

Datasheet for #sbcw24867 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 current on the laser contact (= bonding pad, corresponding to the label "laser" on the LLH) and the positive current on the base contact (= submount, corresponding to the label "base" on the LLH). 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 #sbcw24867 DN

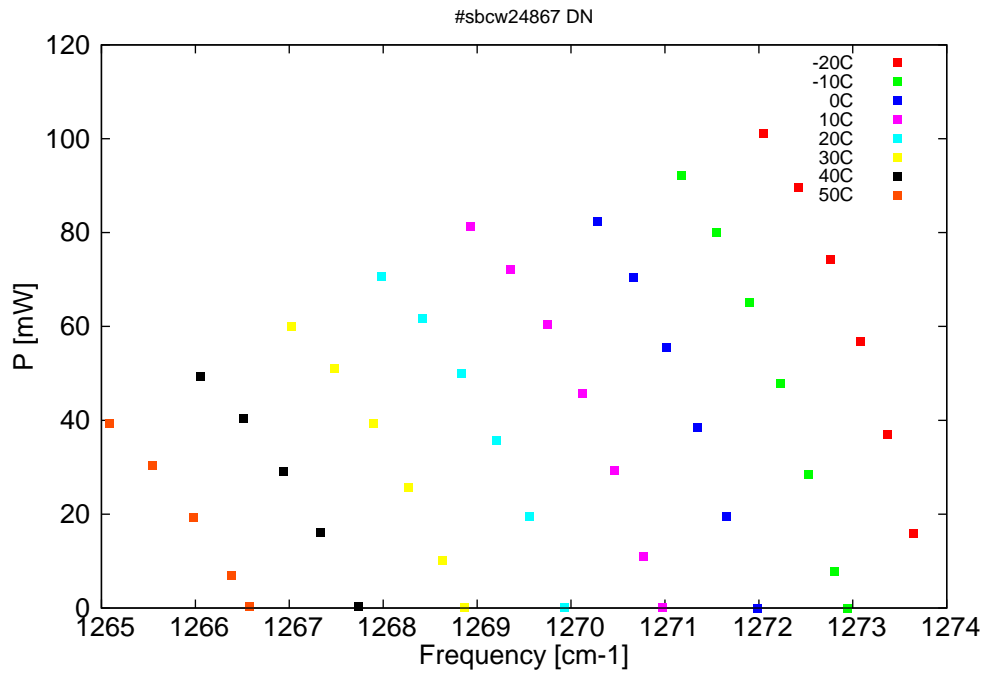


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

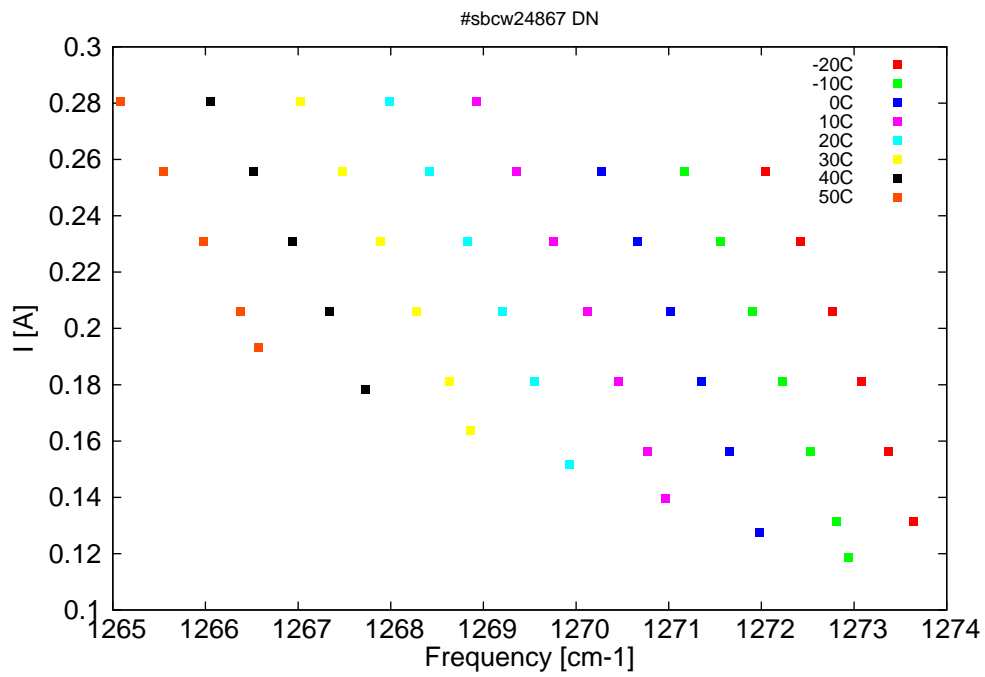


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7851.5	1273.6	16	-20	7.99	0.131
7853.2	1273.4	37	-20	8.23	0.156
7855	1273.1	56.8	-20	8.45	0.181
7856.9	1272.8	74.3	-20	8.68	0.206
7859	1272.4	89.6	-20	8.9	0.231
7861.4	1272	101.2	-20	9.14	0.256
7855.8	1272.9	0	-10	7.77	0.119
7856.7	1272.8	7.8	-10	7.89	0.131
7858.4	1272.5	28.6	-10	8.12	0.156
7860.2	1272.2	47.8	-10	8.34	0.181
7862.2	1271.9	65	-10	8.57	0.206
7864.4	1271.6	80	-10	8.79	0.231
7866.7	1271.2	92.1	-10	9.02	0.256
7861.7	1272	0	0	7.76	0.128
7863.7	1271.7	19.6	0	8.03	0.156
7865.7	1271.3	38.4	0	8.25	0.181
7867.7	1271	55.6	0	8.47	0.206
7869.9	1270.7	70.5	0	8.69	0.231
7872.3	1270.3	82.4	0	8.92	0.256
7868	1271	0	10	7.79	0.14
7869.2	1270.8	10.9	10	7.94	0.156
7871.2	1270.5	29.3	10	8.16	0.181
7873.3	1270.1	45.7	10	8.38	0.206
7875.5	1269.8	60.4	10	8.6	0.231
7878	1269.4	72.2	10	8.82	0.256
7880.7	1268.9	81.2	10	9.05	0.281
7874.5	1269.9	0.1	20	7.82	0.152
7876.8	1269.6	19.6	20	8.08	0.181
7879	1269.2	35.8	20	8.3	0.206
7881.3	1268.8	49.9	20	8.51	0.231
7883.8	1268.4	61.7	20	8.73	0.256
7886.5	1268	70.7	20	8.96	0.281
7881.1	1268.9	0.1	30	7.85	0.164
7882.5	1268.6	10.2	30	8.01	0.181
7884.7	1268.3	25.8	30	8.22	0.206
7887.1	1267.9	39.4	30	8.44	0.231
7889.7	1267.5	51.1	30	8.65	0.256
7892.5	1267	60	30	8.88	0.281
7888.1	1267.7	0.3	40	7.91	0.178
7890.6	1267.3	16.2	40	8.15	0.206
7893	1266.9	29.1	40	8.37	0.231
7895.7	1266.5	40.5	40	8.58	0.256
7898.5	1266.1	49.4	40	8.8	0.281
7895.3	1266.6	0.4	50	7.98	0.193
7896.5	1266.4	6.8	50	8.09	0.206
7899	1266	19.3	50	8.3	0.231
7901.7	1265.5	30.3	50	8.51	0.256
7904.6	1265.1	39.3	50	8.73	0.281

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$\lambda[\text{nm}]$ $\nu[\text{cm}^{-1}]$ $P[\text{mW}]$ $\text{Temp}[\text{°C}]$ $U_{LASER}[\text{V}]$ $I[\text{A}]$
 Table 1: Singlemode optical output power as function of operating parameters.

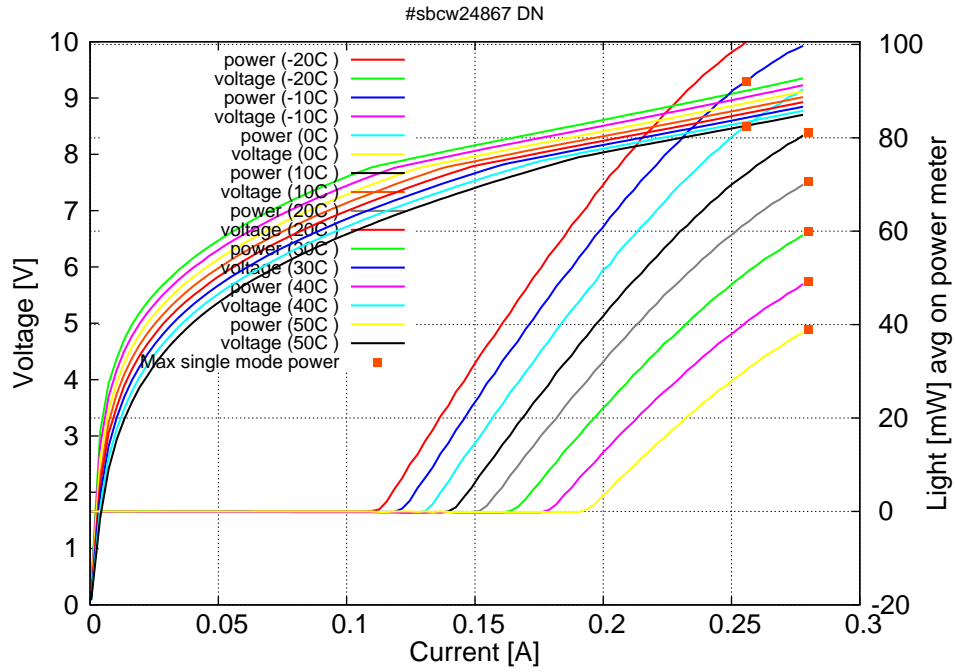


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.11\text{A}$ / $V_{th}=7.8\text{V}$ (2-wires measurements). Maximum operation current: 0.26A between -20C and 0C, 0.28A between 10C and 50C.

Figure 3: spectra at different temperatures for various DC currents

