

Datasheet for #sbcw26093 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 #sbcw26093 DN (please note that AlN submount numbering is A0VYA)

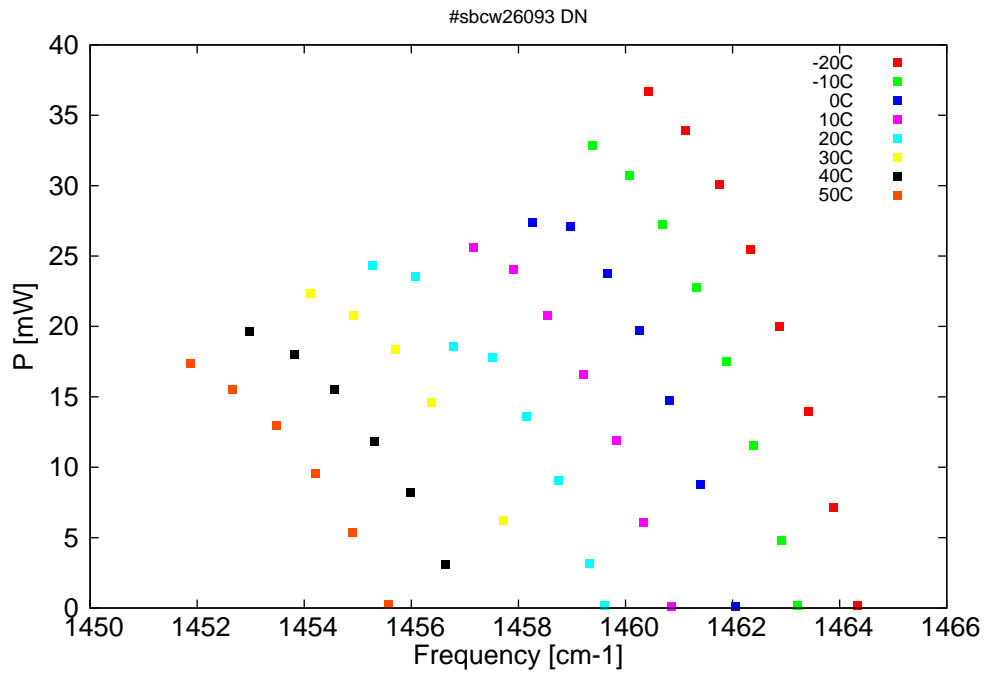


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

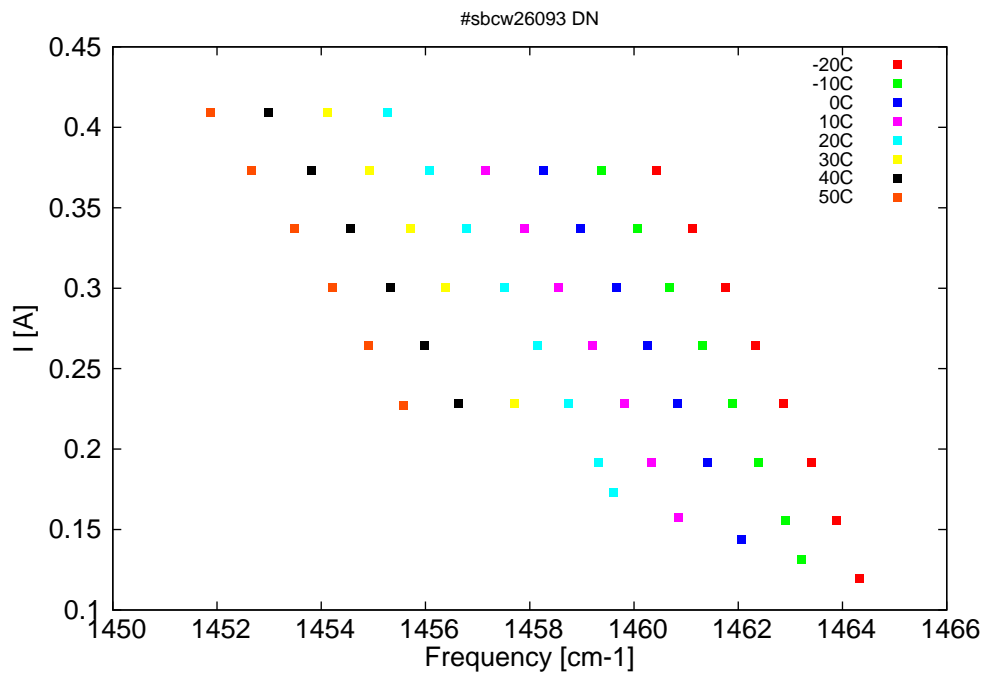


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6829	1464.3	0.2	-20	9.37	0.12
6831.1	1463.9	7.1	-20	9.74	0.156
6833.3	1463.4	13.9	-20	10.08	0.192
6835.9	1462.9	20	-20	10.41	0.228
6838.4	1462.3	25.4	-20	10.72	0.264
6841.1	1461.8	30.1	-20	11.04	0.301
6844.1	1461.1	33.9	-20	11.34	0.337
6847.3	1460.4	36.7	-20	11.66	0.373
6834.2	1463.2	0.2	-10	9.35	0.131
6835.7	1462.9	4.8	-10	9.61	0.156
6838.1	1462.4	11.5	-10	9.95	0.192
6840.5	1461.9	17.5	-10	10.28	0.228
6843.1	1461.3	22.8	-10	10.6	0.264
6846.1	1460.7	27.2	-10	10.91	0.301
6849	1460.1	30.7	-10	11.23	0.337
6852.2	1459.4	32.8	-10	11.53	0.373
6839.7	1462.1	0.1	0	9.35	0.144
6842.7	1461.4	8.8	0	9.83	0.192
6845.4	1460.8	14.7	0	10.16	0.228
6848.1	1460.3	19.7	0	10.48	0.264
6850.9	1459.7	23.8	0	10.8	0.301
6854.2	1459	27.1	0	11.11	0.337
6857.5	1458.3	27.4	0	11.42	0.373
6845.3	1460.9	0.1	10	9.37	0.158
6847.7	1460.3	6.1	10	9.71	0.192
6850.1	1459.8	11.9	10	10.04	0.228
6853	1459.2	16.6	10	10.36	0.264
6856.2	1458.5	20.8	10	10.69	0.301
6859.2	1457.9	24.1	10	11	0.337
6862.7	1457.2	25.6	10	11.31	0.373
6851.2	1459.6	0.2	20	9.42	0.173
6852.5	1459.3	3.2	20	9.6	0.192
6855.2	1458.7	9	20	9.93	0.228
6858	1458.2	13.6	20	10.25	0.264
6861	1457.5	17.8	20	10.58	0.301
6864.4	1456.8	18.6	20	10.89	0.337
6867.8	1456.1	23.6	20	11.21	0.373
6871.5	1455.3	24.3	20	11.51	0.409
6860	1457.7	6.2	30	9.82	0.228
6866.3	1456.4	14.6	30	10.47	0.301
6869.5	1455.7	18.3	30	10.78	0.337
6873.2	1454.9	20.8	30	11.1	0.373
6877	1454.1	22.3	30	11.41	0.409
6865.2	1456.6	3.1	40	9.71	0.228
6868.2	1456	8.2	40	10.04	0.264
6871.3	1455.3	11.8	40	10.35	0.301
6874.9	1454.6	15.5	40	10.67	0.337
6878.4	1453.8	18	40	10.99	0.373
6882.4	1453	19.7	40	11.3	0.409

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λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6870.1	1455.6	0.2	50	9.6	0.227
6873.3	1454.9	5.4	50	9.94	0.264
6876.6	1454.2	9.6	50	10.25	0.301
6880	1453.5	13	50	10.57	0.337
6883.9	1452.7	15.5	50	10.88	0.373
6887.6	1451.9	17.3	50	11.19	0.409

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

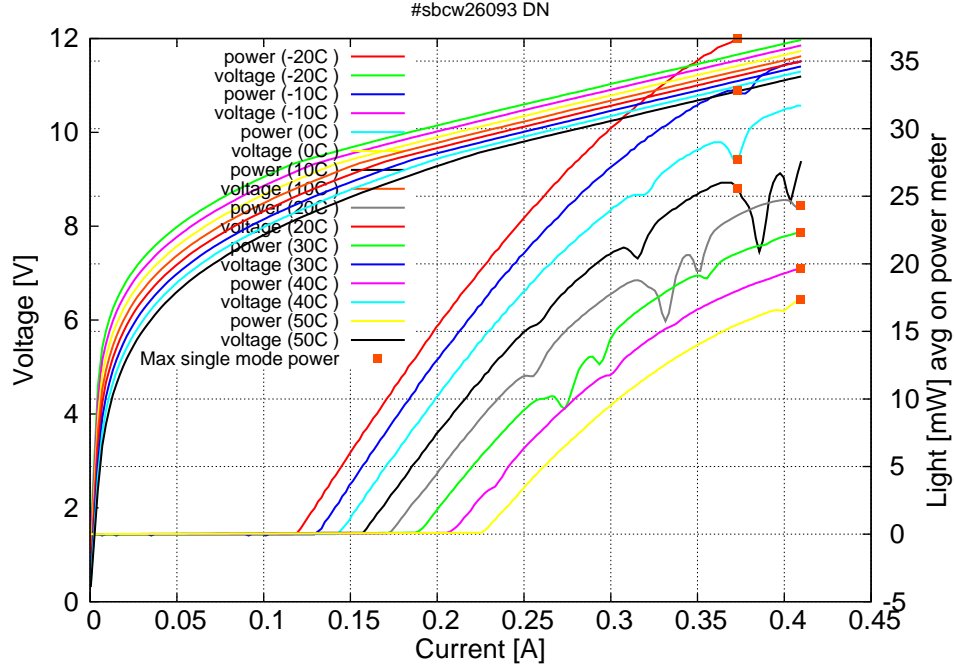


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.12A$ / $V_{th}=9.3V$ (2-wires measurements). Maximum operation current: 0.375A between -20C and 10C, 0.41A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

