

**Datasheet for #sbcw22441 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 #sbcw22441 DN (please note that AlN submount numbering is A0MTK)

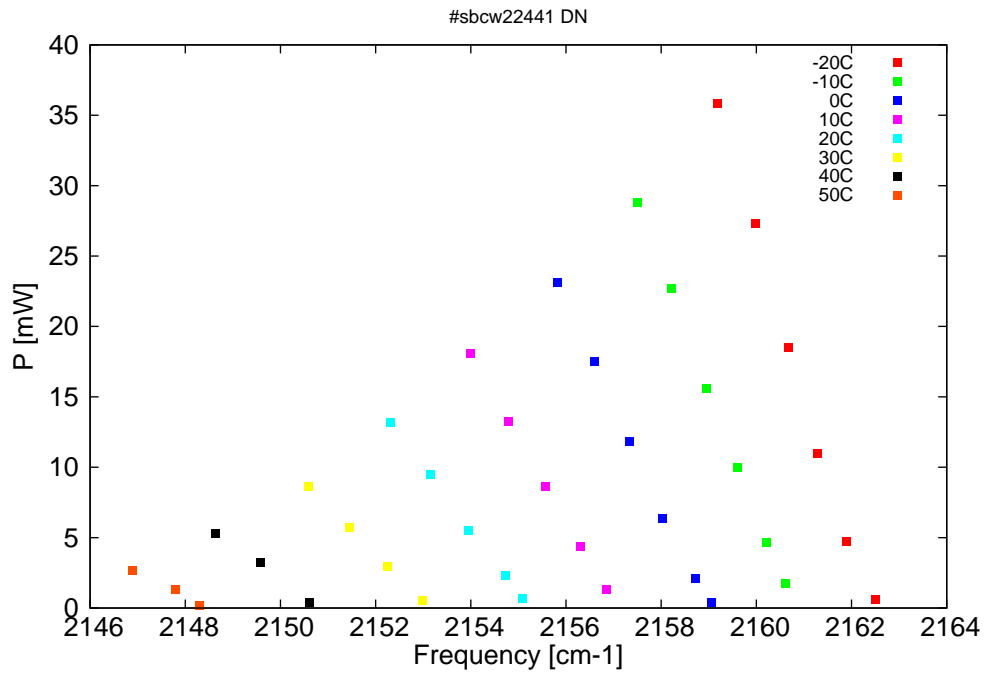


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

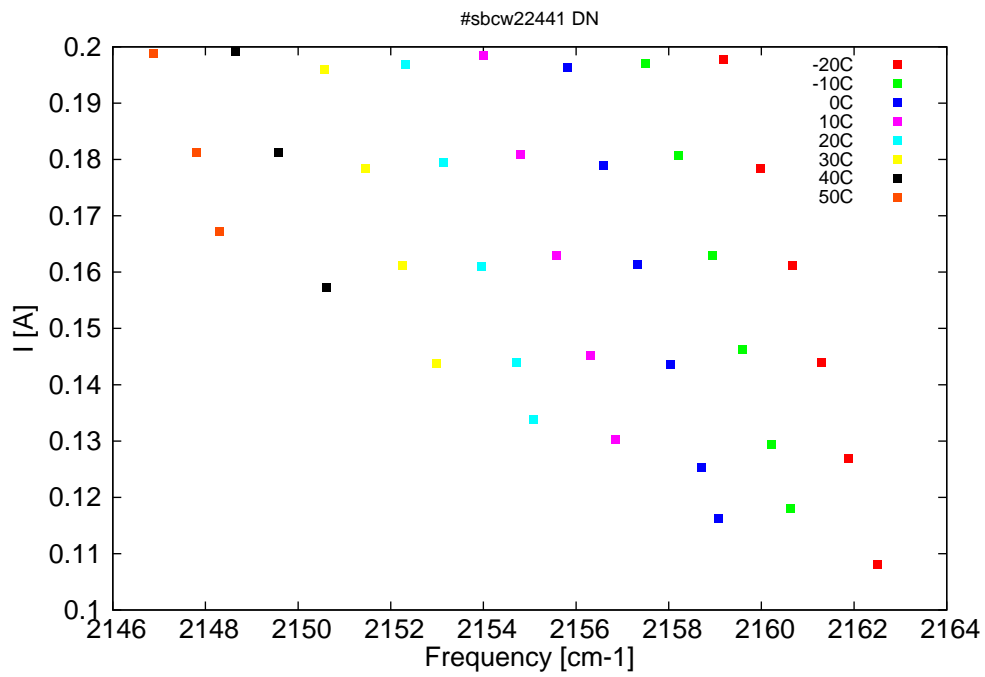


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
4624.2	2162.5	0.6	-20	11.99	0.108
4625.6	2161.9	4.8	-20	12.13	0.127
4626.9	2161.3	11	-20	12.31	0.144
4628.2	2160.7	18.5	-20	12.51	0.161
4629.7	2160	27.3	-20	12.75	0.178
4631.4	2159.2	35.8	-20	13.03	0.198
4628.3	2160.6	1.7	-10	11.97	0.118
4629.2	2160.2	4.6	-10	12.06	0.129
4630.5	2159.6	10	-10	12.24	0.146
4631.9	2158.9	15.6	-10	12.44	0.163
4633.5	2158.2	22.7	-10	12.69	0.181
4635	2157.5	28.8	-10	12.94	0.197
4631.6	2159.1	0.4	0	11.96	0.116
4632.4	2158.7	2.1	0	12.02	0.125
4633.8	2158	6.4	0	12.18	0.144
4635.4	2157.3	11.9	0	12.37	0.161
4636.9	2156.6	17.5	0	12.6	0.179
4638.6	2155.8	23.1	0	12.86	0.196
4636.4	2156.9	1.3	10	12.04	0.13
4637.6	2156.3	4.4	10	12.15	0.145
4639.1	2155.6	8.6	10	12.34	0.163
4640.8	2154.8	13.3	10	12.56	0.181
4642.5	2154	18	10	12.81	0.198
4640.2	2155.1	0.7	20	12.05	0.134
4641	2154.7	2.3	20	12.12	0.144
4642.6	2154	5.5	20	12.29	0.161
4644.4	2153.1	9.5	20	12.51	0.179
4646.2	2152.3	13.2	20	12.75	0.197
4644.7	2153	0.5	30	12.15	0.144
4646.3	2152.3	2.9	30	12.28	0.161
4648	2151.5	5.7	30	12.47	0.178
4649.9	2150.6	8.7	30	12.69	0.196
4649.8	2150.6	0.4	40	12.29	0.157
4652.1	2149.6	3.2	40	12.47	0.181
4654.1	2148.6	5.3	40	12.68	0.199
4654.8	2148.3	0.2	50	12.4	0.167
4655.9	2147.8	1.3	50	12.47	0.181
4657.9	2146.9	2.7	50	12.66	0.199

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

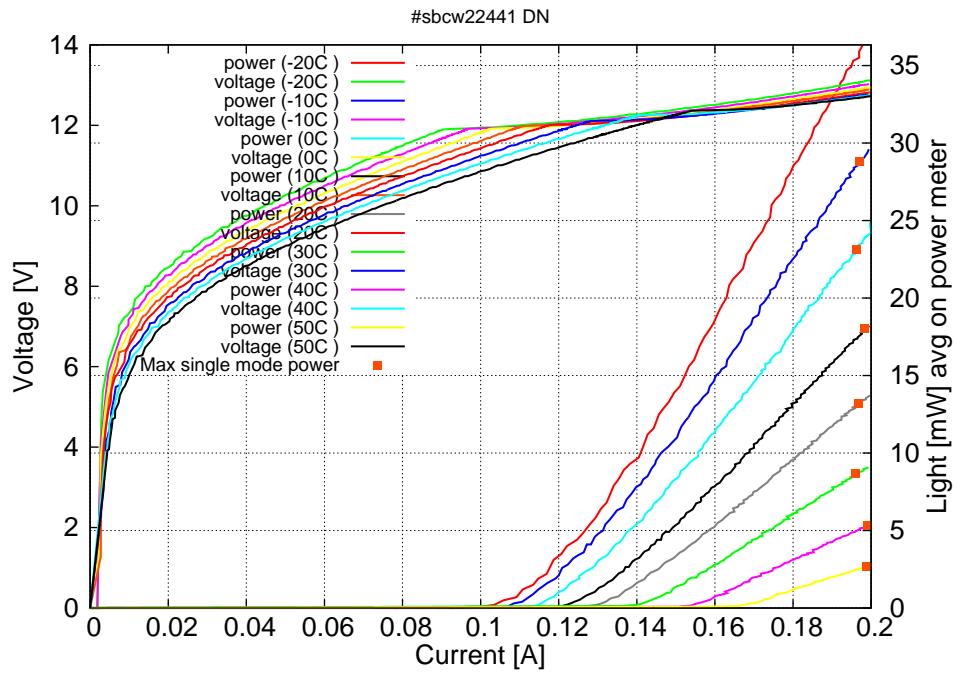


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C:  $I_{th}=0.11A$  /  $V_{th}=12.0V$  (2-wires measurements). Maximum operation current: 0.20A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

