

**Datasheet for #sbcw24839 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 #sbcw24839 DN (please note that AlN submount numbering is A12A3)

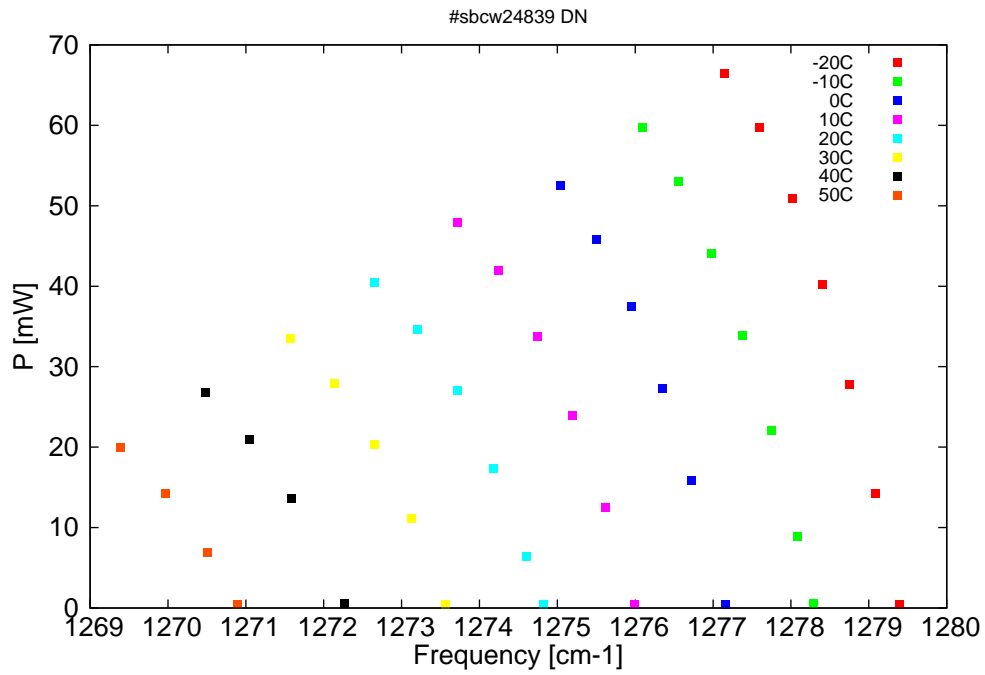


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

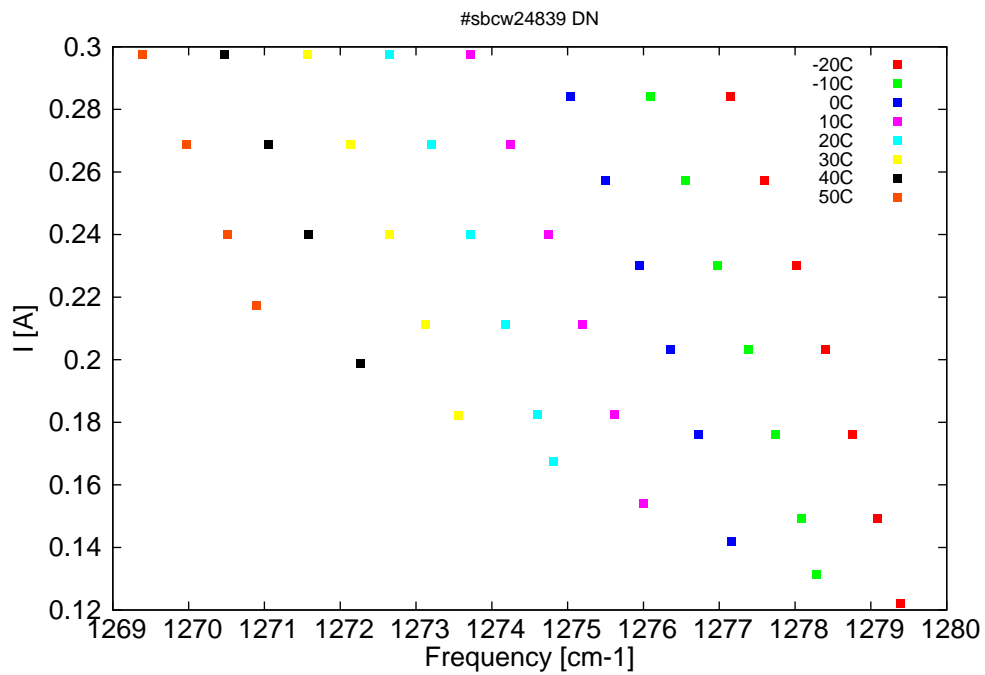


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
7816.2	1279.4	0.4	-20	8.13	0.122
7818.1	1279.1	14.2	-20	8.38	0.149
7820.1	1278.8	27.8	-20	8.61	0.176
7822.2	1278.4	40.2	-20	8.84	0.203
7824.6	1278	50.9	-20	9.07	0.23
7827.2	1277.6	59.7	-20	9.31	0.257
7829.9	1277.2	66.5	-20	9.54	0.284
7823	1278.3	0.6	-10	8.09	0.132
7824.2	1278.1	8.9	-10	8.25	0.149
7826.3	1277.7	22.1	-10	8.49	0.176
7828.5	1277.4	33.9	-10	8.72	0.203
7831	1277	44.1	-10	8.95	0.23
7833.6	1276.6	53	-10	9.18	0.257
7836.4	1276.1	59.8	-10	9.42	0.284
7829.9	1277.2	0.4	0	8.08	0.142
7832.5	1276.7	15.9	0	8.38	0.176
7834.8	1276.4	27.3	0	8.61	0.203
7837.3	1275.9	37.5	0	8.84	0.23
7840	1275.5	45.8	0	9.07	0.257
7842.9	1275	52.5	0	9.3	0.284
7837	1276	0.4	10	8.08	0.154
7839.3	1275.6	12.5	10	8.33	0.183
7841.9	1275.2	23.9	10	8.58	0.211
7844.7	1274.7	33.7	10	8.82	0.24
7847.8	1274.2	42	10	9.06	0.269
7851.1	1273.7	48	10	9.31	0.298
7844.3	1274.8	0.5	20	8.11	0.167
7845.6	1274.6	6.5	20	8.24	0.183
7848.2	1274.2	17.3	20	8.48	0.211
7851.1	1273.7	27	20	8.73	0.24
7854.2	1273.2	34.7	20	8.97	0.269
7857.6	1272.7	40.5	20	9.21	0.298
7852	1273.6	0.4	30	8.15	0.182
7854.7	1273.1	11.1	30	8.4	0.211
7857.6	1272.7	20.3	30	8.64	0.24
7860.8	1272.1	27.9	30	8.88	0.269
7864.3	1271.6	33.5	30	9.13	0.298
7860	1272.3	0.5	40	8.22	0.199
7864.2	1271.6	13.6	40	8.57	0.24
7867.5	1271.1	21	40	8.81	0.269
7871.1	1270.5	26.8	40	9.05	0.298
7868.5	1270.9	0.5	50	8.31	0.217
7870.9	1270.5	6.9	50	8.5	0.24
7874.2	1270	14.3	50	8.74	0.269
7877.8	1269.4	20	50	8.98	0.298

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

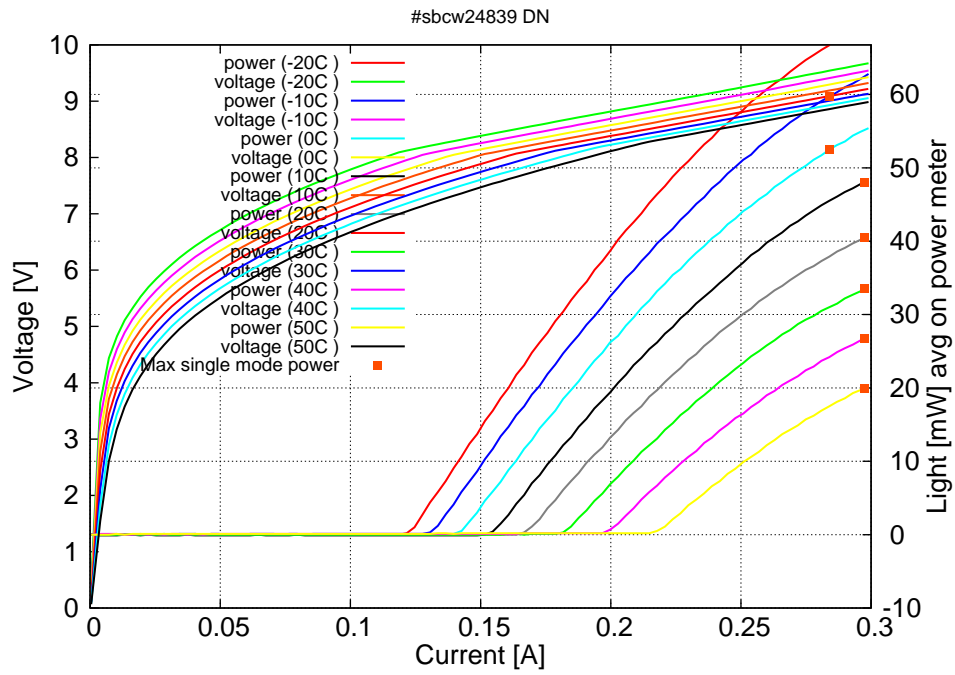


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12A$  /  $V_{th}=8.1V$  (2-wires measurements). Maximum operation current: 0.30A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

