

Datasheet for #sbcw27679 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 #sbcw27679 DN (please note that AlN submount numbering is A0UVC)

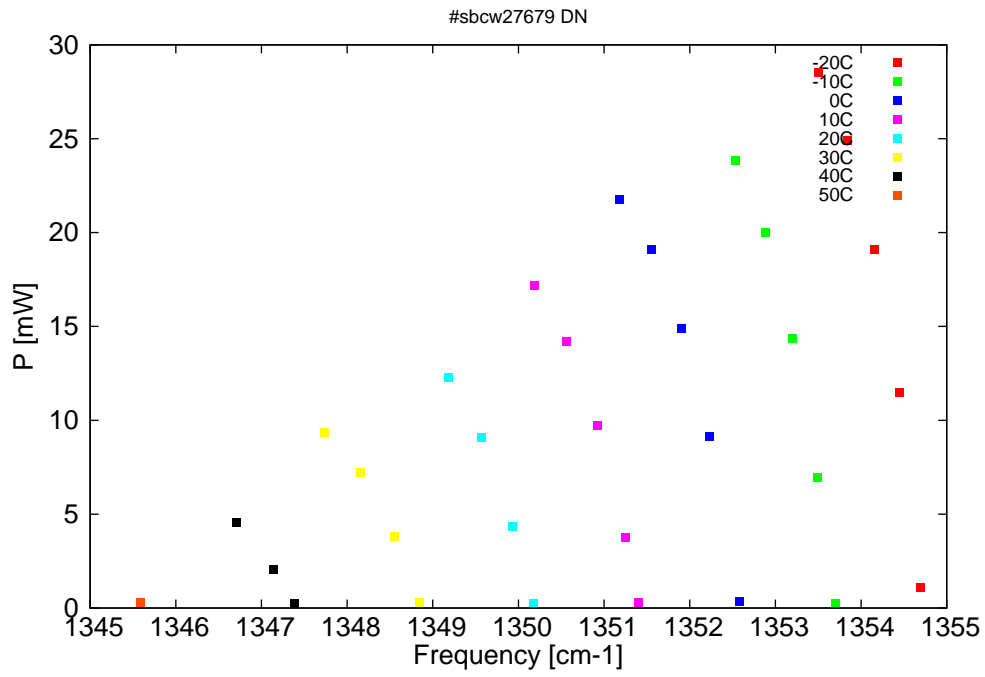


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

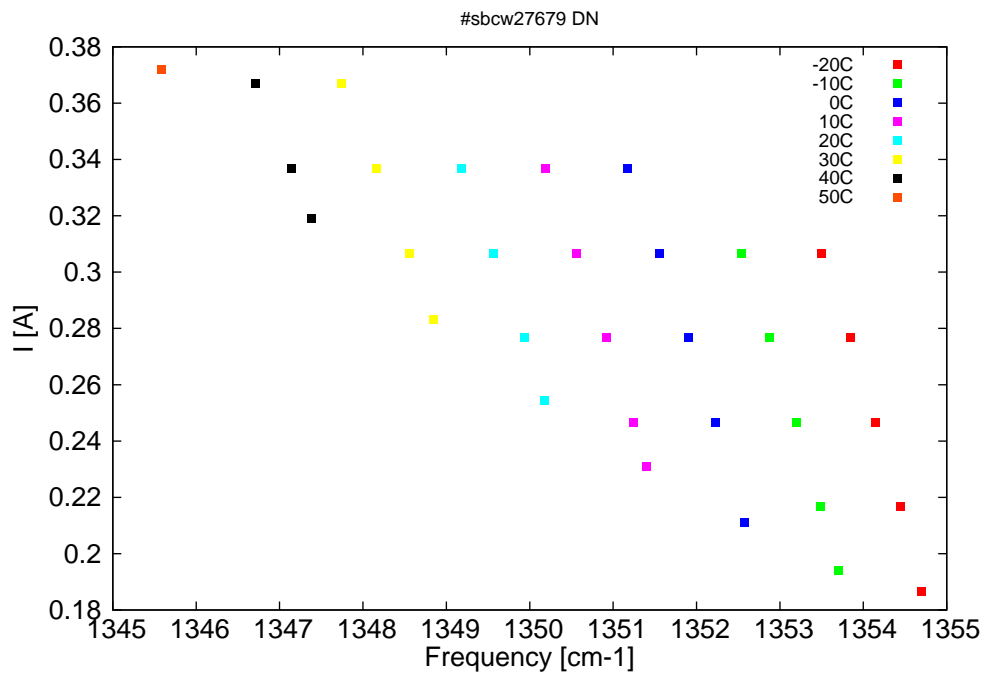


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7381.7	1354.7	1.1	-20	8.89	0.187
7383.1	1354.4	11.5	-20	9.16	0.217
7384.7	1354.2	19.1	-20	9.43	0.247
7386.4	1353.8	24.9	-20	9.7	0.277
7388.3	1353.5	28.5	-20	9.97	0.307
7387.1	1353.7	0.3	-10	8.85	0.194
7388.3	1353.5	6.9	-10	9.05	0.217
7389.9	1353.2	14.4	-10	9.32	0.247
7391.6	1352.9	20	-10	9.58	0.277
7393.5	1352.5	23.8	-10	9.85	0.307
7393.3	1352.6	0.3	0	8.9	0.211
7395.2	1352.2	9.1	0	9.21	0.247
7397	1351.9	14.9	0	9.48	0.277
7398.9	1351.6	19.1	0	9.74	0.307
7401	1351.2	21.7	0	10.01	0.337
7399.7	1351.4	0.3	10	8.97	0.231
7400.6	1351.2	3.8	10	9.11	0.247
7402.4	1350.9	9.7	10	9.37	0.277
7404.3	1350.6	14.2	10	9.64	0.307
7406.4	1350.2	17.2	10	9.9	0.337
7406.4	1350.2	0.2	20	9.08	0.254
7407.8	1349.9	4.4	20	9.28	0.277
7409.8	1349.6	9.1	20	9.53	0.307
7411.9	1349.2	12.3	20	9.79	0.337
7413.7	1348.8	0.3	30	9.23	0.283
7415.3	1348.6	3.8	30	9.44	0.307
7417.5	1348.2	7.2	30	9.69	0.337
7419.8	1347.7	9.3	30	9.95	0.367
7421.8	1347.4	0.2	40	9.44	0.319
7423.1	1347.1	2	40	9.59	0.337
7425.5	1346.7	4.5	40	9.84	0.367
7431.7	1345.6	0.3	50	9.77	0.372

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

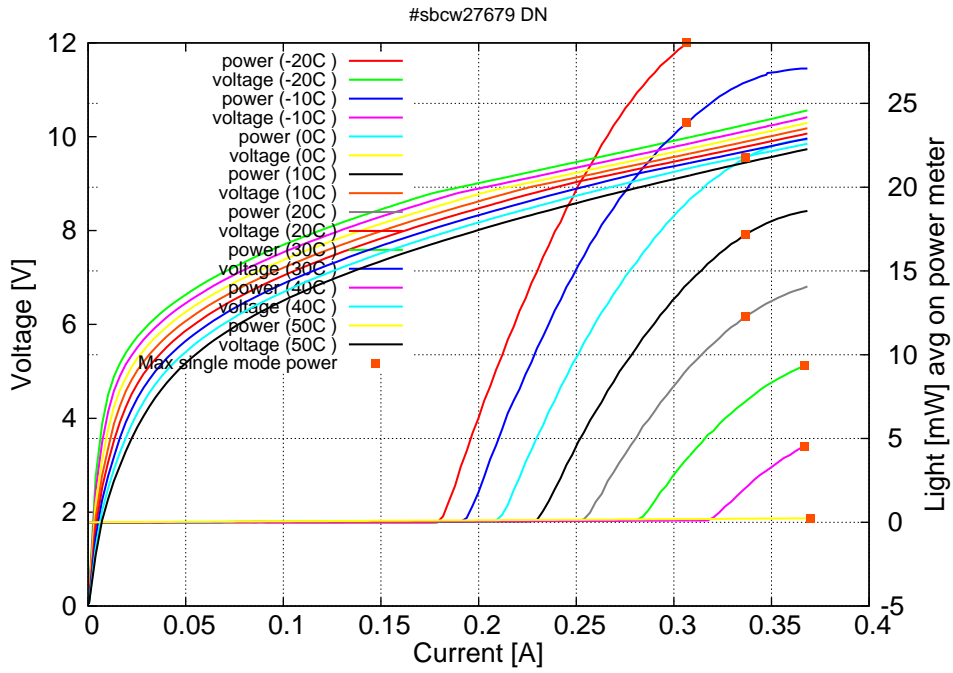


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=8.8V$ (2-wires measurements). Maximum operation current: 0.31A between -20C and -10C, 0.34A between 0C and 20C, 0.37A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

