

**Datasheet for #sbcw24030 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 #sbcw24030 DN (please note that AlN submount numbering is A0Z5M)

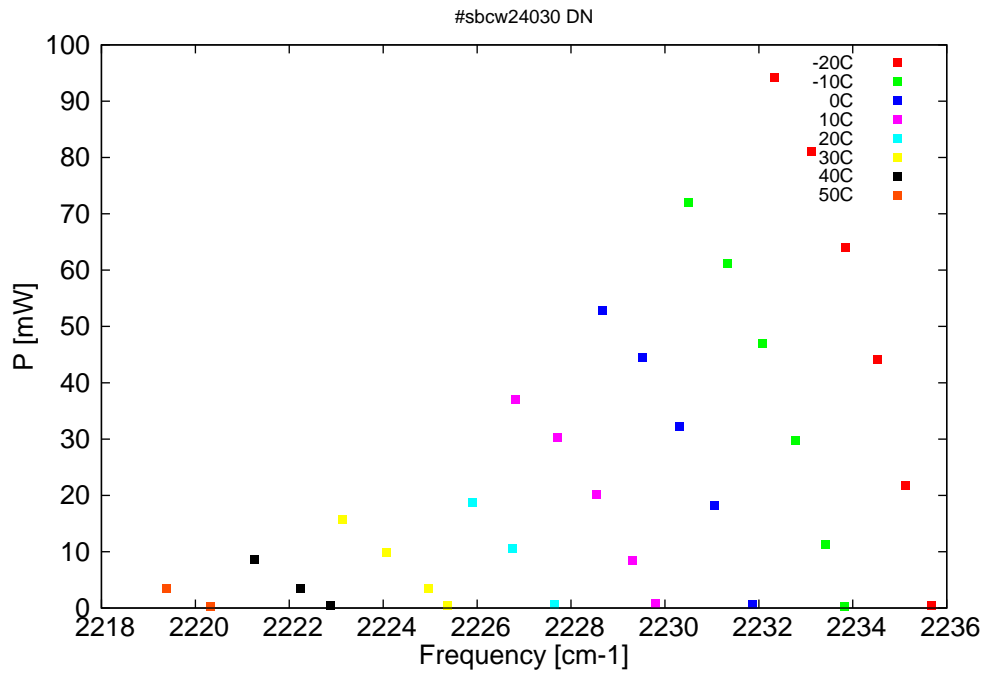


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

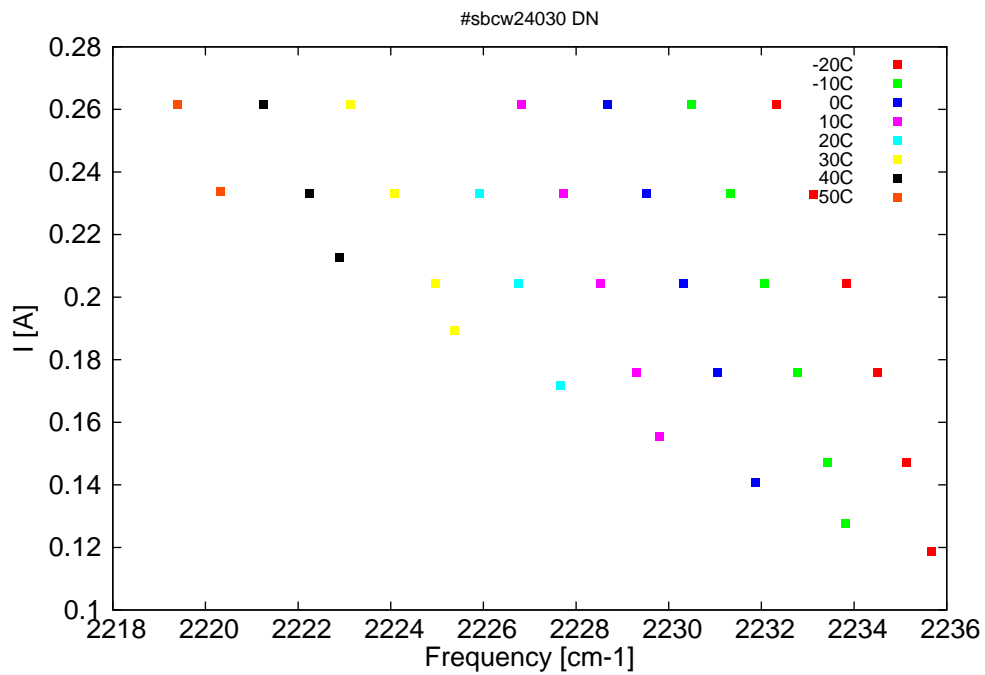


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4472.9	2235.7	0.4	-20	8.44	0.119
4474	2235.1	21.8	-20	8.65	0.147
4475.2	2234.5	44.1	-20	8.86	0.176
4476.6	2233.8	64	-20	9.07	0.204
4478	2233.1	81.1	-20	9.28	0.233
4479.6	2232.3	94.3	-20	9.5	0.262
4476.6	2233.8	0.2	-10	8.44	0.128
4477.4	2233.4	11.3	-10	8.59	0.147
4478.7	2232.8	29.8	-10	8.81	0.176
4480.1	2232.1	46.9	-10	9.02	0.204
4481.6	2231.3	61.3	-10	9.23	0.233
4483.3	2230.5	72	-10	9.45	0.262
4480.6	2231.9	0.7	0	8.5	0.141
4482.2	2231.1	18.1	0	8.76	0.176
4483.7	2230.3	32.2	0	8.98	0.204
4485.3	2229.5	44.5	0	9.2	0.233
4487	2228.7	52.8	0	9.42	0.262
4484.7	2229.8	0.8	10	8.57	0.156
4485.7	2229.3	8.4	10	8.73	0.176
4487.2	2228.5	20.1	10	8.95	0.204
4488.9	2227.7	30.3	10	9.17	0.233
4490.7	2226.8	37.1	10	9.4	0.262
4489	2227.7	0.7	20	8.67	0.172
4490.8	2226.8	10.5	20	8.92	0.204
4492.6	2225.9	18.8	20	9.14	0.233
4493.6	2225.4	0.5	30	8.79	0.189
4494.5	2225	3.5	30	8.9	0.204
4496.2	2224.1	9.8	30	9.12	0.233
4498.2	2223.1	15.8	30	9.35	0.262
4498.7	2222.9	0.5	40	8.95	0.213
4500	2222.2	3.5	40	9.1	0.233
4501.9	2221.3	8.7	40	9.33	0.262
4503.8	2220.3	0.3	50	9.11	0.234
4505.7	2219.4	3.5	50	9.32	0.262

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

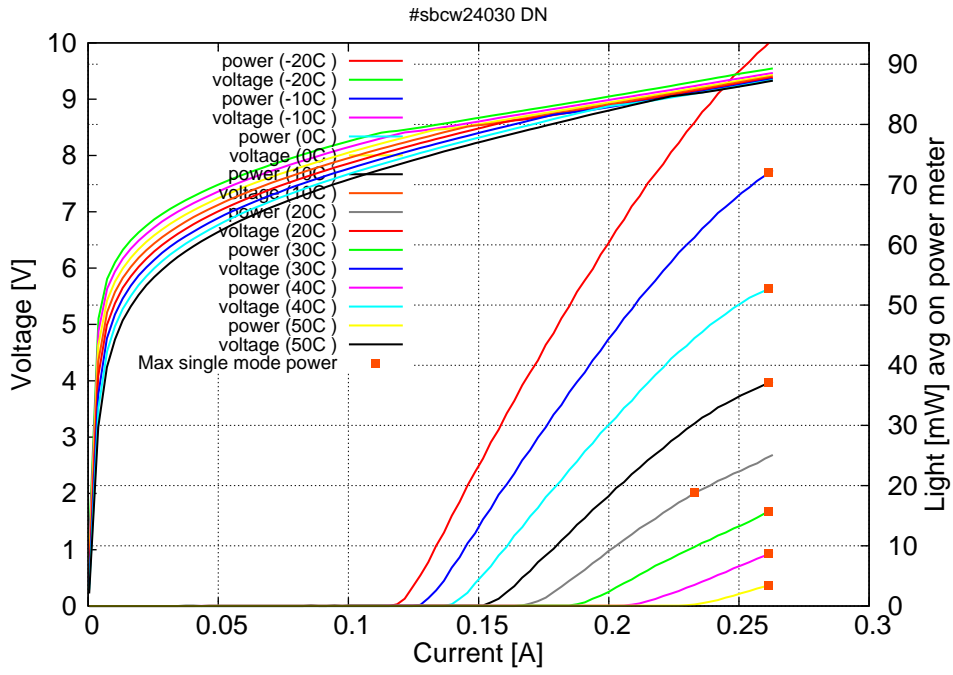


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.12A$  /  $V_{th}=8.5V$  (2-wires measurements). Maximum operation current: 0.265A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

