

Datasheet for #sbcw27894 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 #sbcw27894 DN (please note that AlN submount numbering is A0Y2L)

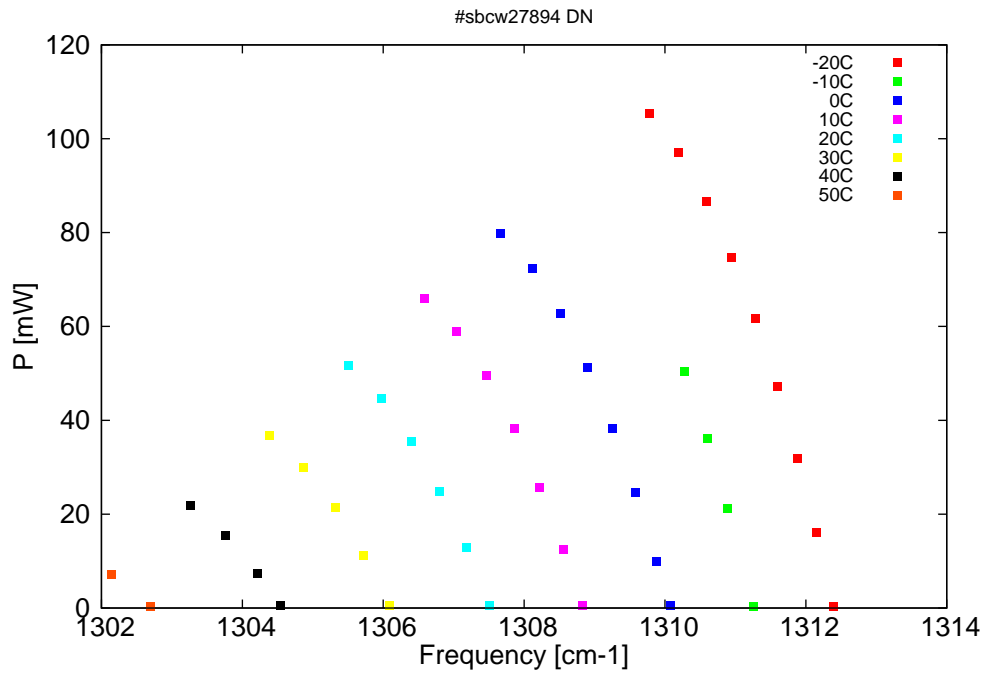


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

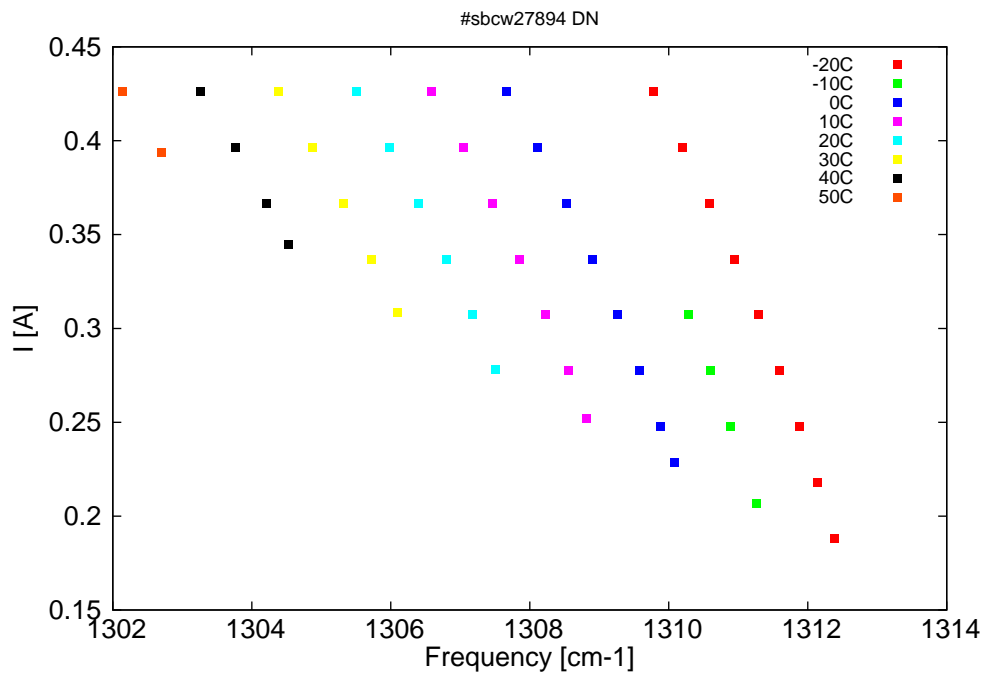


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7619.7	1312.4	0.3	-20	7.82	0.188
7621.1	1312.1	16.1	-20	8.01	0.218
7622.6	1311.9	31.9	-20	8.19	0.248
7624.3	1311.6	47.2	-20	8.37	0.277
7626.1	1311.3	61.7	-20	8.55	0.307
7628.1	1311	74.7	-20	8.74	0.337
7630.2	1310.6	86.7	-20	8.92	0.367
7632.4	1310.2	97	-20	9.11	0.396
7634.9	1309.8	105.3	-20	9.3	0.426
7626.2	1311.3	0.3	-10	7.86	0.207
7628.4	1310.9	21.2	-10	8.11	0.248
7630.1	1310.6	36.1	-10	8.29	0.277
7631.9	1310.3	50.3	-10	8.47	0.307
7633.1	1310.1	0.6	0	7.92	0.228
7634.2	1309.9	10	0	8.04	0.248
7636	1309.6	24.5	0	8.22	0.277
7637.9	1309.3	38.4	0	8.39	0.307
7640	1308.9	51.2	0	8.57	0.337
7642.2	1308.5	62.7	0	8.76	0.367
7644.6	1308.1	72.4	0	8.94	0.396
7647.2	1307.7	79.9	0	9.13	0.426
7640.5	1308.8	0.6	10	8	0.252
7642	1308.6	12.4	10	8.15	0.277
7644	1308.2	25.8	10	8.33	0.307
7646.1	1307.9	38.3	10	8.5	0.337
7648.4	1307.5	49.5	10	8.69	0.367
7650.8	1307	58.9	10	8.87	0.396
7653.5	1306.6	66	10	9.06	0.426
7648.1	1307.5	0.6	20	8.1	0.278
7650.1	1307.2	12.9	20	8.26	0.307
7652.3	1306.8	24.8	20	8.44	0.337
7654.6	1306.4	35.6	20	8.62	0.367
7657.1	1306	44.7	20	8.8	0.396
7659.9	1305.5	51.6	20	8.98	0.426
7656.4	1306.1	0.6	30	8.21	0.308
7658.6	1305.7	11.3	30	8.38	0.337
7661	1305.3	21.5	30	8.55	0.367
7663.6	1304.9	30	30	8.74	0.396
7666.4	1304.4	36.9	30	8.92	0.426
7665.6	1304.5	0.5	40	8.37	0.345
7667.5	1304.2	7.4	40	8.5	0.367
7670.1	1303.8	15.5	40	8.68	0.396
7673	1303.3	21.9	40	8.85	0.426
7676.4	1302.7	0.4	50	8.59	0.394
7679.7	1302.1	7.2	50	8.79	0.426

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

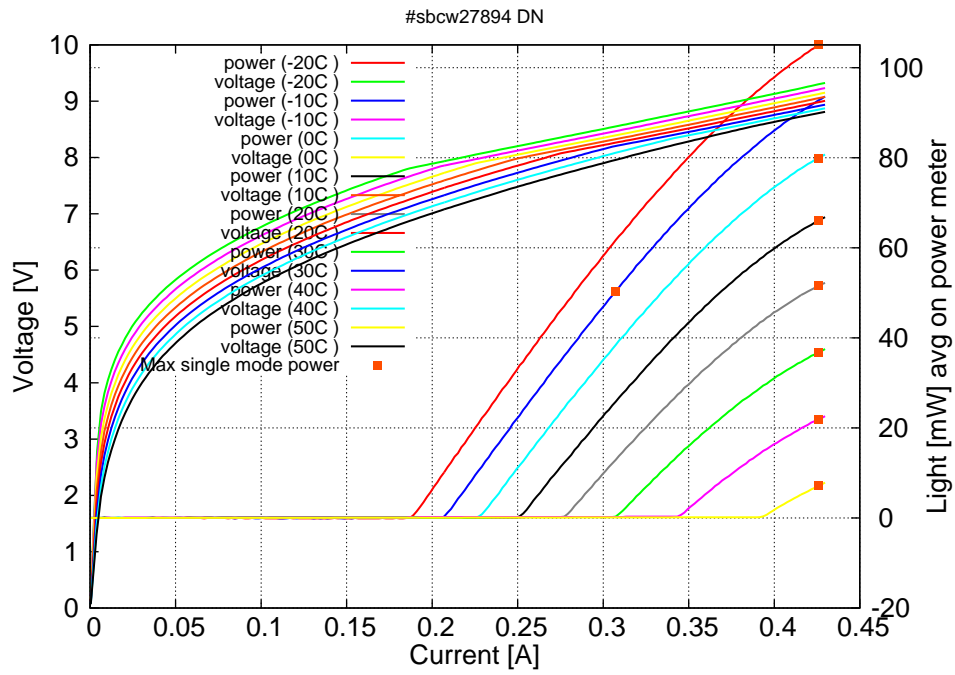


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=7.8V$ (2-wires measurements). Maximum operation current: 0.43A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

