

Datasheet for #sbcw25889 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 #sbcw25889 DN (please note that AlN submount numbering is A0VXX)

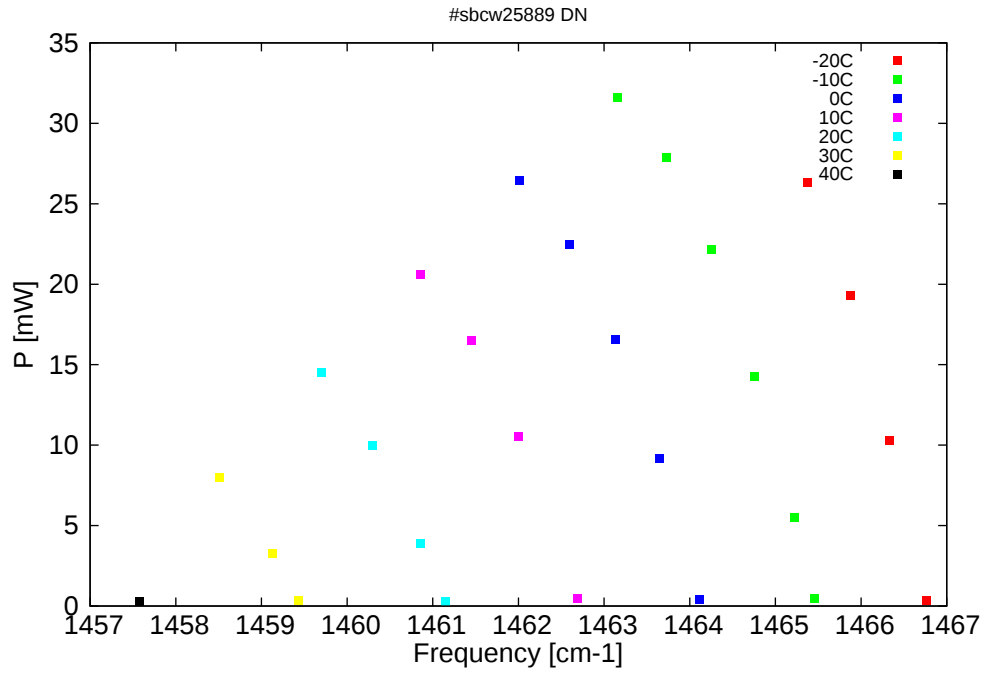


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

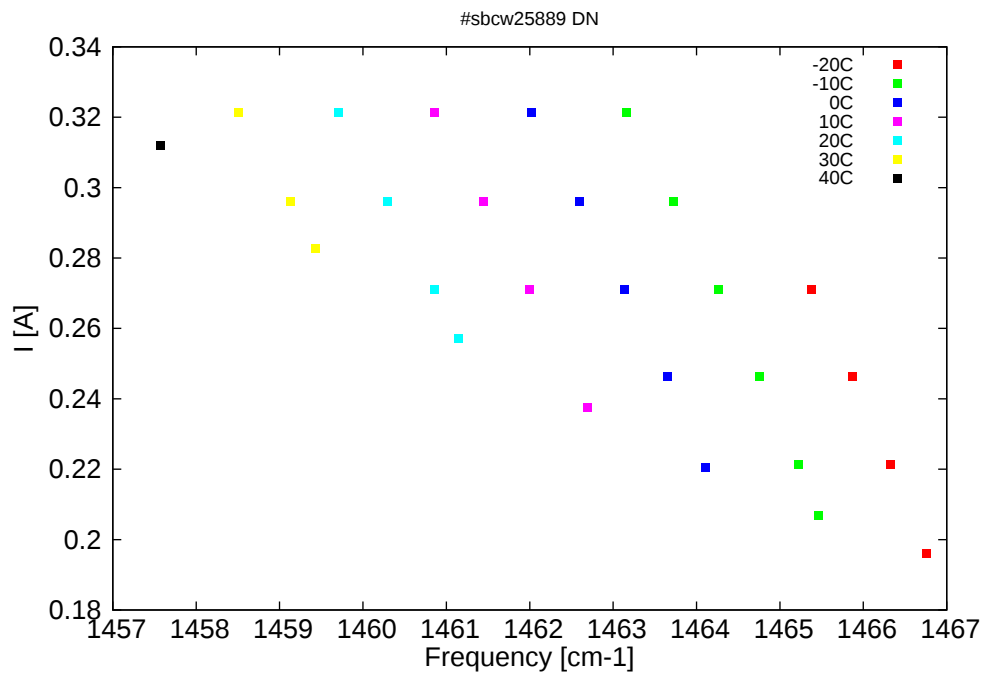


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
6817.7	1466.8	0.3	-20	11.6	0.196
6819.8	1466.3	10.3	-20	11.93	0.221
6821.9	1465.9	19.3	-20	12.26	0.246
6824.2	1465.4	26.3	-20	12.57	0.271
6823.8	1465.5	0.5	-10	11.57	0.207
6824.9	1465.2	5.5	-10	11.76	0.221
6827.1	1464.8	14.3	-10	12.08	0.246
6829.4	1464.3	22.1	-10	12.4	0.271
6831.9	1463.7	27.9	-10	12.72	0.296
6834.5	1463.2	31.6	-10	13.04	0.321
6830.1	1464.1	0.4	0	11.59	0.221
6832.2	1463.6	9.1	0	11.92	0.246
6834.6	1463.1	16.6	0	12.24	0.271
6837.2	1462.6	22.5	0	12.55	0.296
6839.9	1462	26.5	0	12.87	0.321
6836.7	1462.7	0.4	10	11.66	0.238
6839.9	1462	10.5	10	12.08	0.271
6842.5	1461.5	16.5	10	12.4	0.296
6845.3	1460.9	20.6	10	12.71	0.321
6843.9	1461.2	0.3	20	11.76	0.257
6845.3	1460.9	3.9	20	11.93	0.271
6847.9	1460.3	9.9	20	12.25	0.296
6850.7	1459.7	14.5	20	12.56	0.321
6852	1459.4	0.4	30	11.94	0.283
6853.4	1459.1	3.3	30	12.1	0.296
6856.3	1458.5	8	30	12.41	0.321
6860.7	1457.6	0.3	40	12.15	0.312

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

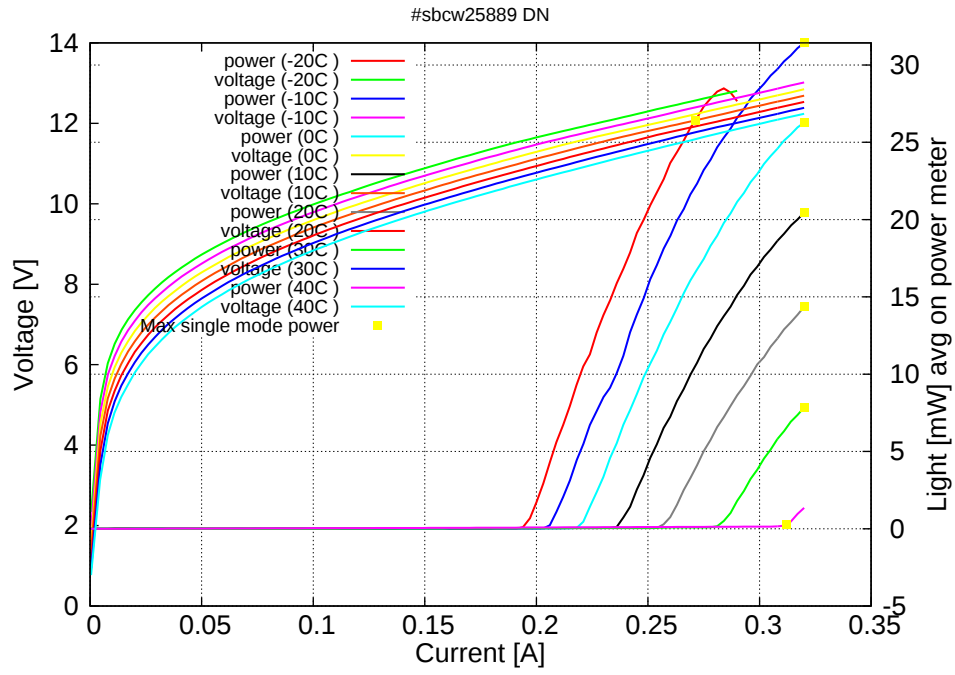


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.19A$ / $V_{th}=11.6V$ (2-wires measurements). Maximum operation current: 0.27A at -20C, 0.32A between -10C and 40C.

Figure 3: spectra at different temperatures for various DC currents

