

Datasheet for #sbcw25890 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 #sbcw25890 DN (please note that AlN submount numbering is A0VXL)

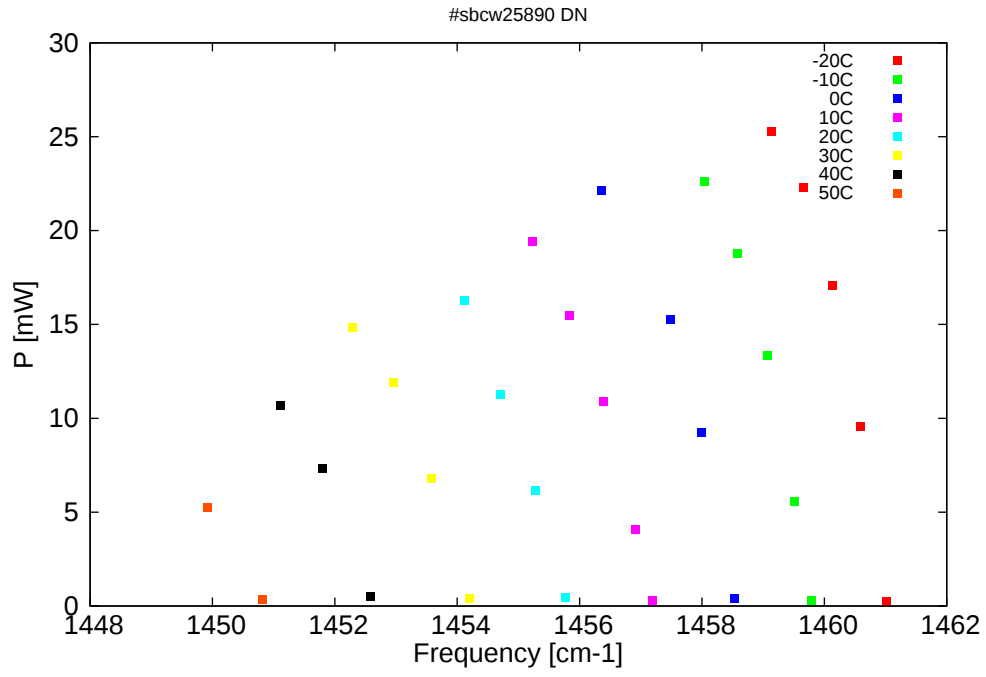


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

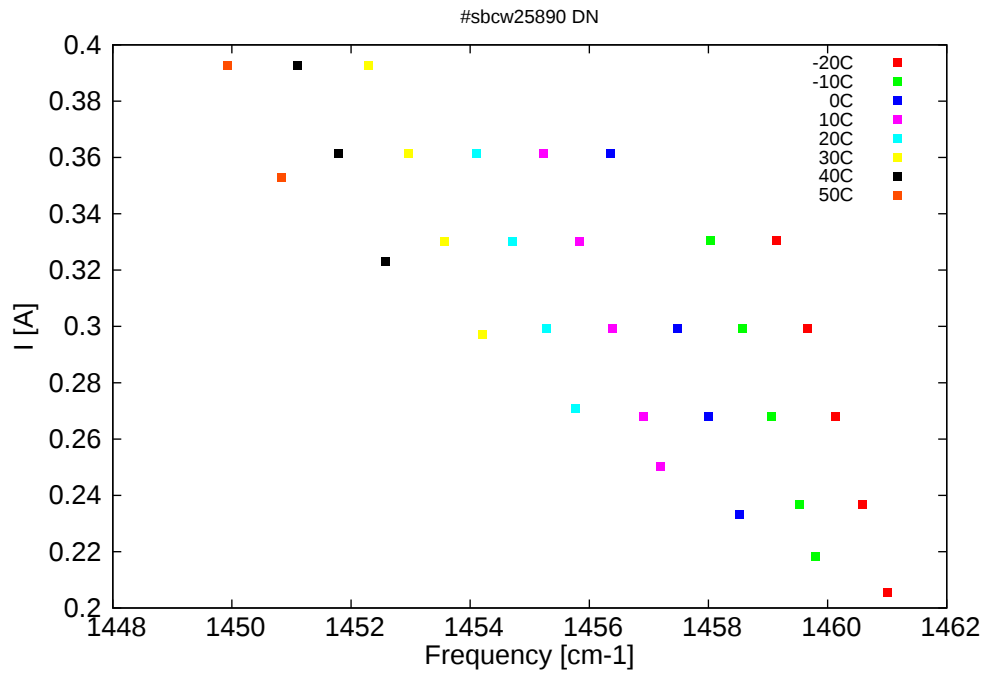


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
6844.6	1461	0.2	-20	10.71	0.205
6846.6	1460.6	9.6	-20	11.02	0.237
6848.7	1460.1	17.1	-20	11.31	0.268
6850.9	1459.7	22.3	-20	11.59	0.299
6853.3	1459.1	25.3	-20	11.89	0.33
6850.3	1459.8	0.3	-10	10.69	0.218
6851.6	1459.5	5.6	-10	10.86	0.237
6853.7	1459.1	13.3	-10	11.16	0.268
6856	1458.6	18.8	-10	11.45	0.299
6858.5	1458	22.6	-10	11.75	0.33
6856.2	1458.5	0.4	0	10.7	0.233
6858.7	1458	9.2	0	11.03	0.268
6861.1	1457.5	15.3	0	11.32	0.299
6866.4	1456.4	22.1	0	11.91	0.362
6862.5	1457.2	0.3	10	10.74	0.25
6863.8	1456.9	4.1	10	10.91	0.268
6866.3	1456.4	10.9	10	11.21	0.299
6868.9	1455.8	15.5	10	11.5	0.33
6871.7	1455.2	19.4	10	11.79	0.362
6869.2	1455.8	0.4	20	10.84	0.271
6871.5	1455.3	6.1	20	11.11	0.299
6874.2	1454.7	11.2	20	11.41	0.33
6877.1	1454.1	16.3	20	11.7	0.362
6876.6	1454.2	0.4	30	11	0.297
6879.6	1453.6	6.8	30	11.32	0.33
6882.5	1453	11.9	30	11.61	0.362
6885.7	1452.3	14.9	30	11.91	0.393
6884.3	1452.6	0.5	40	11.14	0.323
6888	1451.8	7.3	40	11.51	0.362
6891.3	1451.1	10.7	40	11.81	0.393
6892.6	1450.8	0.4	50	11.32	0.353
6896.9	1449.9	5.2	50	11.72	0.393

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

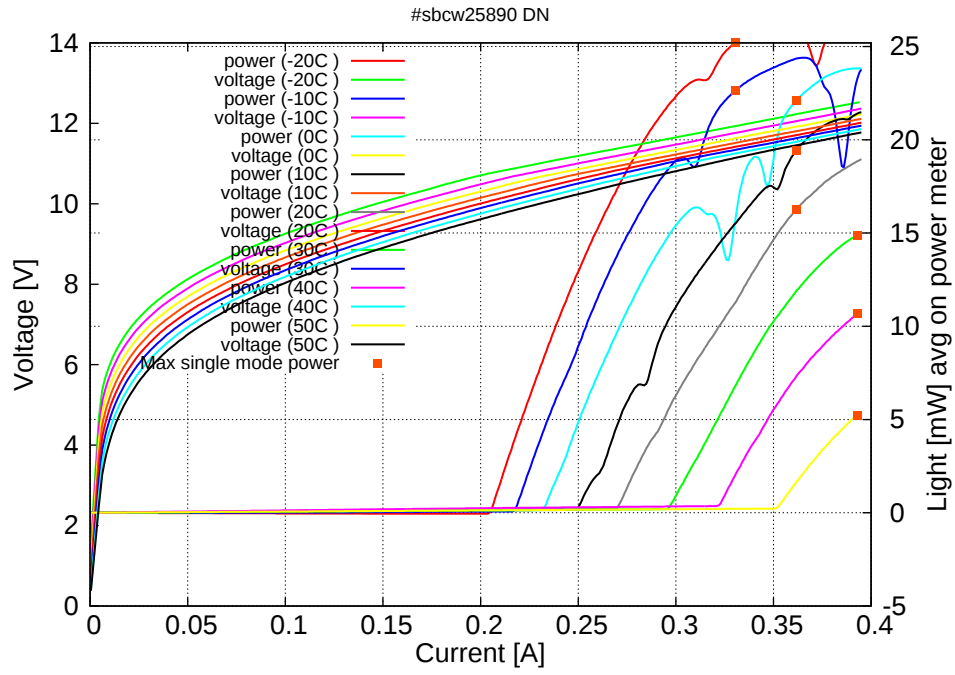


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.20A$ / $V_{th}=10.8V$ (2-wires measurements). Maximum operation current: 0.33A between -20C and -10C, 0.36A between 0C and 20C, 0.395A between 30C and 50C.

Figure 3: spectra at different temperatures for various DC currents

