

**Datasheet for #sbcw25393 DN**

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

**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 #sbcw25393 DN (please note that AlN submount numbering is A128X)

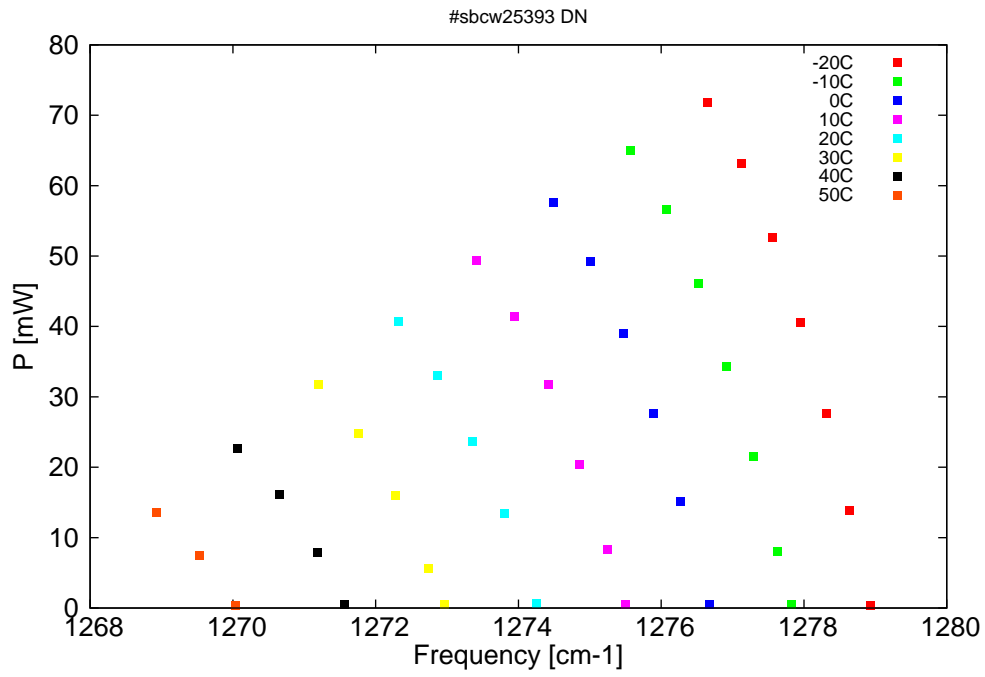


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

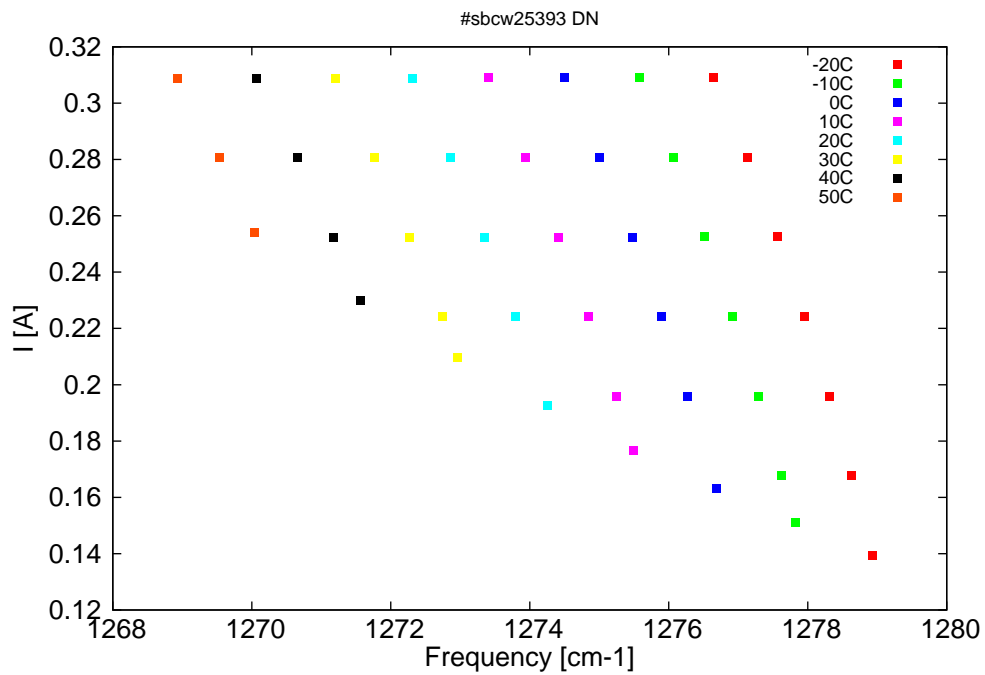


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7819	1278.9	0.4	-20	8.35	0.14
7820.8	1278.6	13.8	-20	8.6	0.168
7822.8	1278.3	27.6	-20	8.86	0.196
7825	1278	40.6	-20	9.1	0.224
7827.4	1277.6	52.7	-20	9.35	0.253
7830.1	1277.1	63.2	-20	9.6	0.281
7833	1276.6	71.8	-20	9.86	0.309
7825.8	1277.8	0.5	-10	8.34	0.151
7827	1277.6	8.1	-10	8.49	0.168
7829.1	1277.3	21.5	-10	8.74	0.196
7831.4	1276.9	34.4	-10	8.98	0.224
7833.8	1276.5	46.1	-10	9.23	0.253
7836.6	1276.1	56.6	-10	9.48	0.281
7839.6	1275.6	65	-10	9.74	0.309
7832.8	1276.7	0.5	0	8.34	0.163
7835.3	1276.3	15.1	0	8.63	0.196
7837.7	1275.9	27.6	0	8.87	0.224
7840.2	1275.5	39	0	9.12	0.252
7843.1	1275	49.3	0	9.37	0.281
7846.2	1274.5	57.6	0	9.63	0.309
7840.1	1275.5	0.5	10	8.37	0.177
7841.6	1275.2	8.4	10	8.54	0.196
7844.1	1274.8	20.4	10	8.79	0.224
7846.7	1274.4	31.7	10	9.03	0.252
7849.7	1273.9	41.5	10	9.28	0.281
7852.9	1273.4	49.4	10	9.54	0.309
7847.7	1274.3	0.6	20	8.43	0.193
7850.5	1273.8	13.4	20	8.7	0.224
7853.3	1273.4	23.7	20	8.95	0.252
7856.3	1272.9	33.1	20	9.2	0.281
7859.7	1272.3	40.7	20	9.45	0.309
7855.7	1273	0.5	30	8.5	0.21
7857.1	1272.7	5.7	30	8.63	0.224
7859.9	1272.3	15.9	30	8.88	0.252
7863.1	1271.8	24.8	30	9.13	0.281
7866.6	1271.2	31.8	30	9.39	0.309
7864.3	1271.6	0.5	40	8.62	0.23
7866.7	1271.2	7.9	40	8.82	0.252
7870	1270.7	16.2	40	9.07	0.281
7873.6	1270.1	22.7	40	9.33	0.309
7873.8	1270	0.4	50	8.77	0.254
7876.9	1269.5	7.5	50	9	0.281
7880.7	1268.9	13.6	50	9.26	0.309

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

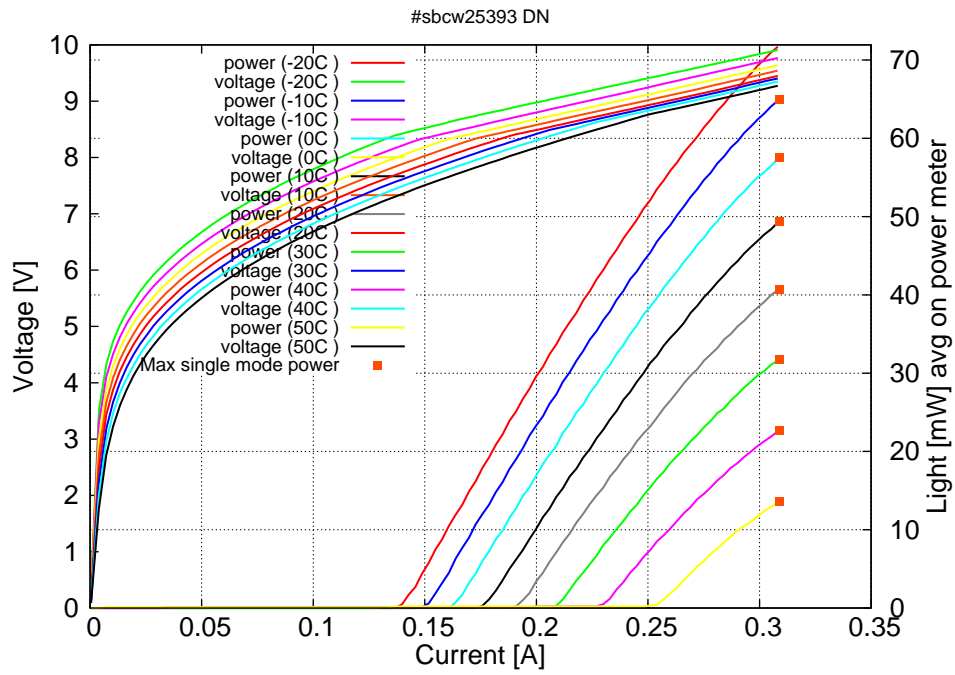


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.14A$  /  $V_{th}=8.3V$  (2-wires measurements). Maximum operation current: 0.31A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

