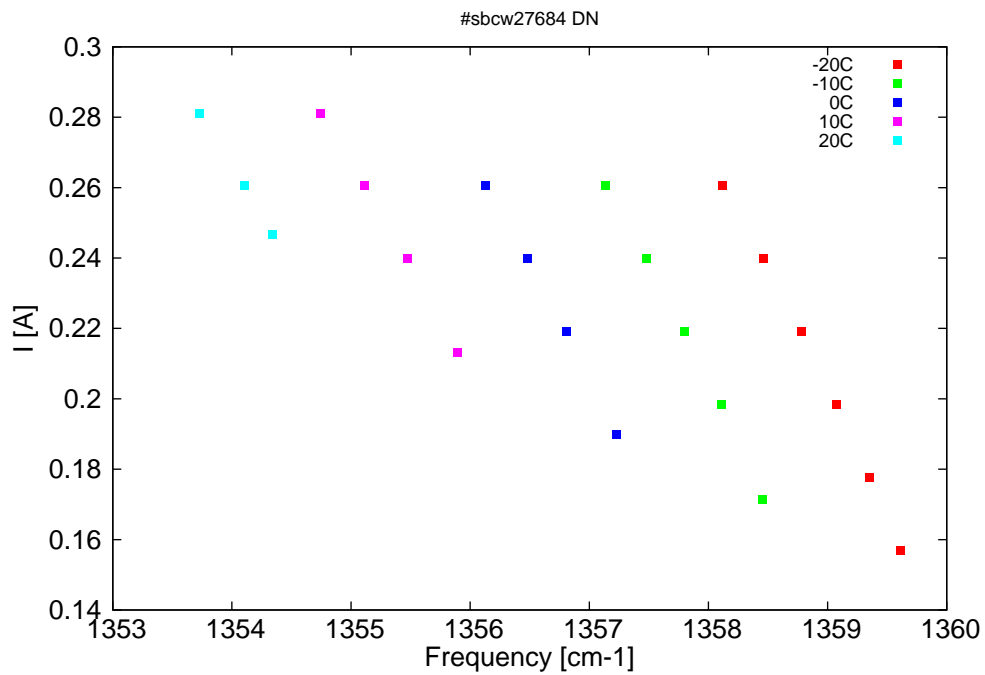


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7355.1	1359.6	0.3	-20	9.18	0.157
7356.4	1359.4	5.9	-20	9.42	0.178
7357.9	1359.1	10.7	-20	9.66	0.198
7359.5	1358.8	14.2	-20	9.9	0.219
7361.3	1358.5	16.6	-20	10.15	0.24
7363.1	1358.1	18	-20	10.4	0.261
7361.3	1358.5	0.2	-10	9.24	0.171
7363.2	1358.1	6.3	-10	9.55	0.198
7364.9	1357.8	9.9	-10	9.78	0.219
7366.6	1357.5	12.6	-10	10.03	0.24
7368.5	1357.1	14.2	-10	10.27	0.261
7368	1357.2	0.2	0	9.35	0.19
7370.2	1356.8	5.5	0	9.68	0.219
7372	1356.5	8.2	0	9.92	0.24
7373.9	1356.1	10.1	0	10.16	0.261
7375.2	1355.9	0.2	10	9.51	0.213
7377.5	1355.5	3.8	10	9.81	0.24
7379.4	1355.1	5.8	10	10.04	0.261
7381.5	1354.7	6.9	10	10.28	0.281
7383.7	1354.3	0.2	20	9.78	0.247
7384.9	1354.1	1.3	20	9.94	0.261
7387	1353.7	2.6	20	10.17	0.281

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

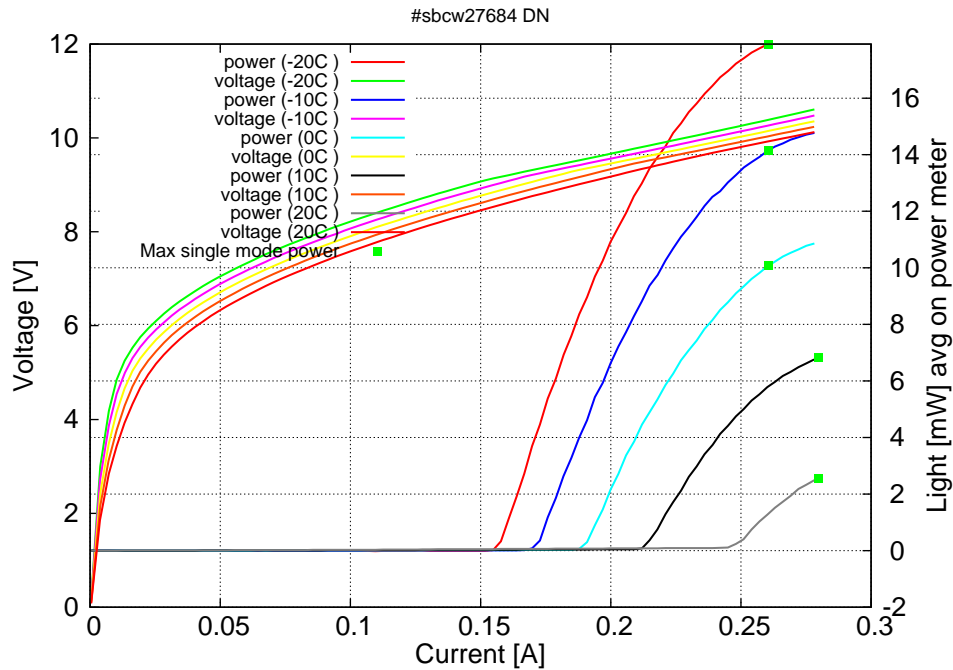


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.26A between -20C and 0C, 0.28A between 10C and 20C.

Figure 3: spectra at different temperatures for various DC currents

