

Datasheet for #sbcw25649 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 #sbcw25649 DN (please note that AlN submount numbering is A0VRW)

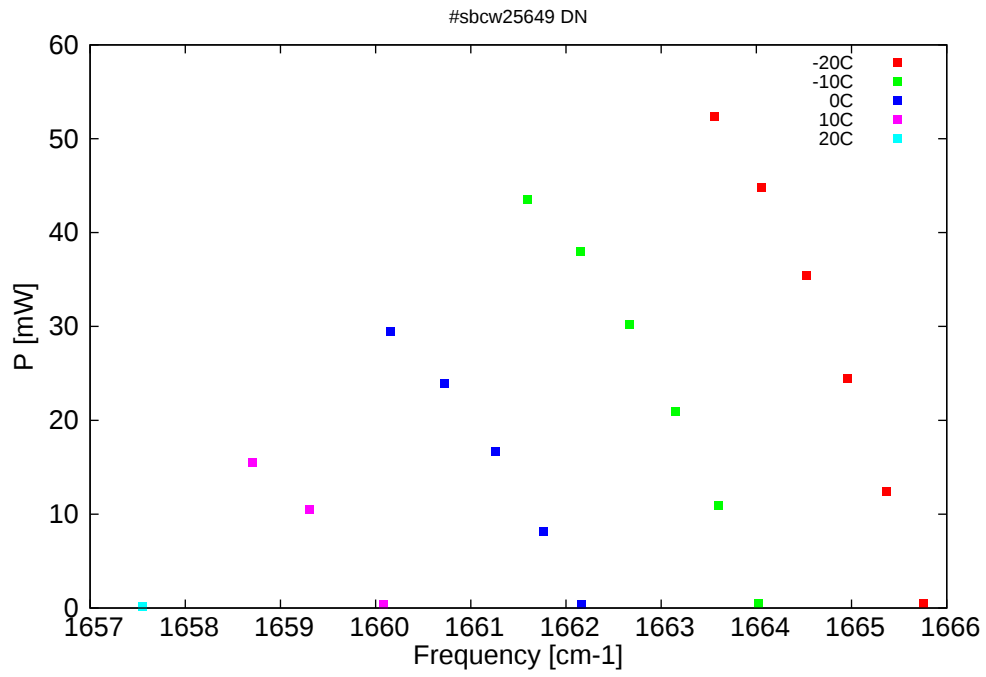


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

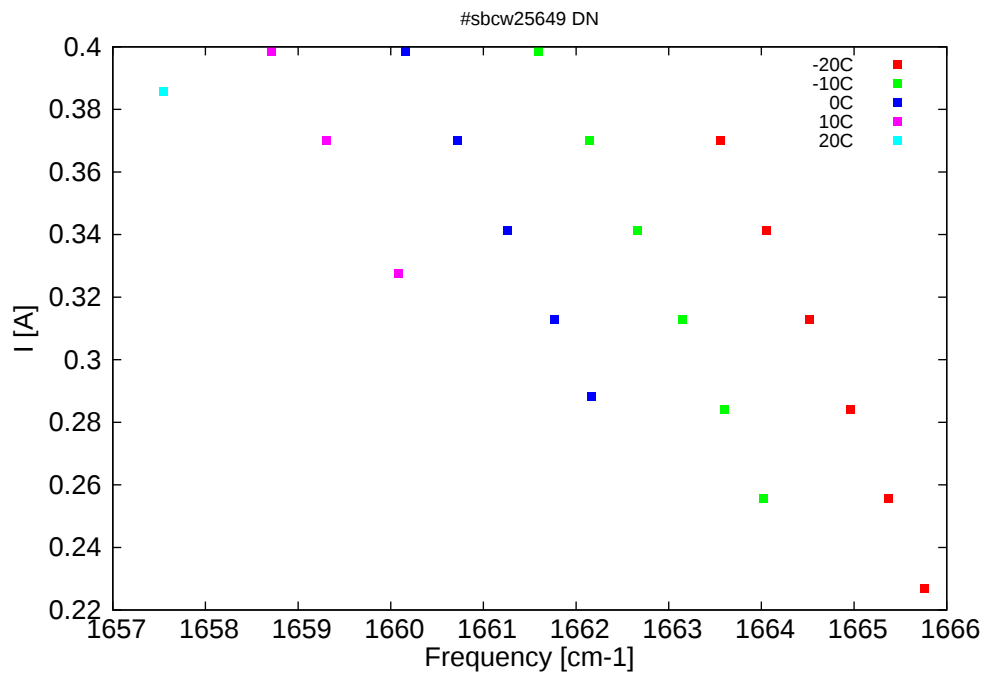


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
6003.3	1665.8	0.5	-20	9.93	0.227
6004.7	1665.4	12.5	-20	10.14	0.256
6006.2	1665	24.4	-20	10.35	0.284
6007.7	1664.5	35.5	-20	10.56	0.313
6009.4	1664.1	44.8	-20	10.76	0.341
6011.2	1663.6	52.4	-20	10.98	0.37
6009.5	1664	0.4	-10	9.98	0.256
6011.1	1663.6	10.9	-10	10.17	0.284
6012.7	1663.1	21	-10	10.37	0.313
6014.4	1662.7	30.2	-10	10.57	0.341
6016.3	1662.1	38	-10	10.78	0.37
6018.3	1661.6	43.5	-10	10.99	0.399
6016.2	1662.2	0.4	0	10.13	0.288
6017.7	1661.8	8.2	0	10.29	0.313
6019.5	1661.3	16.7	0	10.5	0.341
6021.5	1660.7	24	0	10.71	0.37
6023.5	1660.2	29.5	0	10.91	0.399
6023.8	1660.1	0.4	10	10.33	0.328
6026.6	1659.3	10.5	10	10.64	0.37
6028.8	1658.7	15.5	10	10.85	0.399
6033	1657.5	0.2	20	10.69	0.386

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

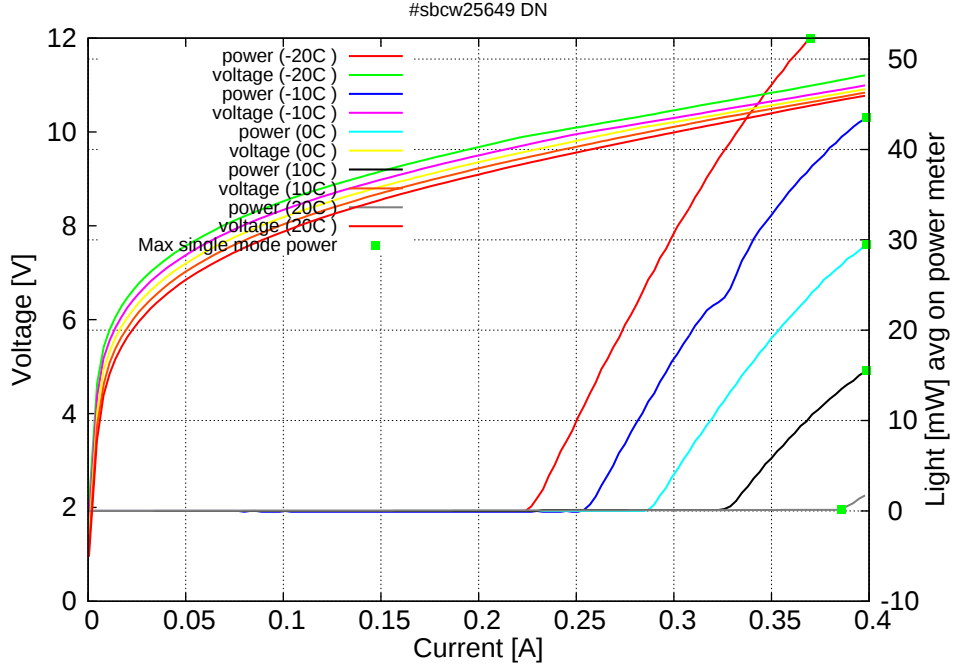


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.22\text{A}$ / $V_{th}=9.9\text{V}$ (2-wires measurements). Maximum operation

current: 0.37A at -20C, 0.40A between -10C and 20C.

Figure 3: spectra at different temperatures for various DC currents

