

**Datasheet for #sbcw24058 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 #sbcw24058 DN (please note that AlN submount numbering is A0ZT8)

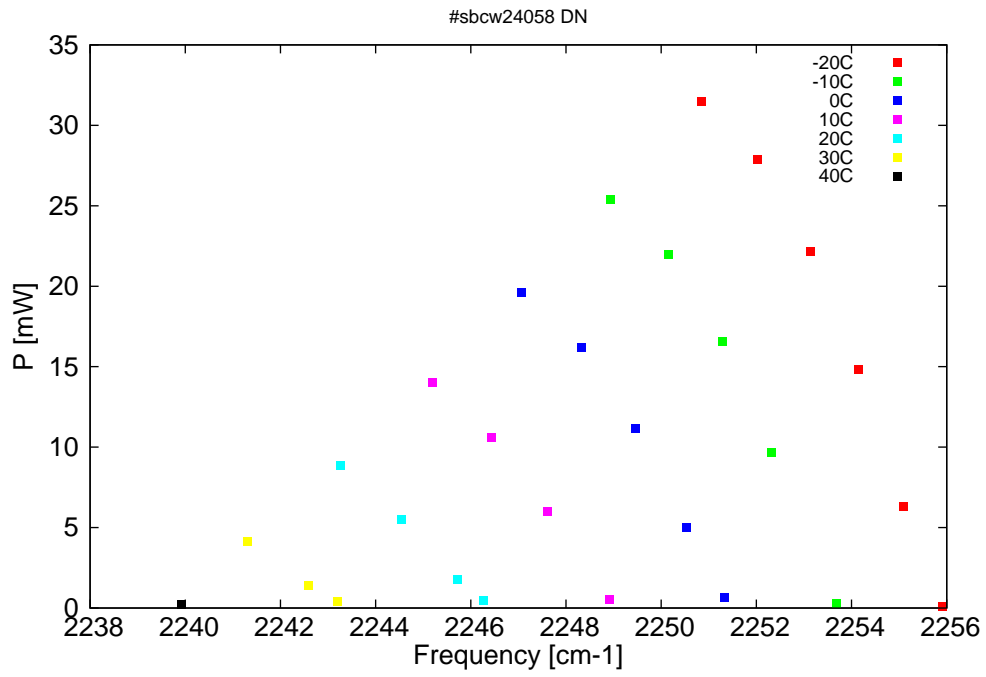


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

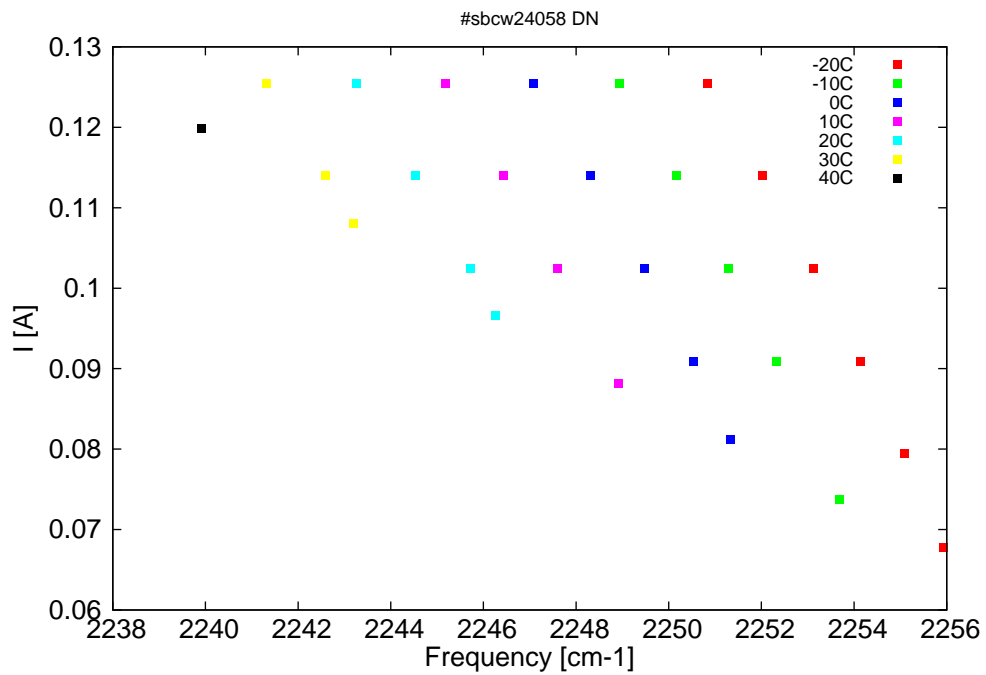


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4432.8	2255.9	0.1	-20	12.95	0.068
4434.4	2255.1	6.3	-20	13.24	0.079
4436.3	2254.1	14.9	-20	13.54	0.091
4438.3	2253.1	22.2	-20	13.84	0.102
4440.5	2252	27.9	-20	14.14	0.114
4442.8	2250.8	31.5	-20	14.45	0.126
4437.2	2253.7	0.3	-10	12.97	0.074
4439.9	2252.3	9.7	-10	13.39	0.091
4441.9	2251.3	16.6	-10	13.69	0.102
4444.1	2250.2	22	-10	13.99	0.114
4446.5	2248.9	25.4	-10	14.29	0.126
4441.8	2251.3	0.6	0	13.03	0.081
4443.4	2250.5	5	0	13.26	0.091
4445.5	2249.5	11.1	0	13.56	0.102
4447.8	2248.3	16.2	0	13.85	0.114
4450.2	2247.1	19.6	0	14.14	0.126
4446.6	2248.9	0.5	10	13.09	0.088
4449.2	2247.6	6	10	13.43	0.102
4451.5	2246.4	10.6	10	13.72	0.114
4454	2245.2	14	10	14.01	0.126
4451.8	2246.3	0.5	20	13.2	0.097
4452.9	2245.7	1.8	20	13.33	0.102
4455.3	2244.5	5.5	20	13.61	0.114
4457.8	2243.3	8.8	20	13.89	0.126
4457.9	2243.2	0.4	30	13.4	0.108
4459.1	2242.6	1.4	30	13.52	0.114
4461.7	2241.3	4.2	30	13.78	0.126
4464.4	2239.9	0.2	40	13.6	0.12

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

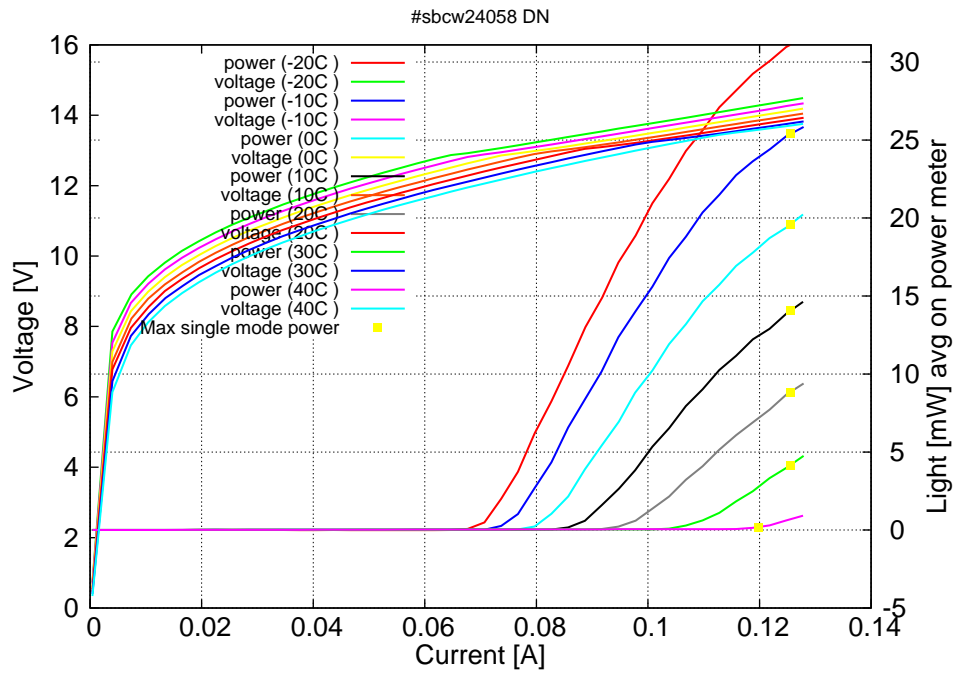


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=13.0V$  (2-wires measurements). Maximum operation current: 0.13A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

