

Datasheet for #sbcw25650 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <https://www.alpeslasers.ch/resources/#faq>

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 #sbcw25650 DN (please note that AlN submount numbering is A0WVR)

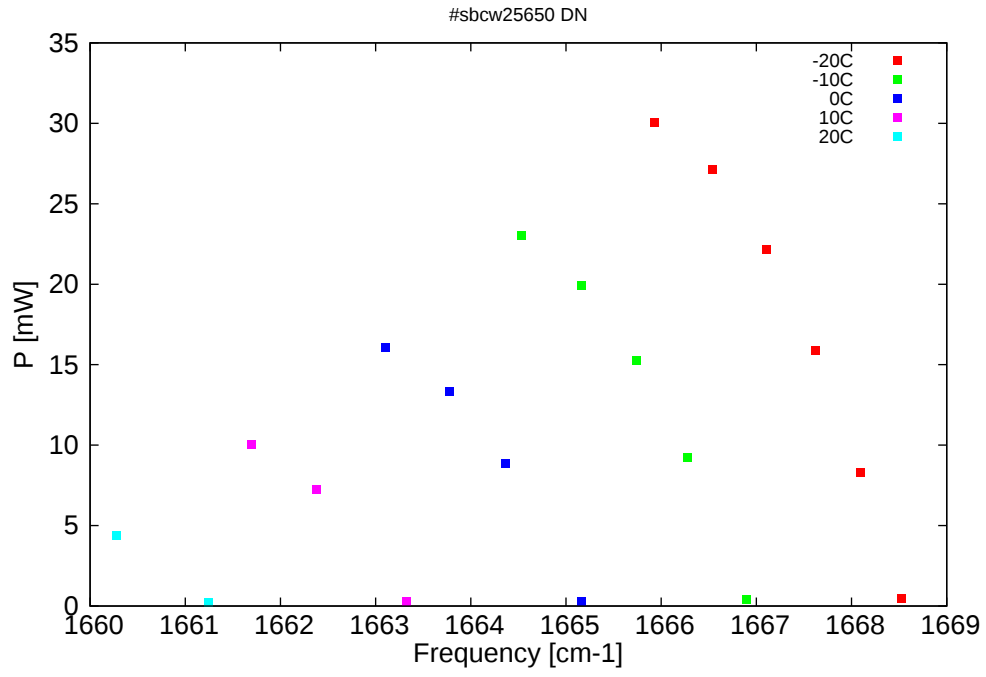


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

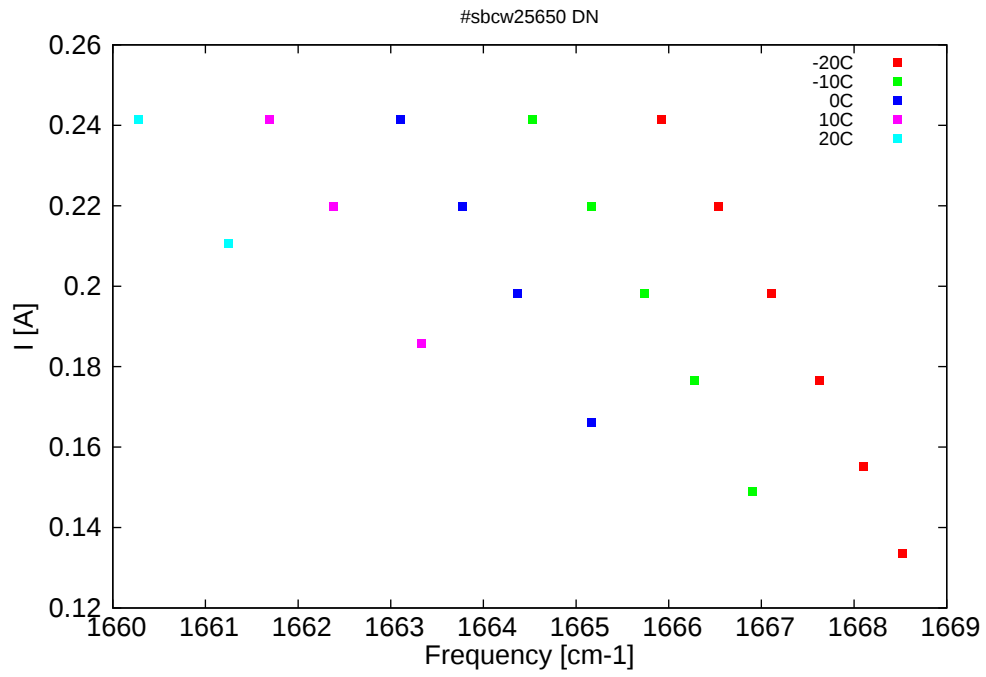


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
5993.3	1668.5	0.5	-20	9.74	0.134
5994.8	1668.1	8.3	-20	10.01	0.155
5996.6	1667.6	15.9	-20	10.27	0.177
5998.4	1667.1	22.2	-20	10.54	0.198
6000.5	1666.5	27.1	-20	10.81	0.22
6002.7	1665.9	30.1	-20	11.1	0.241
5999.2	1666.9	0.4	-10	9.86	0.149
6001.4	1666.3	9.3	-10	10.2	0.177
6003.3	1665.7	15.3	-10	10.47	0.198
6005.4	1665.2	19.9	-10	10.74	0.22
6007.7	1664.5	23	-10	11.03	0.241
6005.4	1665.2	0.3	0	10	0.166
6008.3	1664.4	8.8	0	10.4	0.198
6010.4	1663.8	13.4	0	10.68	0.22
6012.9	1663.1	16.1	0	10.96	0.241
6012	1663.3	0.3	10	10.18	0.186
6015.5	1662.4	7.3	10	10.62	0.22
6017.9	1661.7	10.1	10	10.9	0.241
6019.6	1661.2	0.2	20	10.44	0.211
6023.1	1660.3	4.4	20	10.84	0.241

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

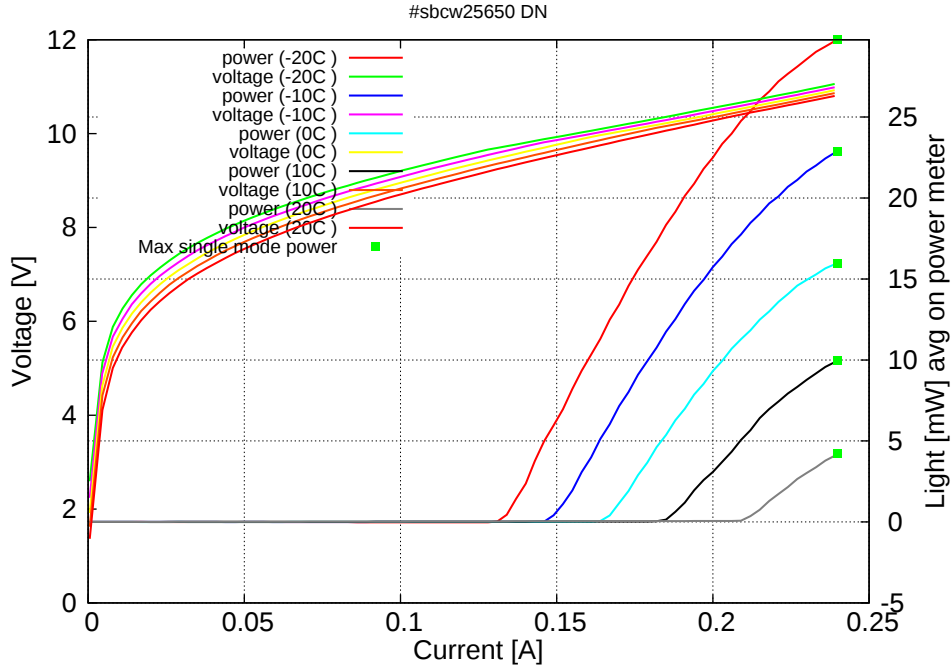


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.13A$ / $V_{th}=9.7V$ (2-wires measurements). Maximum operation current: 0.24A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

