

Datasheet for #sbcw21256 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 #sbcw21256 DN (please note that AlN submount numbering is A0NM2)

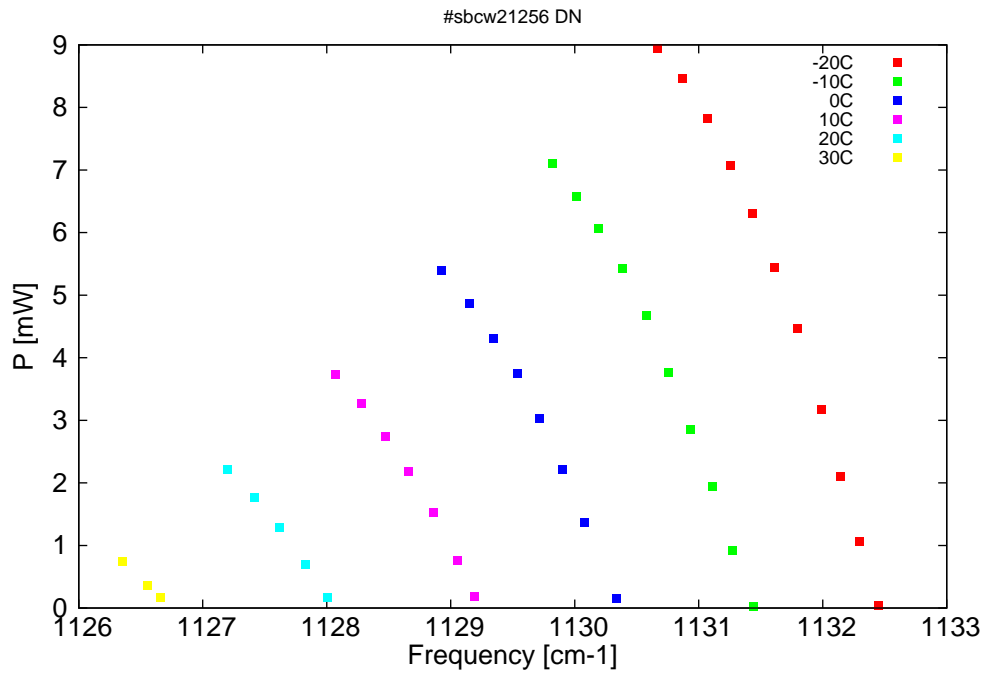


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

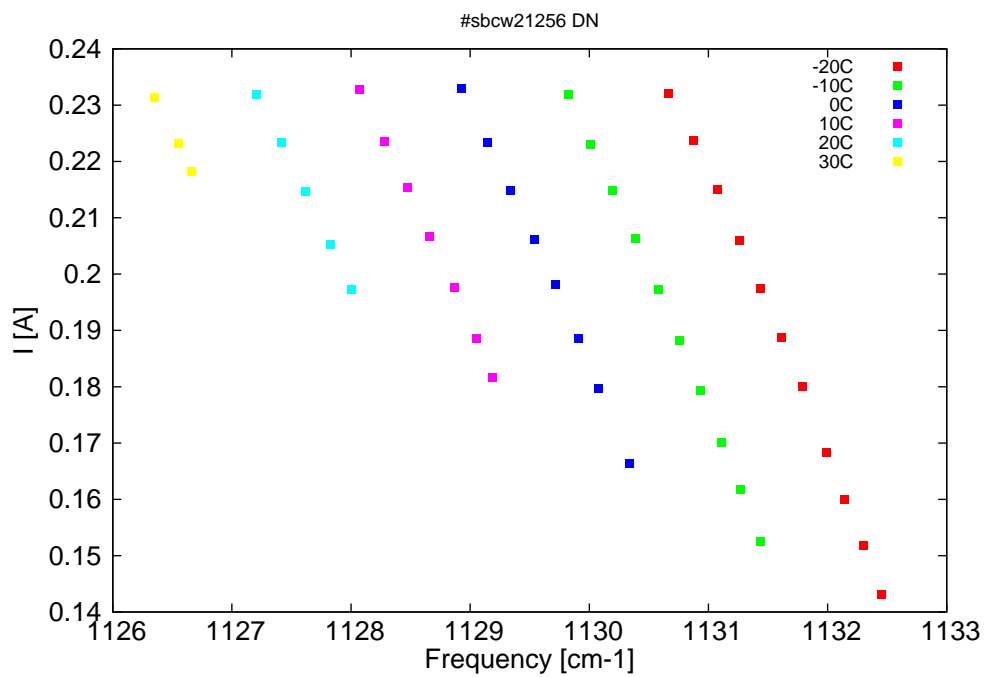


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8830.4	1132.5	0	-20	9.75	0.143
8831.6	1132.3	1.1	-20	9.94	0.152
8832.8	1132.1	2.1	-20	10.13	0.16
8834	1132	3.2	-20	10.33	0.168
8835.5	1131.8	4.5	-20	10.42	0.18
8836.9	1131.6	5.4	-20	10.62	0.189
8838.3	1131.4	6.3	-20	10.81	0.197
8839.7	1131.3	7.1	-20	10.99	0.206
8841.2	1131.1	7.8	-20	11.19	0.215
8842.7	1130.9	8.5	-20	11.38	0.224
8844.3	1130.7	8.9	-20	11.57	0.232
8838.3	1131.4	0	-10	9.74	0.152
8839.6	1131.3	0.9	-10	9.93	0.162
8840.9	1131.1	1.9	-10	10.12	0.17
8842.3	1130.9	2.9	-10	10.31	0.179
8843.6	1130.8	3.8	-10	10.5	0.188
8845	1130.6	4.7	-10	10.69	0.197
8846.5	1130.4	5.4	-10	10.88	0.206
8848.1	1130.2	6.1	-10	11.07	0.215
8849.5	1130	6.6	-10	11.25	0.223
8851	1129.8	7.1	-10	11.44	0.232
8846.9	1130.3	0.2	0	9.87	0.166
8848.9	1130.1	1.4	0	10.14	0.18
8850.3	1129.9	2.2	0	10.32	0.189
8851.8	1129.7	3	0	10.52	0.198
8853.2	1129.5	3.8	0	10.69	0.206
8854.7	1129.3	4.3	0	10.87	0.215
8856.2	1129.1	4.9	0	11.05	0.223
8858	1128.9	5.4	0	11.24	0.233
8855.9	1129.2	0.2	10	10.02	0.182
8857	1129.1	0.8	10	10.15	0.189
8858.5	1128.9	1.5	10	10.34	0.198
8860.1	1128.7	2.2	10	10.52	0.207
8861.5	1128.5	2.7	10	10.69	0.215
8863	1128.3	3.3	10	10.86	0.224
8864.7	1128.1	3.7	10	11.05	0.233
8865.2	1128	0.2	20	10.19	0.197
8866.6	1127.8	0.7	20	10.36	0.205
8868.3	1127.6	1.3	20	10.54	0.215
8869.8	1127.4	1.8	20	10.7	0.223
8871.5	1127.2	2.2	20	10.88	0.232
8875.8	1126.7	0.2	30	10.36	0.218
8876.6	1126.6	0.4	30	10.46	0.223
8878.2	1126.4	0.7	30	10.62	0.231

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

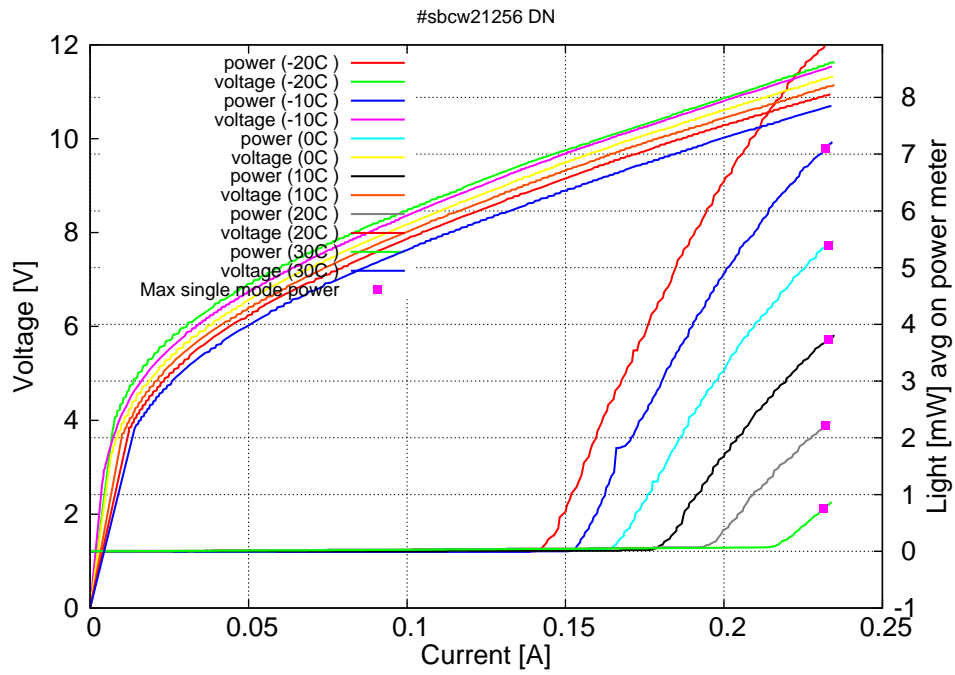


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.14A$ / $V_{th}=9.6V$ (2-wires measurements). Maximum operation current: 0.235A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

