

Datasheet for #sbcw25707 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 #sbcw25707 DN (please note that AlN submount numbering is A0X45)

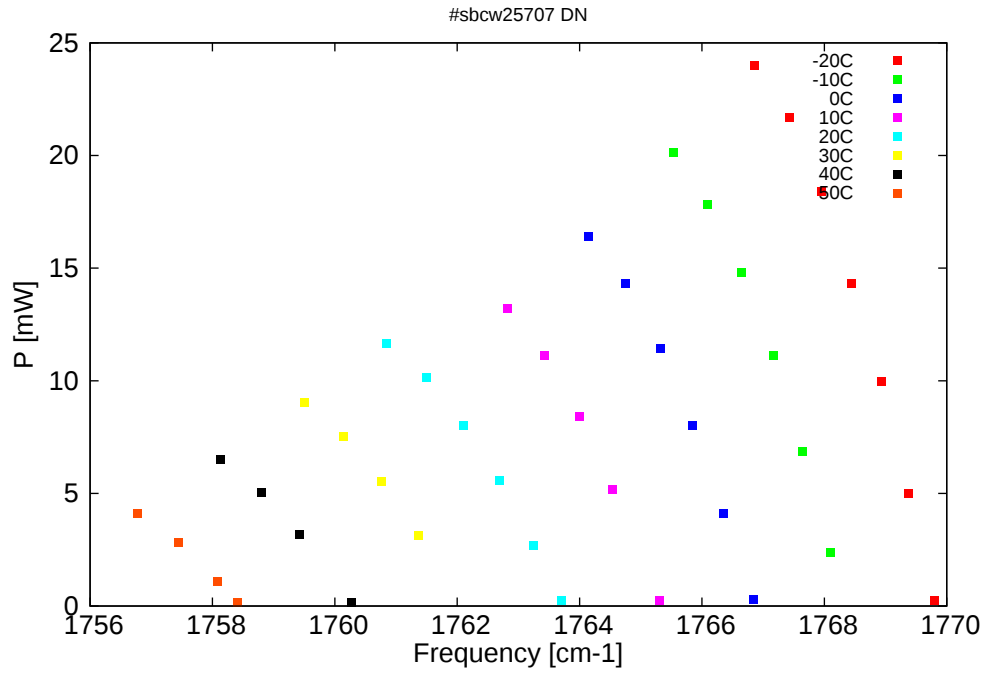


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

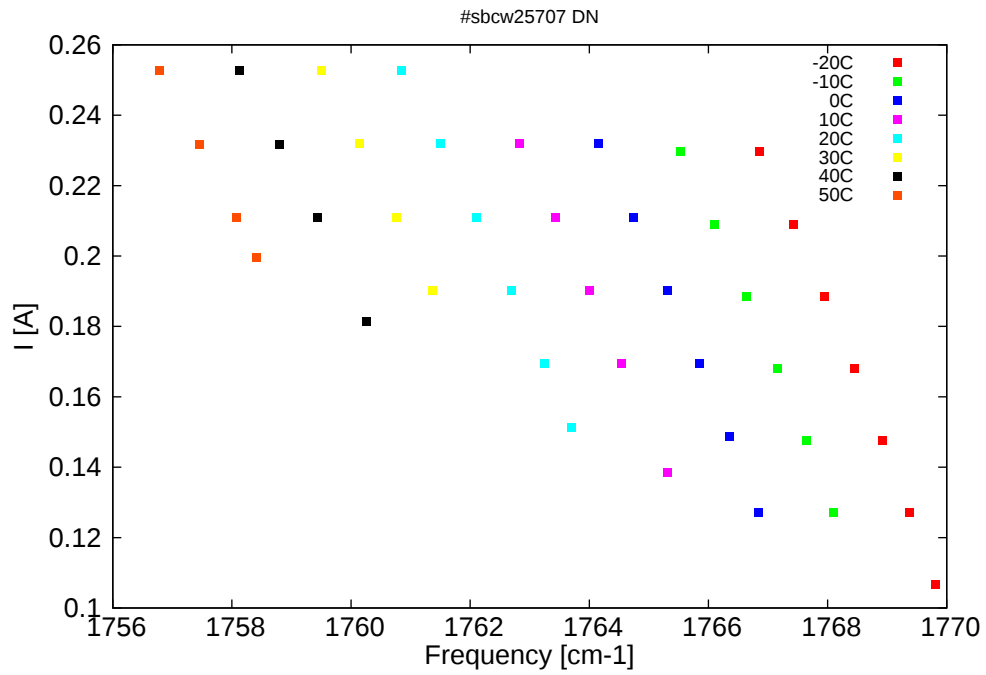


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda[\text{nm}]$	$\nu[\text{cm}^{-1}]$	P[mW]	Temp[°C]	$U_{LASER}[\text{V}]$	I[A]
5650.3	1769.8	0.2	-20	9.65	0.107
5651.7	1769.4	5	-20	9.95	0.127
5653.1	1768.9	10	-20	10.23	0.148
5654.7	1768.4	14.3	-20	10.51	0.168
5656.3	1767.9	18.4	-20	10.76	0.189
5657.9	1767.4	21.7	-20	11.02	0.209
5659.7	1766.9	24	-20	11.27	0.23
5655.8	1768.1	2.4	-10	9.77	0.127
5657.2	1767.6	6.9	-10	10.05	0.148
5658.8	1767.2	11.1	-10	10.31	0.168
5660.4	1766.6	14.8	-10	10.58	0.189
5662.2	1766.1	17.8	-10	10.82	0.209
5664	1765.5	20.2	-10	11.07	0.23
5659.8	1766.8	0.3	0	9.59	0.127
5661.4	1766.4	4.1	0	9.89	0.149
5663	1765.8	8	0	10.15	0.169
5664.7	1765.3	11.5	0	10.41	0.19
5666.5	1764.7	14.3	0	10.66	0.211
5668.4	1764.2	16.4	0	10.91	0.232
5664.7	1765.3	0.2	10	9.59	0.138
5667.2	1764.5	5.2	10	9.99	0.169
5668.9	1764	8.4	10	10.24	0.19
5670.8	1763.4	11.1	10	10.49	0.211
5672.7	1762.8	13.2	10	10.73	0.232
5669.9	1763.7	0.2	20	9.6	0.151
5671.4	1763.2	2.7	20	9.82	0.169
5673.1	1762.7	5.6	20	10.08	0.19
5675	1762.1	8	20	10.32	0.211
5677	1761.5	10.2	20	10.56	0.232
5679.1	1760.9	11.7	20	10.79	0.253
5677.4	1761.4	3.1	30	9.91	0.19
5679.3	1760.8	5.5	30	10.15	0.211
5681.4	1760.1	7.5	30	10.38	0.232
5683.4	1759.5	9	30	10.61	0.253
5681	1760.3	0.2	40	9.65	0.182
5683.7	1759.4	3.2	40	9.99	0.211
5685.7	1758.8	5	40	10.21	0.232
5687.9	1758.1	6.5	40	10.44	0.253
5686.9	1758.4	0.2	50	9.7	0.2
5688	1758.1	1.1	50	9.82	0.211
5690.1	1757.4	2.8	50	10.05	0.232
5692.2	1756.8	4.1	50	10.26	0.253

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

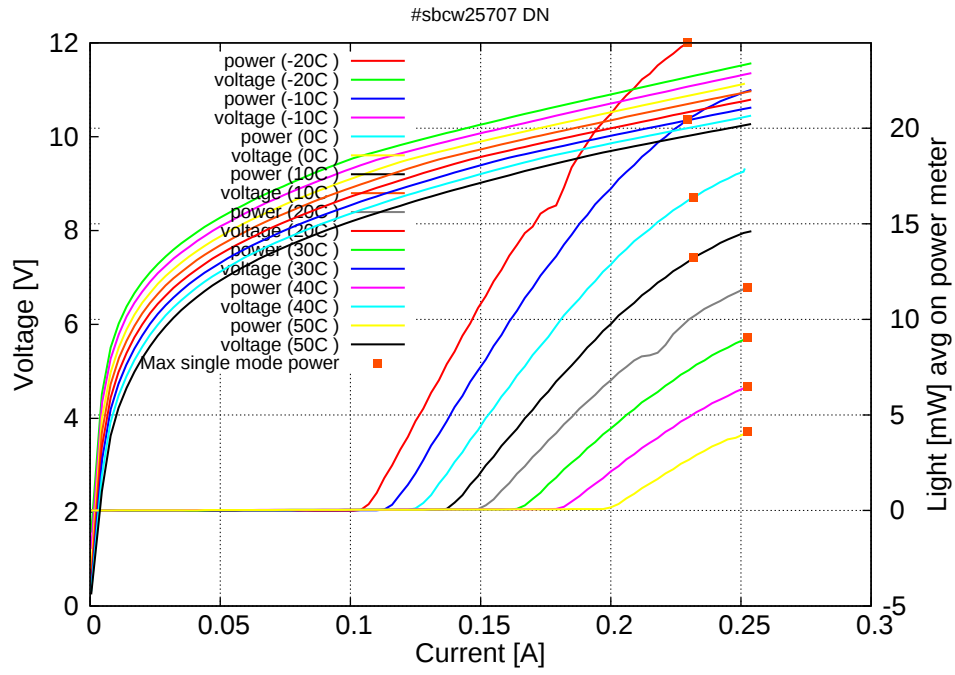


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.10A$ / $V_{th}=9.6V$ (2-wires measurements). Maximum operation current: 0.235A between -20C and 10C, 0.255A between 20C and 50C.

Figure 3: spectra at different temperatures for various DC currents

