

Datasheet for #sbcw25654 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.

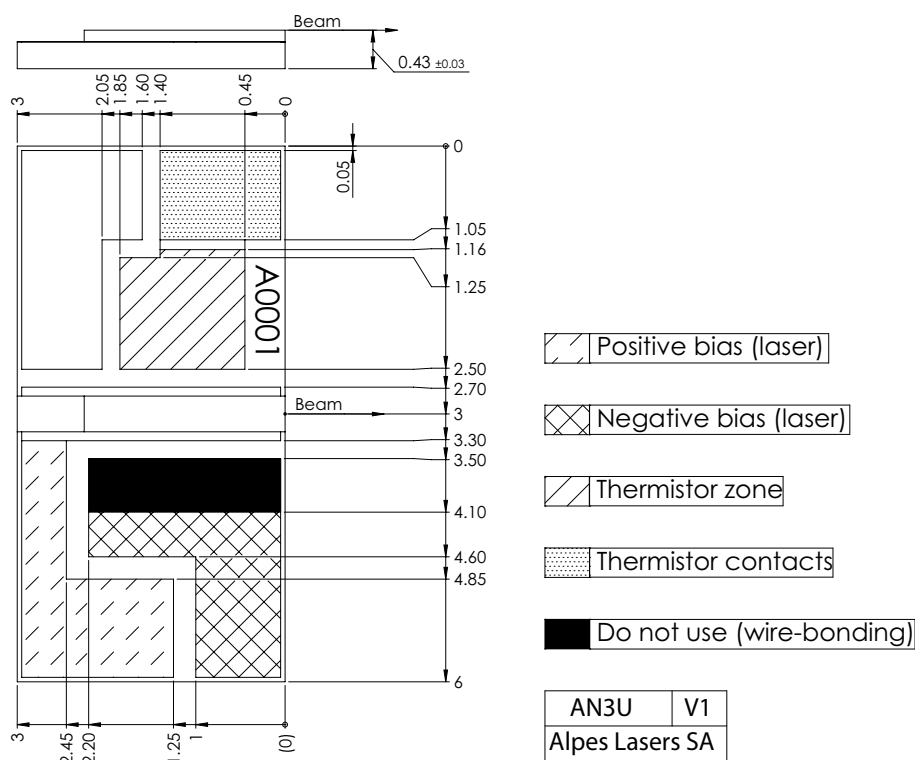


Figure 1: Mechanical and electrical interface for #sbcw25654 DN (please note that AlN submount numbering is A0U09)

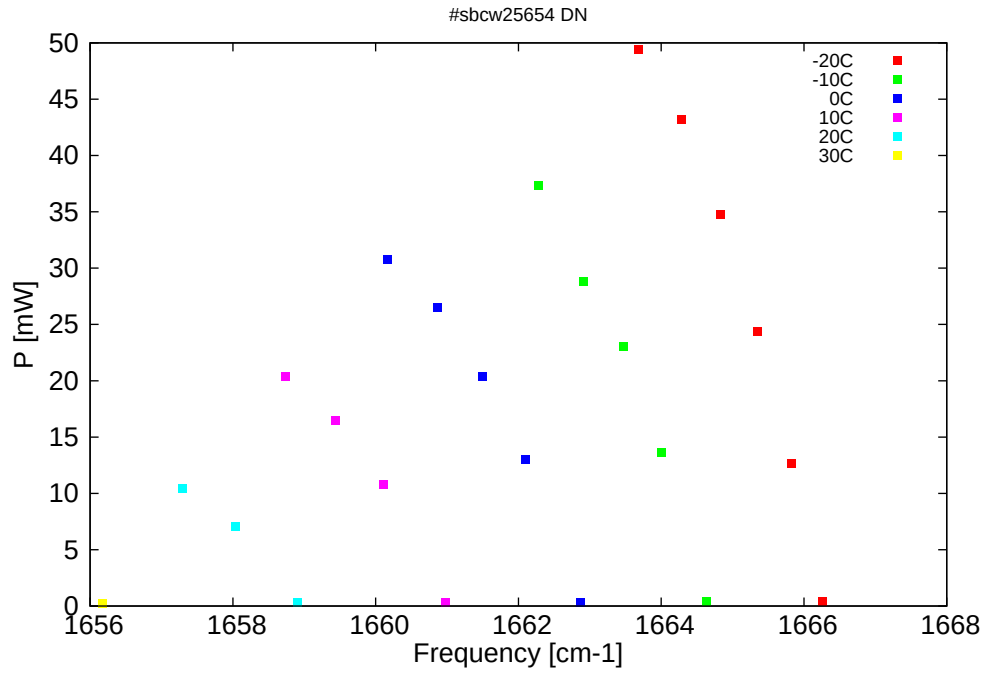


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

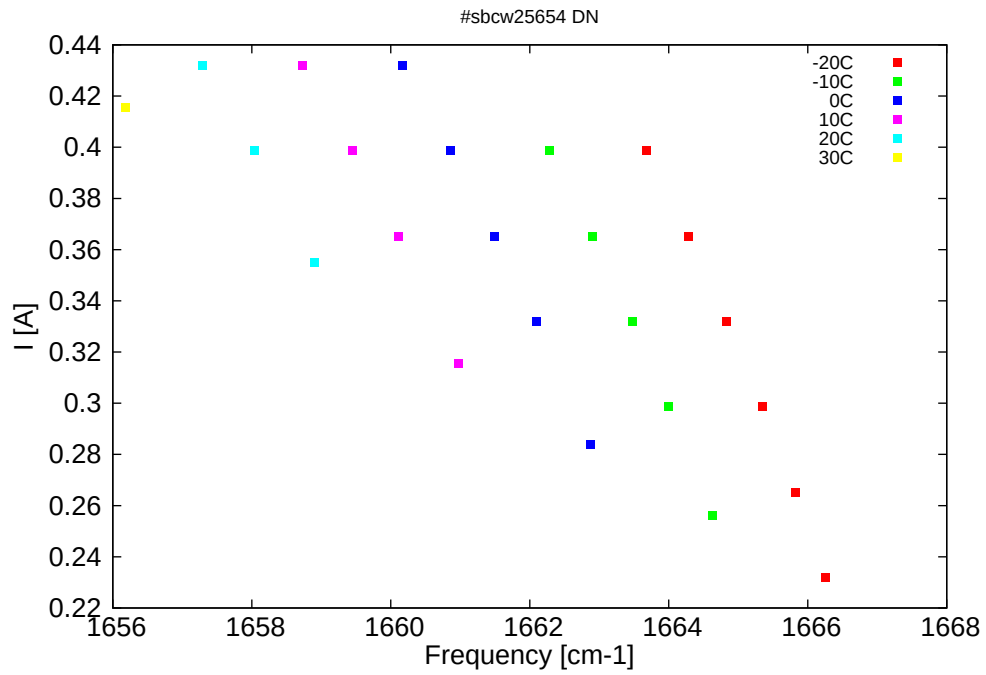


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
6001.5	1666.3	0.4	-20	9.67	0.232
6003	1665.8	12.7	-20	9.89	0.265
6004.8	1665.3	24.4	-20	10.11	0.299
6006.6	1664.8	34.8	-20	10.33	0.332
6008.6	1664.3	43.2	-20	10.56	0.365
6010.8	1663.7	49.4	-20	10.79	0.399
6007.3	1664.6	0.4	-10	9.75	0.256
6009.6	1664	13.6	-10	10.03	0.299
6011.5	1663.5	23	-10	10.26	0.332
6013.6	1662.9	28.8	-10	10.49	0.365
6015.8	1662.3	37.3	-10	10.72	0.399
6013.7	1662.9	0.3	0	9.87	0.284
6016.5	1662.1	13	0	10.19	0.332
6018.7	1661.5	20.4	0	10.43	0.365
6021	1660.9	26.5	0	10.66	0.399
6023.5	1660.2	30.8	0	10.91	0.432
6020.6	1661	0.3	10	10.02	0.316
6023.7	1660.1	10.8	10	10.36	0.365
6026.1	1659.4	16.4	10	10.61	0.399
6028.7	1658.7	20.4	10	10.86	0.432
6028.1	1658.9	0.3	20	10.23	0.355
6031.2	1658	7	20	10.56	0.399
6033.9	1657.3	10.5	20	10.81	0.432
6038	1656.2	0.2	30	10.63	0.416

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

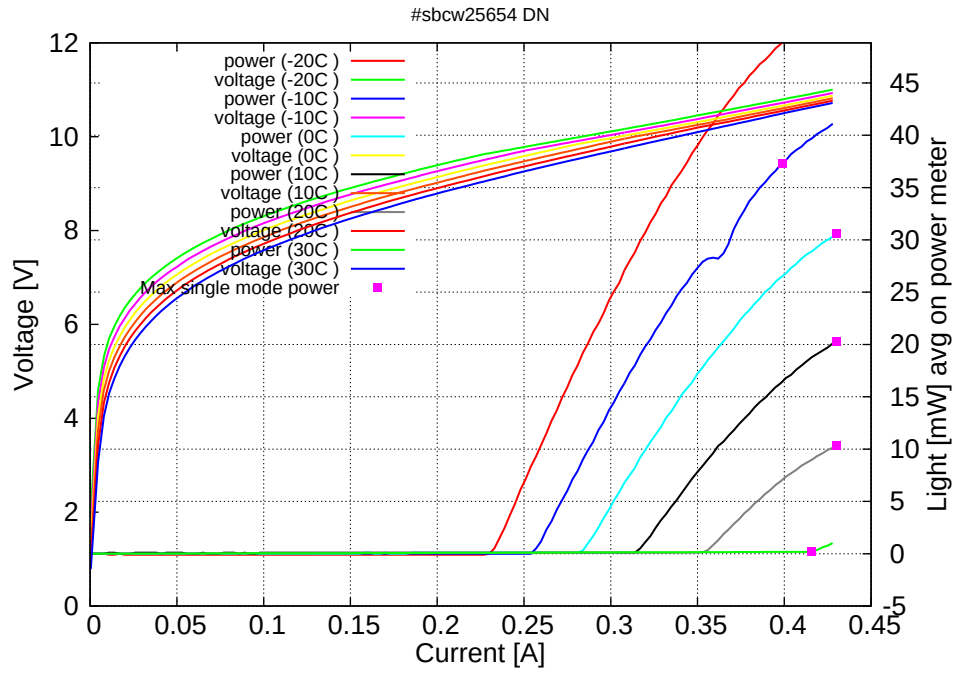


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.23A$ / $V_{th}=9.6V$ (2-wires measurements). Maximum operation current: 0.40A between -20C and -10C, 0.43A between 0C and 30C.

Figure 3: spectra at different temperatures for various DC currents

