

**Datasheet for #sbcw24059 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 #sbcw24059 DN (please note that AlN submount numbering is A0ZRT)

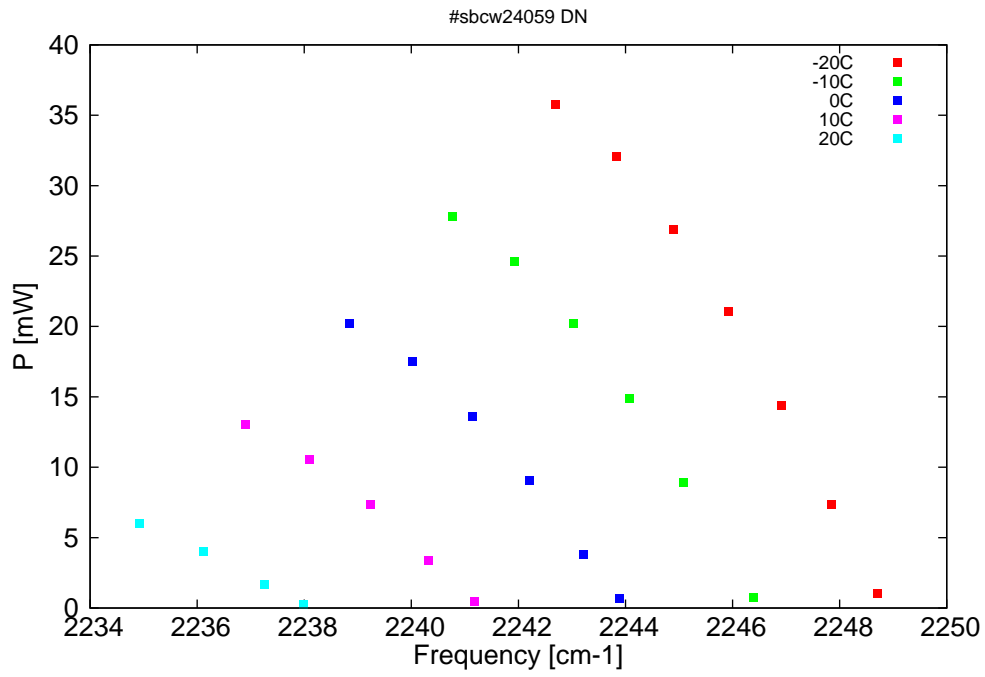


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

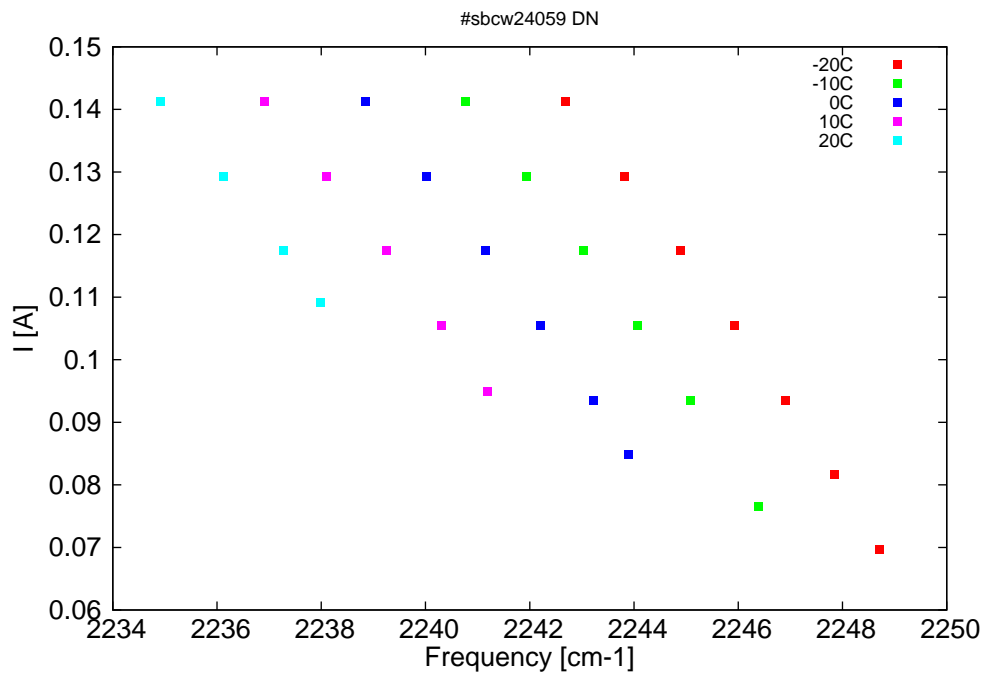


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4447	2248.7	1	-20	12.79	0.07
4448.7	2247.8	7.4	-20	13.06	0.082
4450.5	2246.9	14.4	-20	13.33	0.094
4452.5	2245.9	21.1	-20	13.6	0.106
4454.5	2244.9	26.9	-20	13.85	0.117
4456.7	2243.8	32	-20	14.11	0.129
4458.9	2242.7	35.8	-20	14.38	0.141
4451.6	2246.4	0.8	-10	12.78	0.077
4454.2	2245.1	8.9	-10	13.14	0.094
4456.2	2244.1	14.9	-10	13.39	0.105
4458.3	2243	20.2	-10	13.65	0.117
4460.4	2241.9	24.6	-10	13.89	0.129
4462.7	2240.8	27.8	-10	14.14	0.141
4456.5	2243.9	0.7	0	12.86	0.085
4457.9	2243.2	3.8	0	13.04	0.094
4459.9	2242.2	9.1	0	13.28	0.106
4462	2241.1	13.6	0	13.52	0.117
4464.2	2240	17.5	0	13.77	0.129
4466.6	2238.8	20.2	0	14	0.141
4461.9	2241.2	0.5	10	12.99	0.095
4463.7	2240.3	3.4	10	13.17	0.105
4465.8	2239.2	7.4	10	13.4	0.117
4468.1	2238.1	10.6	10	13.65	0.129
4470.5	2236.9	13	10	13.87	0.141
4468.3	2238	0.3	20	13.21	0.109
4469.7	2237.3	1.7	20	13.34	0.117
4472	2236.1	4	20	13.57	0.129
4474.4	2234.9	6	20	13.79	0.141

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

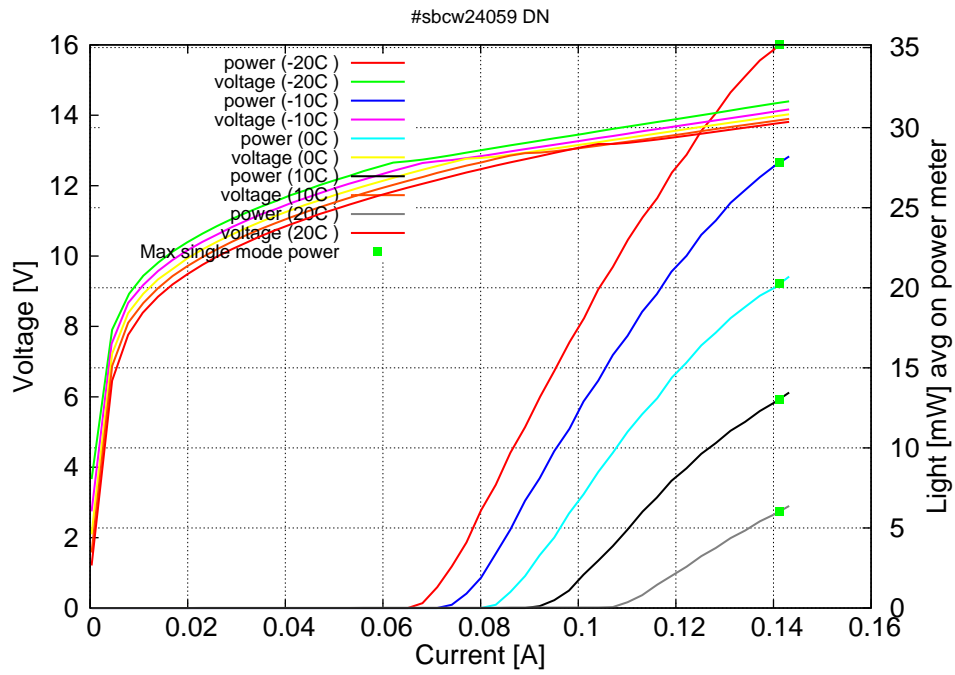


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.07A$  /  $V_{th}=12.7V$  (2-wires measurements). Maximum operation current: 0.145A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

