

Datasheet for #sbcw27892 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 #sbcw27892 DN (please note that AlN submount numbering is A0Y01)

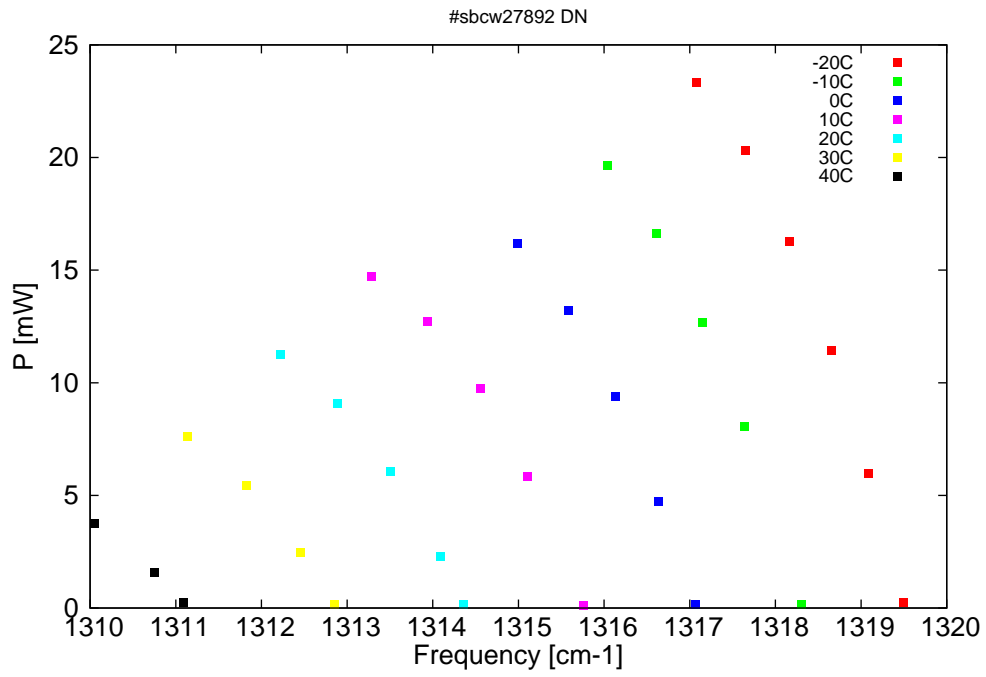


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

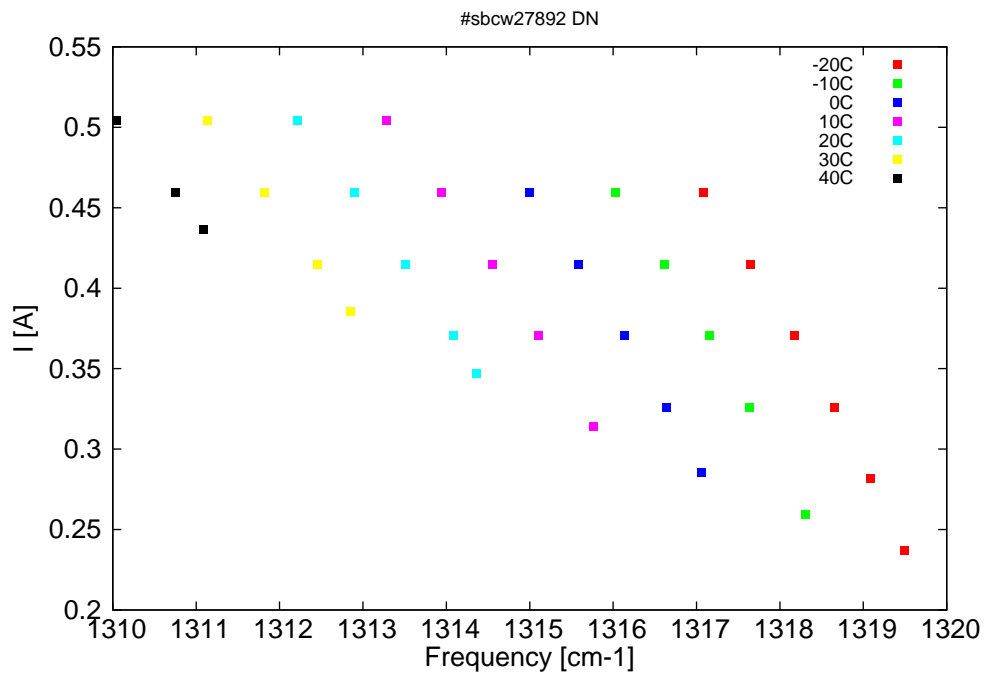


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7578.6	1319.5	0.2	-20	8.18	0.237
7581	1319.1	6	-20	8.48	0.282
7583.5	1318.7	11.5	-20	8.78	0.326
7586.3	1318.2	16.3	-20	9.07	0.371
7589.3	1317.6	20.3	-20	9.37	0.415
7592.5	1317.1	23.3	-20	9.66	0.459
7585.5	1318.3	0.1	-10	8.24	0.26
7589.3	1317.6	8	-10	8.68	0.326
7592.1	1317.2	12.7	-10	8.97	0.371
7595.2	1316.6	16.6	-10	9.27	0.415
7598.6	1316	19.7	-10	9.57	0.459
7592.7	1317.1	0.1	0	8.33	0.286
7595.1	1316.6	4.7	0	8.6	0.326
7598	1316.1	9.4	0	8.89	0.371
7601.2	1315.6	13.2	0	9.18	0.415
7604.6	1315	16.2	0	9.48	0.459
7600.2	1315.8	0.1	10	8.43	0.314
7603.9	1315.1	5.8	10	8.81	0.371
7607.1	1314.6	9.7	10	9.1	0.415
7610.7	1313.9	12.7	10	9.39	0.459
7614.5	1313.3	14.7	10	9.69	0.504
7608.3	1314.4	0.1	20	8.57	0.347
7609.9	1314.1	2.3	20	8.73	0.371
7613.2	1313.5	6.1	20	9.02	0.415
7616.8	1312.9	9.1	20	9.31	0.459
7620.7	1312.2	11.3	20	9.6	0.504
7617	1312.9	0.2	30	8.75	0.386
7619.3	1312.5	2.5	30	8.94	0.415
7623	1311.8	5.4	30	9.23	0.459
7626.9	1311.1	7.6	30	9.52	0.504
7627.2	1311.1	0.2	40	9	0.437
7629.2	1310.8	1.6	40	9.15	0.459
7633.3	1310.1	3.7	40	9.44	0.504

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

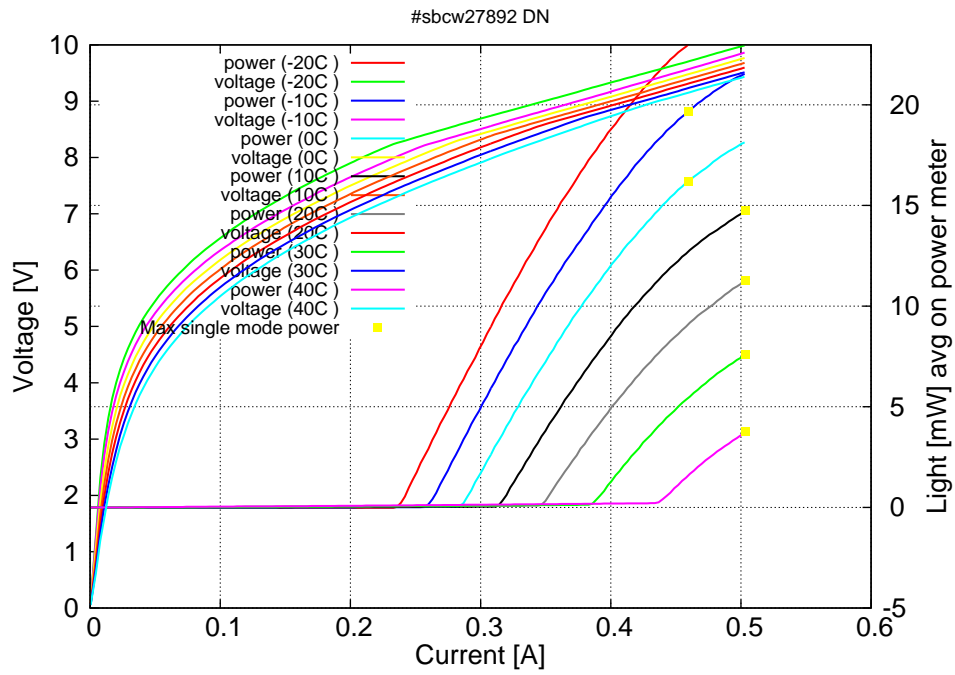


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.23A$ / $V_{th}=8.1V$ (2-wires measurements). Maximum operation current: 0.46A between -20C and 0C, 0.505A between 10C and 40C.

