

**Datasheet for #sbcw24950 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 #sbcw24950 DN (please note that AlN submount numbering is A121C)

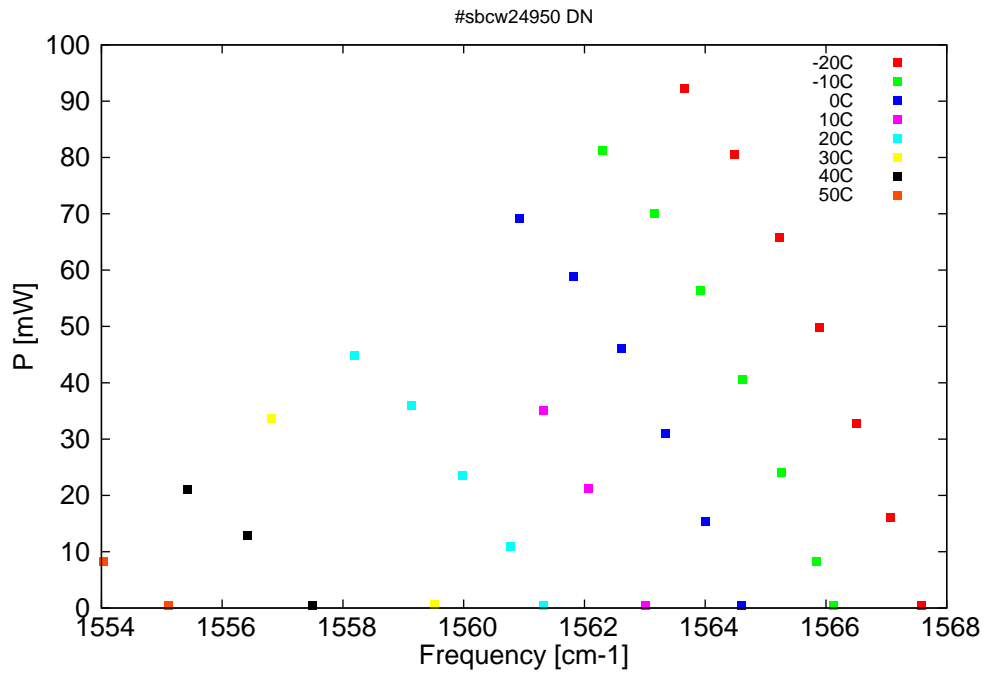


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

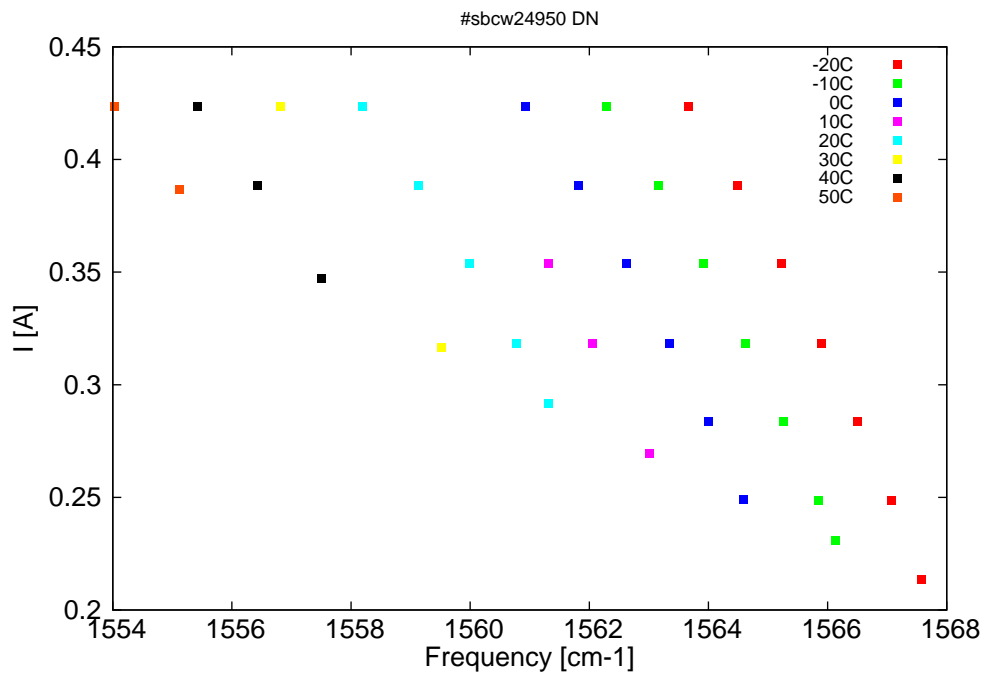


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
6379.3	1567.6	0.4	-20	8.78	0.214
6381.4	1567.1	16.1	-20	9.03	0.249
6383.6	1566.5	32.8	-20	9.27	0.284
6386.1	1565.9	49.8	-20	9.51	0.319
6388.9	1565.2	65.7	-20	9.76	0.354
6391.9	1564.5	80.5	-20	10.02	0.389
6395.3	1563.7	92.2	-20	10.3	0.424
6385.2	1566.1	0.4	-10	8.82	0.231
6386.4	1565.8	8.2	-10	8.95	0.249
6388.7	1565.3	24	-10	9.19	0.284
6391.3	1564.6	40.5	-10	9.45	0.319
6394.2	1563.9	56.3	-10	9.7	0.354
6397.3	1563.2	70	-10	9.97	0.389
6400.8	1562.3	81.3	-10	10.25	0.424
6391.4	1564.6	0.4	0	8.88	0.249
6393.8	1564	15.4	0	9.12	0.284
6396.5	1563.3	30.9	0	9.38	0.319
6399.5	1562.6	46	0	9.64	0.354
6402.8	1561.8	58.9	0	9.91	0.389
6406.4	1560.9	69.1	0	10.2	0.424
6397.9	1563	0.4	10	8.95	0.269
6401.8	1562.1	21.1	10	9.32	0.319
6404.9	1561.3	35.1	10	9.58	0.354
6404.8	1561.3	0.5	20	9.05	0.292
6407.1	1560.8	10.9	20	9.25	0.319
6410.3	1560	23.5	20	9.52	0.354
6413.8	1559.1	35.9	20	9.8	0.389
6417.7	1558.2	44.9	20	10.09	0.424
6412.2	1559.5	0.5	30	9.17	0.317
6423.4	1556.8	33.6	30	10.03	0.424
6420.6	1557.5	0.4	40	9.34	0.347
6425	1556.4	12.9	40	9.67	0.389
6429.1	1555.4	21.1	40	9.96	0.424
6430.4	1555.1	0.4	50	9.59	0.387
6434.9	1554	8.3	50	9.89	0.424

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

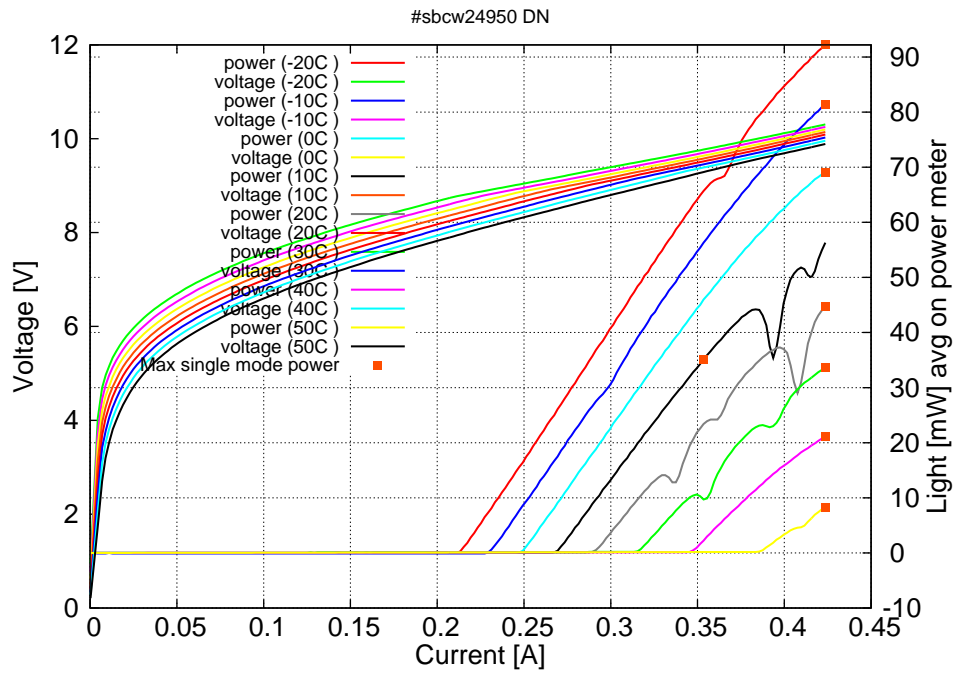


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.21A$  /  $V_{th}=8.75V$  (2-wires measurements). Maximum operation current: 0.425A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

