

Datasheet for #sbcw27789 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 #sbcw27789 DN (please note that AlN submount numbering is A0VNV)

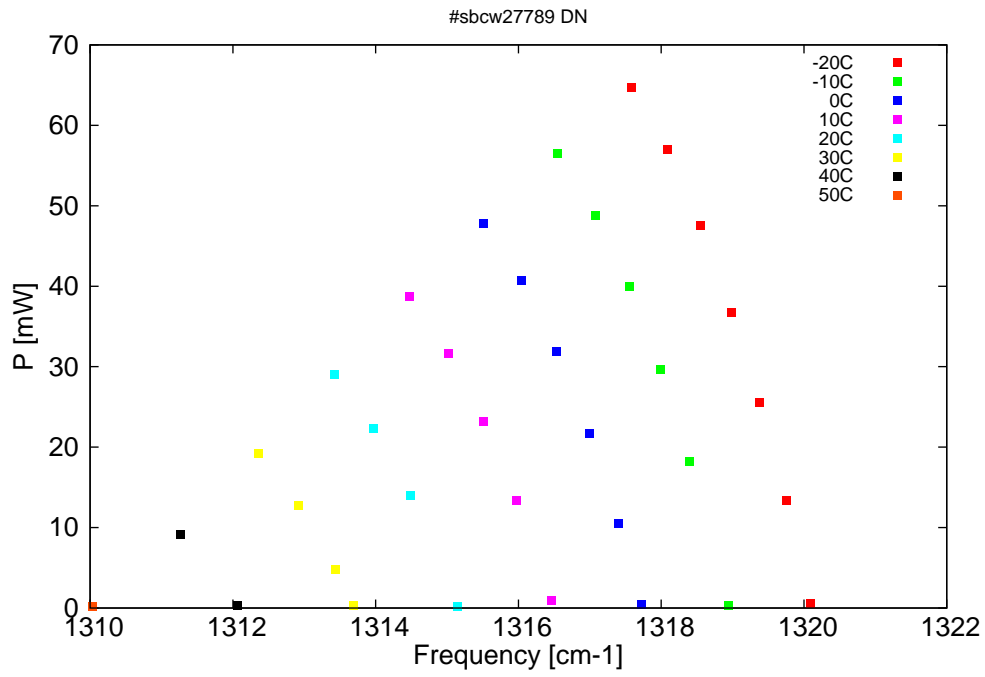


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

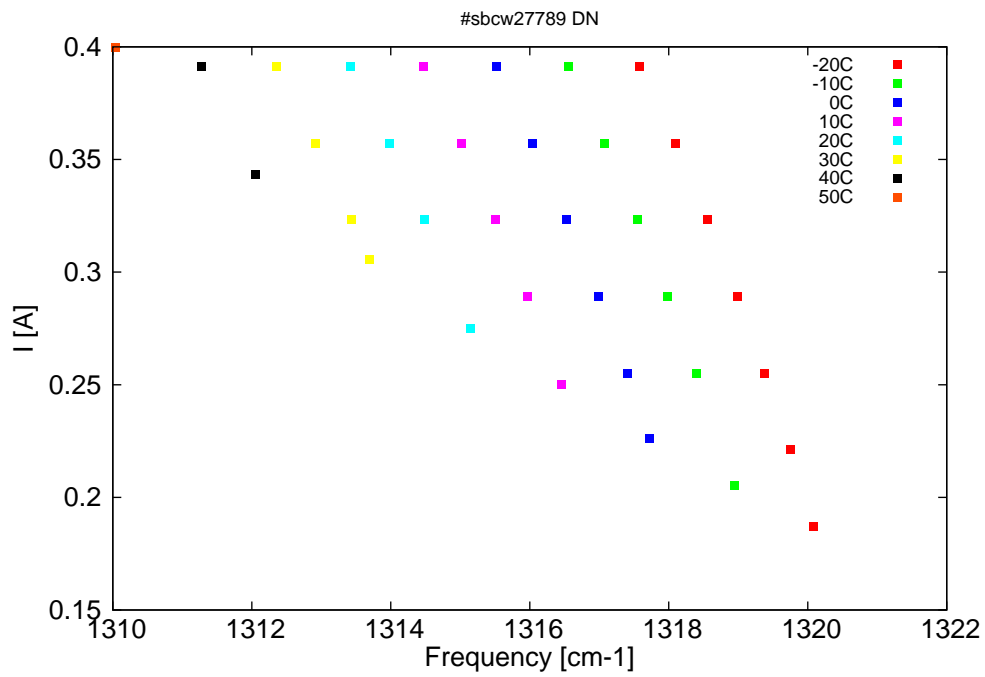


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7575.3	1320.1	0.5	-20	8.64	0.187
7577.2	1319.7	13.4	-20	8.95	0.221
7579.3	1319.4	25.6	-20	9.25	0.255
7581.6	1319	36.7	-20	9.53	0.289
7584	1318.6	47.6	-20	9.81	0.323
7586.7	1318.1	57	-20	10.1	0.357
7589.7	1317.6	64.7	-20	10.38	0.391
7581.8	1318.9	0.3	-10	8.68	0.205
7585	1318.4	18.2	-10	9.11	0.255
7587.3	1318	29.6	-10	9.4	0.289
7589.8	1317.5	40	-10	9.68	0.323
7592.6	1317.1	48.9	-10	9.97	0.357
7595.6	1316.6	56.6	-10	10.26	0.391
7588.8	1317.7	0.4	0	8.75	0.226
7590.7	1317.4	10.5	0	9	0.255
7593.1	1317	21.7	0	9.28	0.289
7595.7	1316.5	31.9	0	9.56	0.323
7598.5	1316	40.7	0	9.84	0.357
7601.6	1315.5	47.8	0	10.13	0.391
7596.1	1316.5	0.9	10	8.86	0.25
7598.9	1316	13.3	10	9.18	0.289
7601.6	1315.5	23.2	10	9.46	0.323
7604.5	1315	31.7	10	9.74	0.357
7607.6	1314.5	38.7	10	10.02	0.391
7603.7	1315.1	0.2	20	8.97	0.275
7607.5	1314.5	14	20	9.37	0.323
7610.5	1314	22.3	20	9.64	0.357
7613.7	1313.4	29	20	9.92	0.391
7612.2	1313.7	0.3	30	9.13	0.306
7613.6	1313.4	4.8	30	9.28	0.323
7616.6	1312.9	12.8	30	9.55	0.357
7619.9	1312.4	19.2	30	9.82	0.391
7621.6	1312.1	0.4	40	9.35	0.344
7626.2	1311.3	9.1	40	9.72	0.391
7633.4	1310	0.2	50	9.7	0.4

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

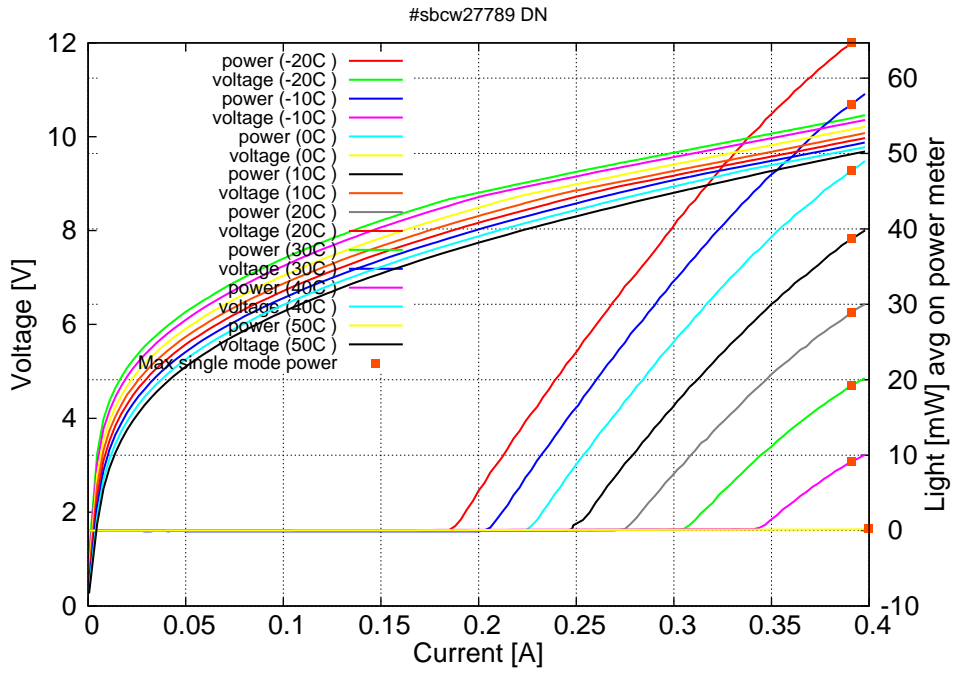


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.18A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.40A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

