

Datasheet for #sbcw27625 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 #sbcw27625 DN (please note that AlN submount numbering is A0VCT)

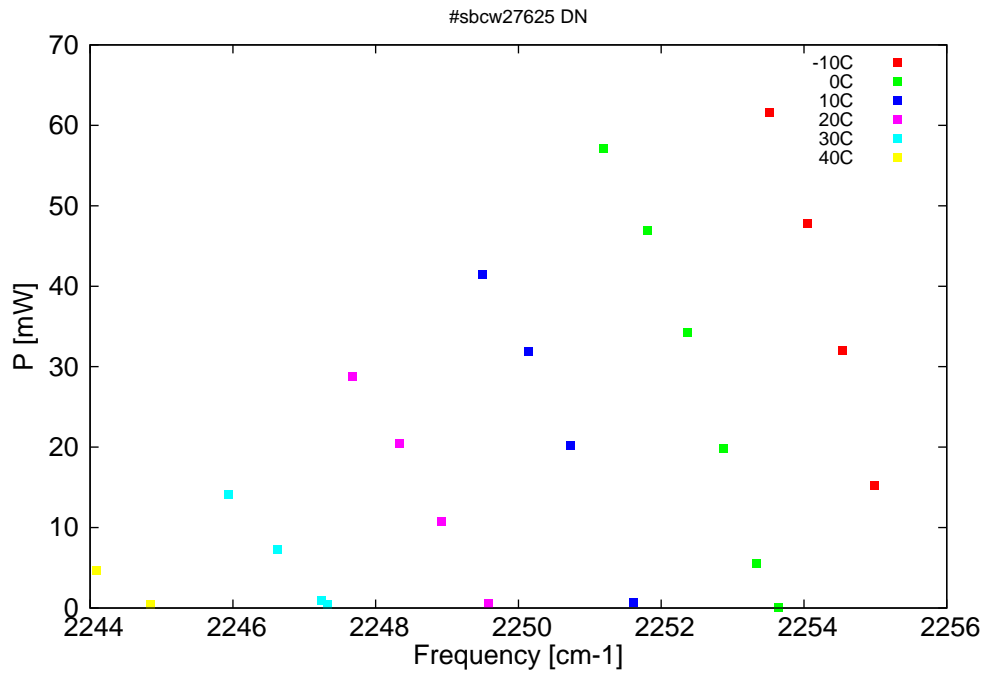


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

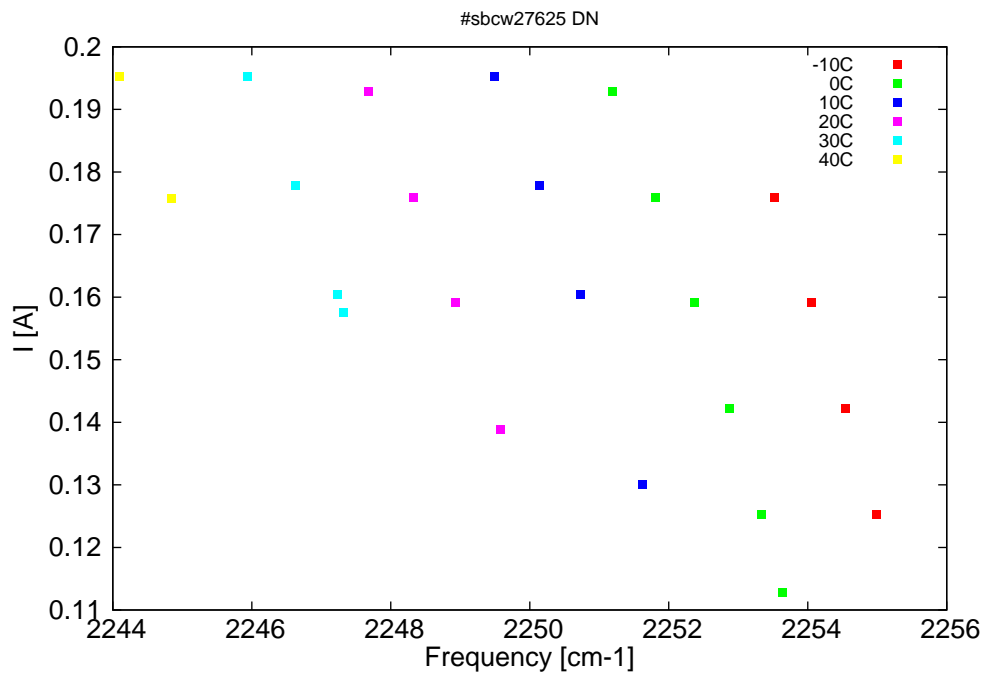


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
4434.6	2255	15.3	-10	9.39	0.125
4435.5	2254.5	32	-10	9.62	0.142
4436.4	2254.1	47.8	-10	9.85	0.159
4437.5	2253.5	61.6	-10	10.1	0.176
4437.3	2253.6	0.1	0	9.24	0.113
4437.9	2253.3	5.5	0	9.38	0.125
4438.8	2252.9	19.8	0	9.6	0.142
4439.8	2252.4	34.3	0	9.84	0.159
4440.9	2251.8	47	0	10.09	0.176
4442.1	2251.2	57.1	0	10.34	0.193
4441.3	2251.6	0.6	10	9.41	0.13
4443	2250.7	20.2	10	9.79	0.16
4444.2	2250.1	31.9	10	10.04	0.178
4445.4	2249.5	41.4	10	10.3	0.195
4445.3	2249.6	0.6	20	9.56	0.139
4446.6	2248.9	10.7	20	9.82	0.159
4447.7	2248.3	20.5	20	10.06	0.176
4449	2247.7	28.8	20	10.31	0.193
4449.7	2247.3	0.5	30	9.78	0.158
4449.9	2247.2	1	30	9.81	0.16
4451.1	2246.6	7.2	30	10.03	0.178
4452.5	2245.9	14.1	30	10.28	0.195
4454.6	2244.8	0.5	40	10.06	0.176
4456.1	2244.1	4.7	40	10.31	0.195

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

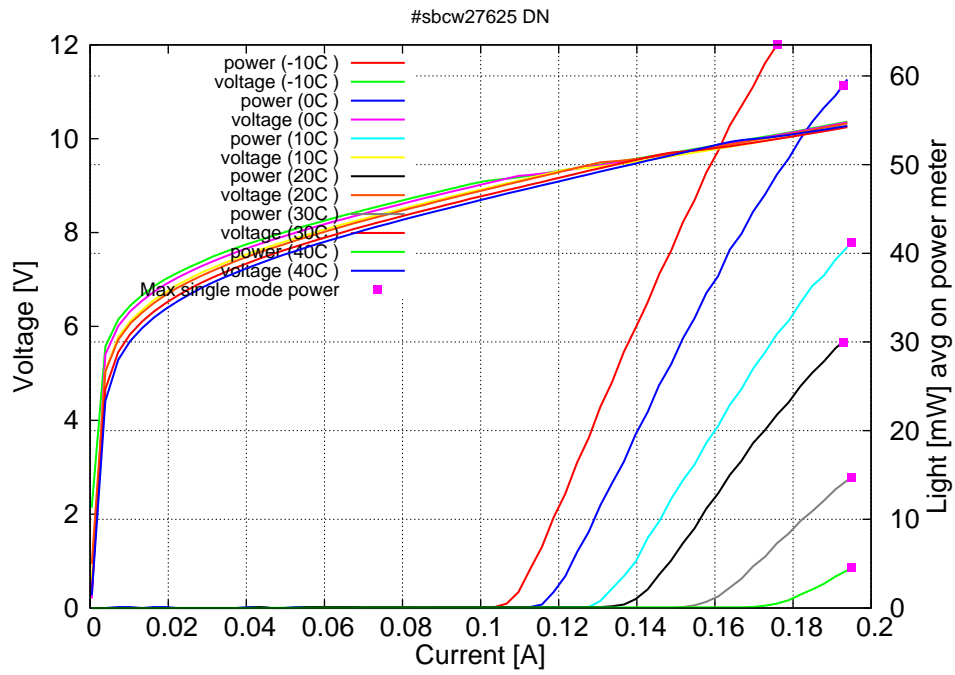


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -10C: $I_{th}=0.11A$ / $V_{th}=9.1V$ (2-wires measurements). Maximum operation current: 0.175A at -10C, 0.195A between 0C and 40C.

Figure 3: spectra at different temperatures for various DC currents

