

**Datasheet for #sbcw27895 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 #sbcw27895 DN (please note that AlN submount numbering is A0Y0J)

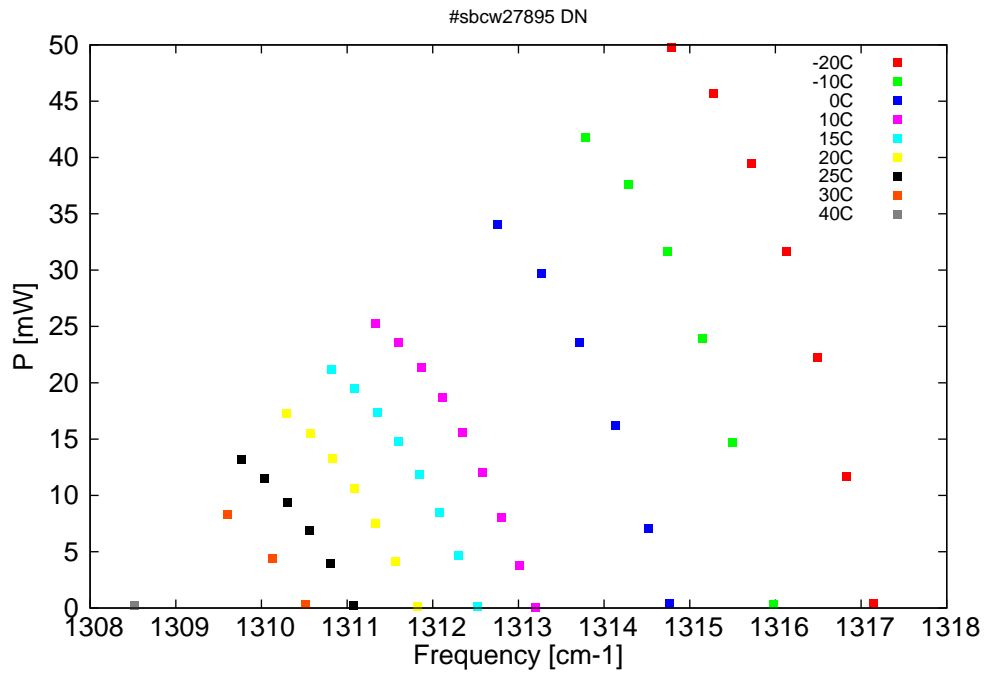


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

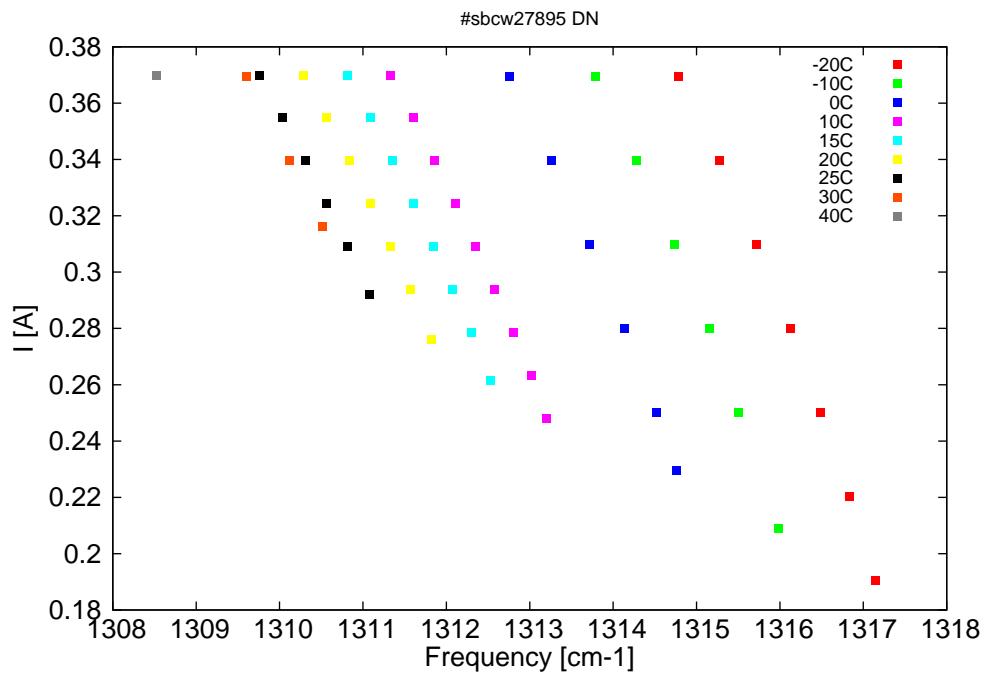


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7592.2	1317.1	0.4	-20	8.83	0.191
7594	1316.8	11.7	-20	9.12	0.22
7596	1316.5	22.3	-20	9.4	0.25
7598	1316.1	31.7	-20	9.69	0.28
7600.4	1315.7	39.5	-20	9.99	0.31
7603	1315.3	45.7	-20	10.3	0.34
7605.8	1314.8	49.7	-20	10.62	0.37
7598.9	1316	0.3	-10	8.9	0.209
7601.7	1315.5	14.7	-10	9.3	0.25
7603.7	1315.2	24	-10	9.56	0.28
7606.1	1314.7	31.7	-10	9.86	0.31
7608.7	1314.3	37.6	-10	10.16	0.34
7611.6	1313.8	41.8	-10	10.47	0.37
7605.9	1314.8	0.4	0	8.99	0.23
7607.3	1314.5	7.1	0	9.18	0.25
7609.6	1314.1	16.2	0	9.46	0.28
7612	1313.7	23.6	0	9.75	0.31
7614.6	1313.3	29.7	0	10.05	0.34
7617.5	1312.8	34	0	10.35	0.37
7615	1313.2	0	10	9.08	0.248
7616.1	1313	3.8	10	9.23	0.263
7617.3	1312.8	8	10	9.37	0.279
7618.6	1312.6	12	10	9.51	0.294
7619.9	1312.4	15.5	10	9.65	0.309
7621.3	1312.1	18.7	10	9.79	0.324
7622.7	1311.9	21.4	10	9.94	0.34
7624.3	1311.6	23.6	10	10.08	0.355
7625.8	1311.3	25.3	10	10.23	0.37
7618.9	1312.5	0.1	15	9.16	0.262
7620.2	1312.3	4.7	15	9.32	0.279
7621.5	1312.1	8.4	15	9.45	0.294
7622.9	1311.8	11.8	15	9.59	0.309
7624.3	1311.6	14.8	15	9.74	0.324
7625.7	1311.4	17.4	15	9.88	0.34
7627.2	1311.1	19.5	15	10.02	0.355
7628.9	1310.8	21.1	15	10.17	0.37
7623	1311.8	0.1	20	9.25	0.276
7624.5	1311.6	4.1	20	9.41	0.294
7625.8	1311.3	7.5	20	9.55	0.309
7627.3	1311.1	10.6	20	9.68	0.324
7628.7	1310.8	13.3	20	9.83	0.34
7630.3	1310.6	15.5	20	9.97	0.355
7631.9	1310.3	17.3	20	10.11	0.37
7627.3	1311.1	0.2	25	9.34	0.292
7628.9	1310.8	3.9	25	9.49	0.309
7630.3	1310.6	6.9	25	9.63	0.324
7631.8	1310.3	9.4	25	9.77	0.34
7633.4	1310	11.5	25	9.91	0.355
7635	1309.8	13.2	25	10.05	0.37

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7630.6	1310.5	0.3	30	9.53	0.316
7632.9	1310.1	4.4	30	9.75	0.34
7635.9	1309.6	8.3	30	10.03	0.37
7642.2	1308.5	0.2	40	9.94	0.37

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

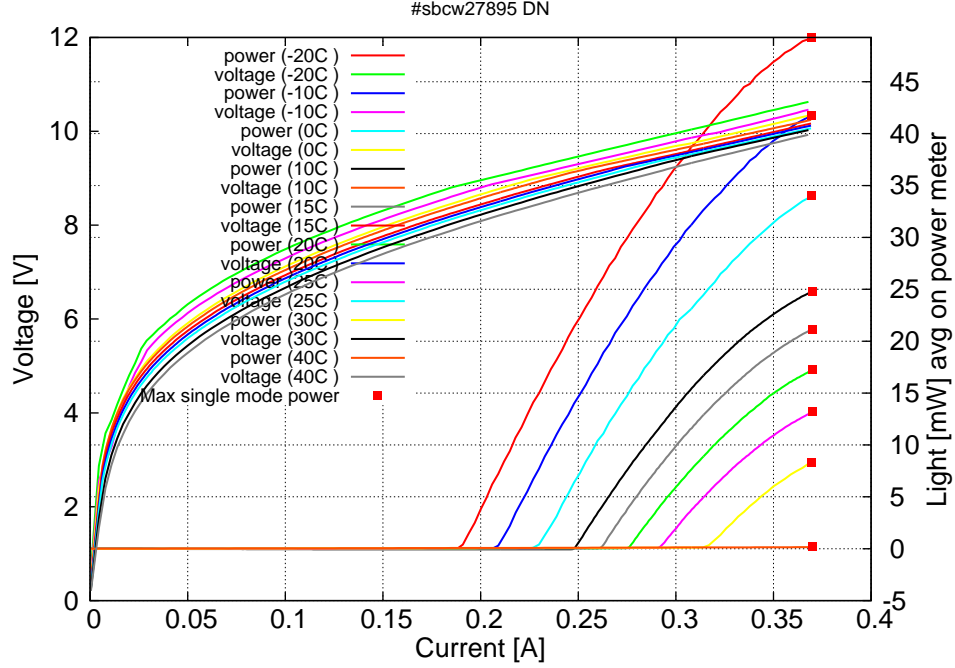


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.19A$  /  $V_{th}=8.8V$  (2-wires measurements). Maximum operation current: 0.37A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

