

Datasheet for #sbcw25254 DN

Recommendations:

Please read the User Manual and have a look at the FAQ at <http://www.alpeslasers.ch/?a=142>

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 #sbcw25254 DN (please note that AlN submount numbering is A1166)

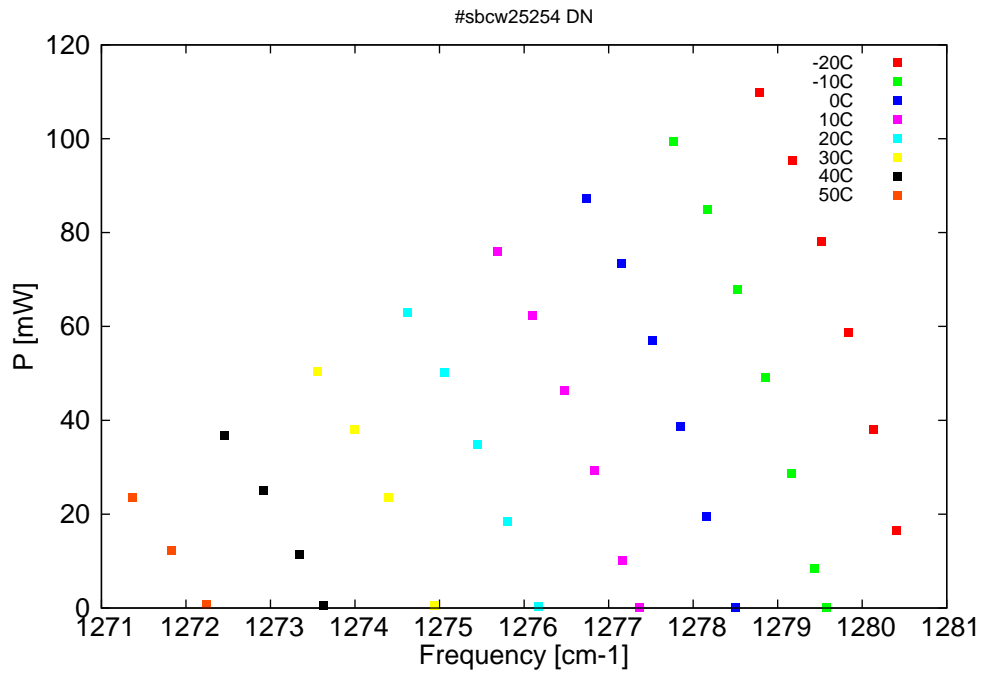


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

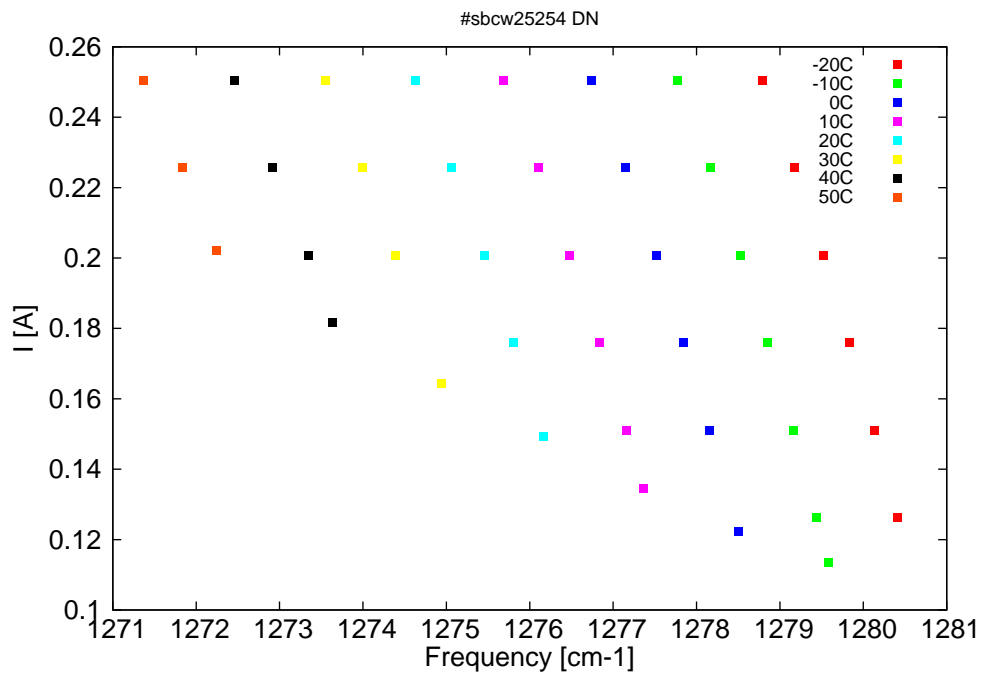


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7810	1280.4	16.6	-20	8.27	0.126
7811.7	1280.1	38.1	-20	8.53	0.151
7813.5	1279.8	58.7	-20	8.78	0.176
7815.4	1279.5	78	-20	9.03	0.201
7817.5	1279.2	95.3	-20	9.28	0.226
7819.9	1278.8	109.9	-20	9.53	0.251
7815.1	1279.6	0.1	-10	8.02	0.113
7815.9	1279.4	8.4	-10	8.16	0.126
7817.6	1279.2	28.6	-10	8.41	0.151
7819.5	1278.9	49	-10	8.66	0.176
7821.5	1278.5	67.9	-10	8.9	0.201
7823.7	1278.2	85	-10	9.15	0.226
7826.1	1277.8	99.3	-10	9.4	0.251
7821.7	1278.5	0	0	8.02	0.122
7823.8	1278.2	19.6	0	8.31	0.151
7825.6	1277.9	38.6	0	8.56	0.176
7827.7	1277.5	57	0	8.81	0.201
7829.9	1277.2	73.3	0	9.05	0.226
7832.4	1276.7	87.3	0	9.31	0.251
7828.6	1277.4	0.1	10	8.05	0.134
7829.9	1277.2	10.2	10	8.21	0.151
7831.9	1276.8	29.3	10	8.46	0.176
7834	1276.5	46.4	10	8.71	0.201
7836.4	1276.1	62.4	10	8.95	0.226
7838.9	1275.7	76	10	9.21	0.251
7836	1276.2	0.4	20	8.1	0.149
7838.2	1275.8	18.4	20	8.36	0.176
7840.3	1275.5	34.9	20	8.6	0.201
7842.8	1275.1	50.1	20	8.85	0.226
7845.4	1274.6	63	20	9.09	0.251
7843.5	1274.9	0.5	30	8.16	0.164
7846.9	1274.4	23.6	30	8.52	0.201
7849.3	1274	38.1	30	8.76	0.226
7852	1273.6	50.4	30	9.01	0.251
7851.6	1273.6	0.6	40	8.26	0.182
7853.3	1273.3	11.5	40	8.44	0.201
7856	1272.9	25.1	40	8.69	0.226
7858.8	1272.5	36.9	40	8.93	0.251
7860.1	1272.2	0.7	50	8.39	0.202
7862.7	1271.8	12.3	50	8.62	0.226
7865.6	1271.4	23.4	50	8.87	0.251

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

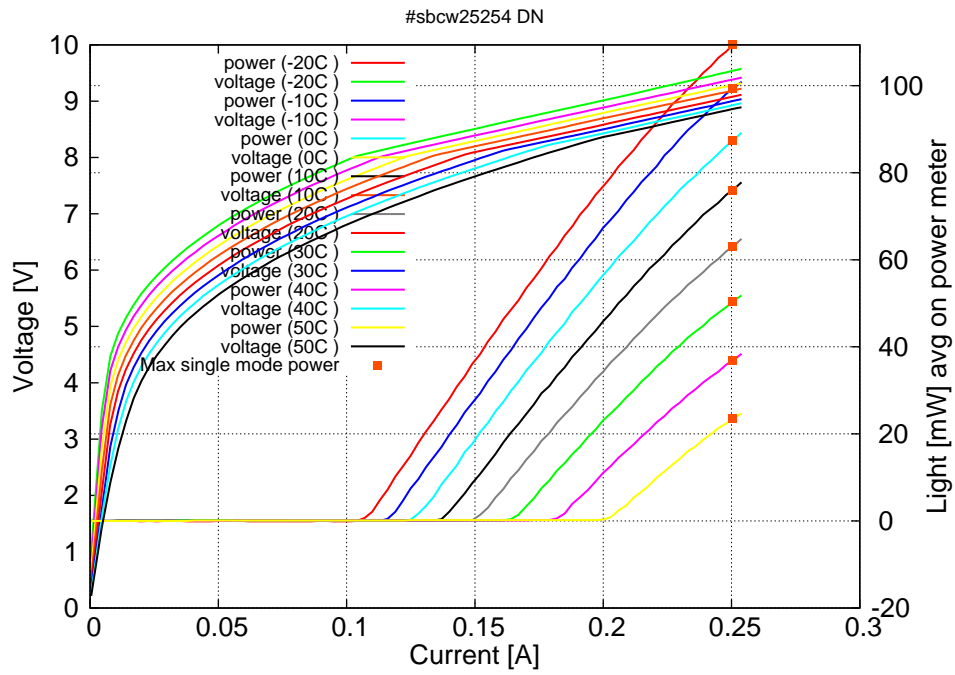


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.255A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

