

Datasheet for #sbcw27689 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 #sbcw27689 DN (please note that AlN submount numbering is A0V00)

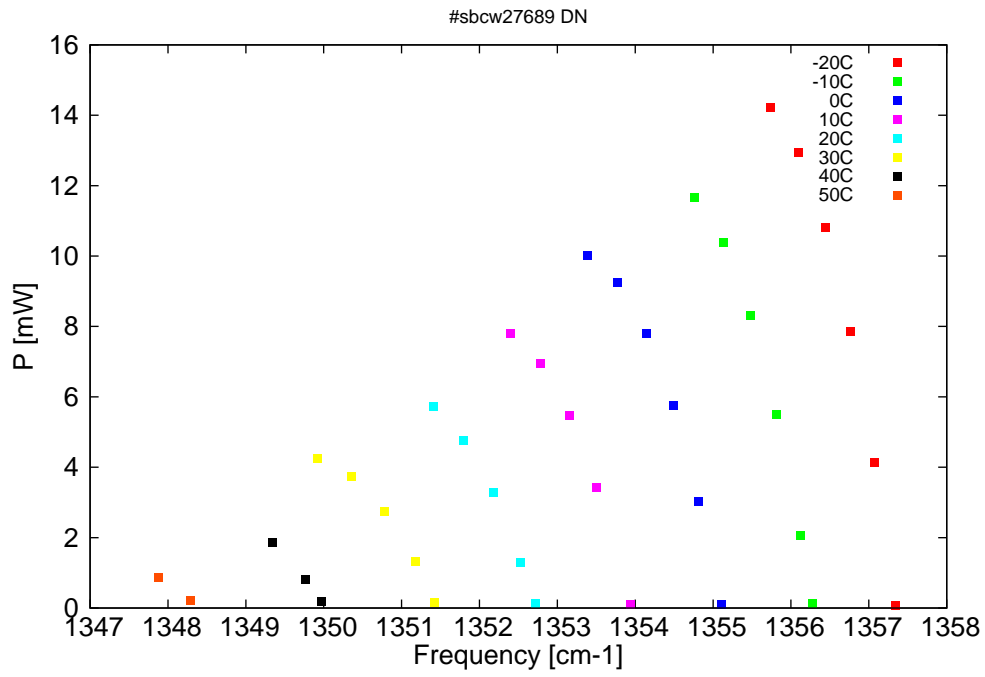


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

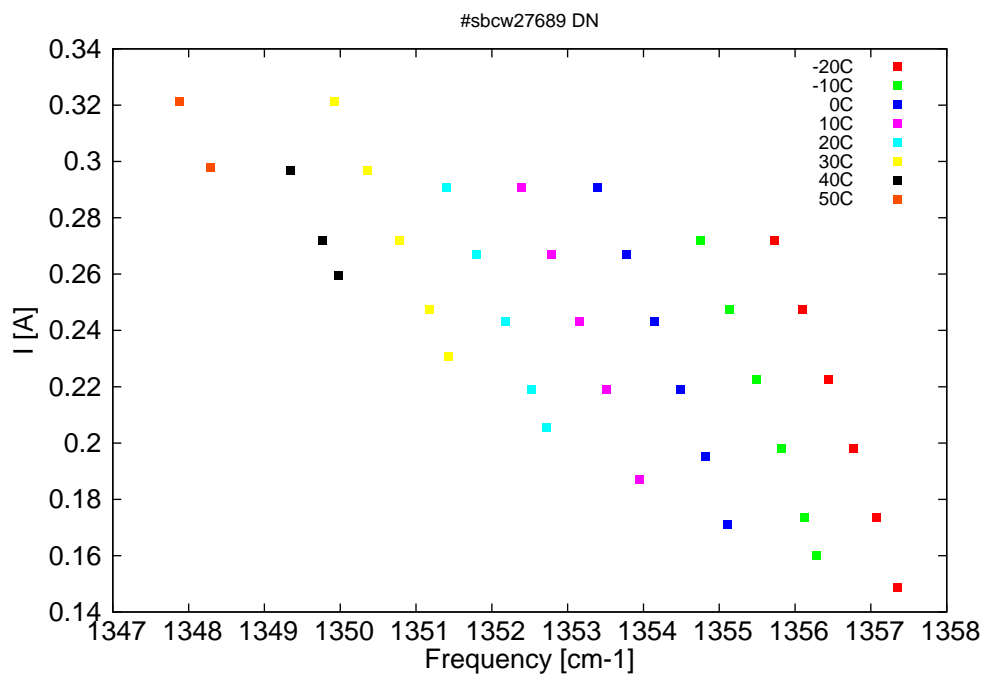


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7367.3	1357.3	0.1	-20	8.89	0.149
7368.8	1357.1	4.1	-20	9.17	0.173
7370.5	1356.8	7.9	-20	9.44	0.198
7372.2	1356.4	10.8	-20	9.71	0.223
7374.1	1356.1	12.9	-20	9.98	0.247
7376.1	1355.7	14.2	-20	10.25	0.272
7373.1	1356.3	0.1	-10	8.89	0.16
7374	1356.1	2.1	-10	9.04	0.173
7375.6	1355.8	5.5	-10	9.31	0.198
7377.4	1355.5	8.3	-10	9.58	0.223
7379.3	1355.1	10.4	-10	9.84	0.247
7381.4	1354.8	11.7	-10	10.11	0.272
7379.5	1355.1	0.1	0	8.89	0.171
7381.1	1354.8	3	0	9.15	0.195
7382.9	1354.5	5.7	0	9.4	0.219
7384.7	1354.1	7.8	0	9.65	0.243
7386.7	1353.8	9.2	0	9.91	0.267
7388.8	1353.4	10	0	10.16	0.291
7385.8	1353.9	0.1	10	8.95	0.187
7388.2	1353.5	3.4	10	9.29	0.219
7390.1	1353.2	5.5	10	9.54	0.243
7392.2	1352.8	6.9	10	9.78	0.267
7394.3	1352.4	7.8	10	10.03	0.291
7392.5	1352.7	0.1	20	9.03	0.205
7393.6	1352.5	1.3	20	9.17	0.219
7395.5	1352.2	3.3	20	9.42	0.243
7397.5	1351.8	4.8	20	9.67	0.267
7399.7	1351.4	5.7	20	9.91	0.291
7399.6	1351.4	0.2	30	9.2	0.231
7401	1351.2	1.3	30	9.37	0.247
7403.1	1350.8	2.8	30	9.61	0.272
7405.4	1350.4	3.7	30	9.86	0.297
7407.8	1349.9	4.2	30	10.11	0.321
7407.6	1350	0.2	40	9.37	0.259
7408.7	1349.8	0.8	40	9.49	0.272
7411	1349.3	1.9	40	9.73	0.297
7416.8	1348.3	0.2	50	9.62	0.298
7419.1	1347.9	0.9	50	9.85	0.321

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

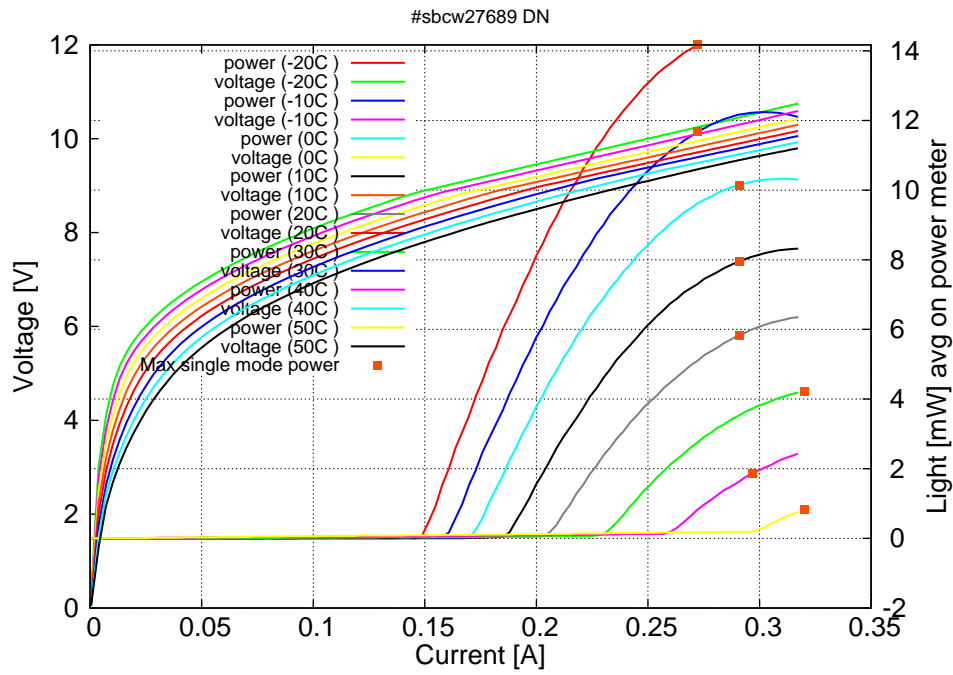


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15A$ / $V_{th}=8.9V$ (2-wires measurements). Maximum operation current: 0.27A between -20C and -10C, 0.29A between 0C and 20C, 0.32A between 30C and 50C.

