

Datasheet for #sbcw27264 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 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.

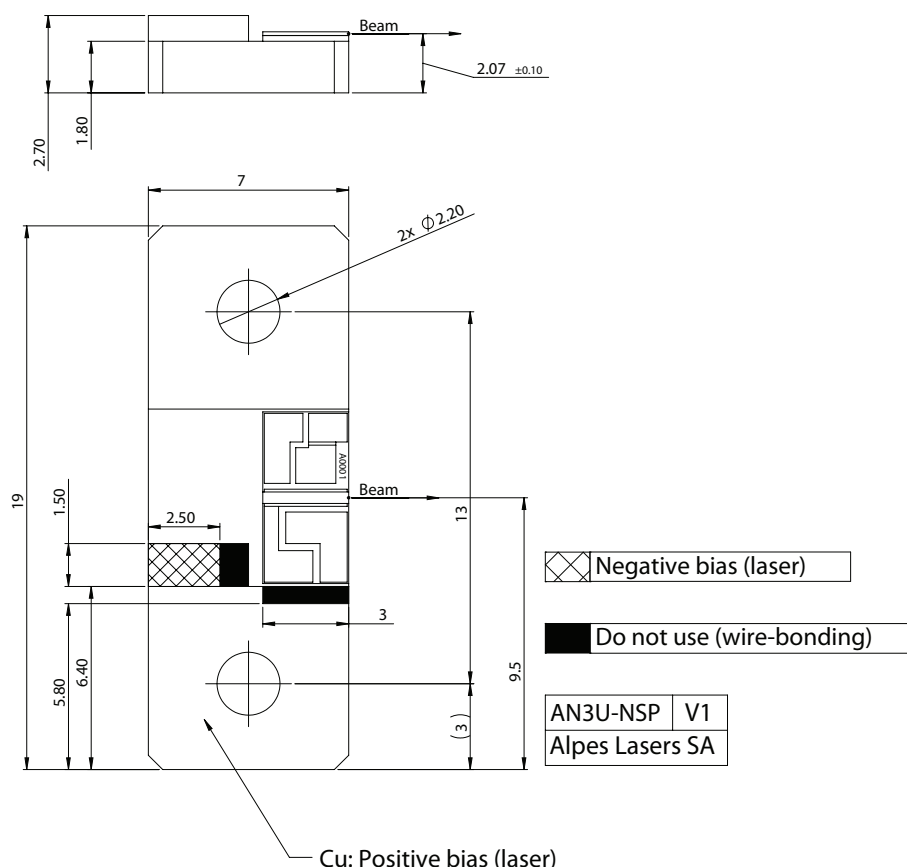


Figure 1: Mechanical and electrical interface for #sbcw27264 DN

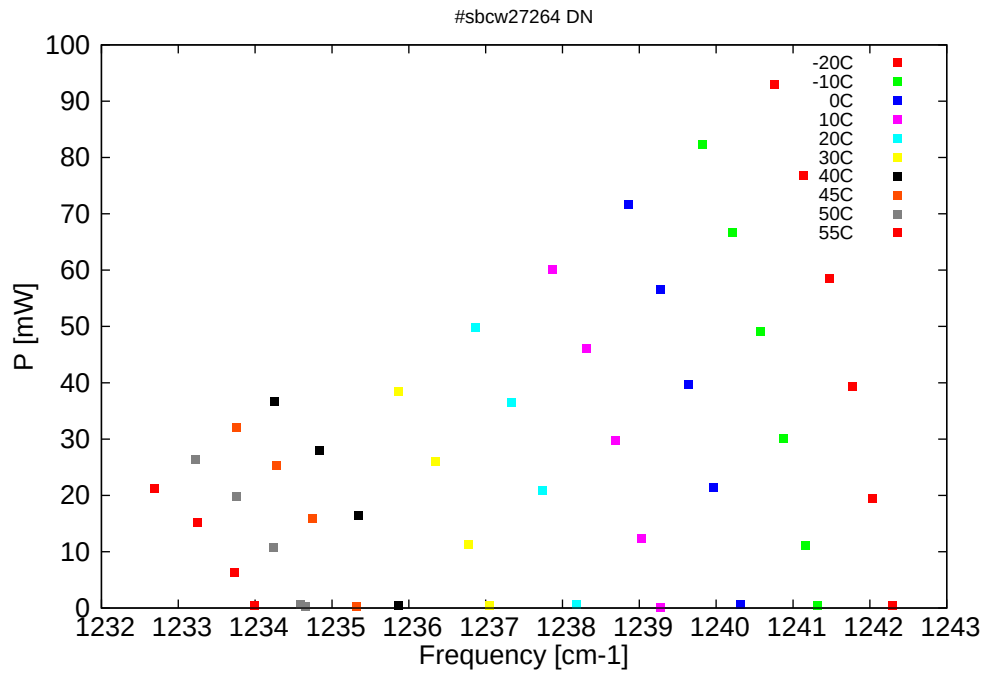


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

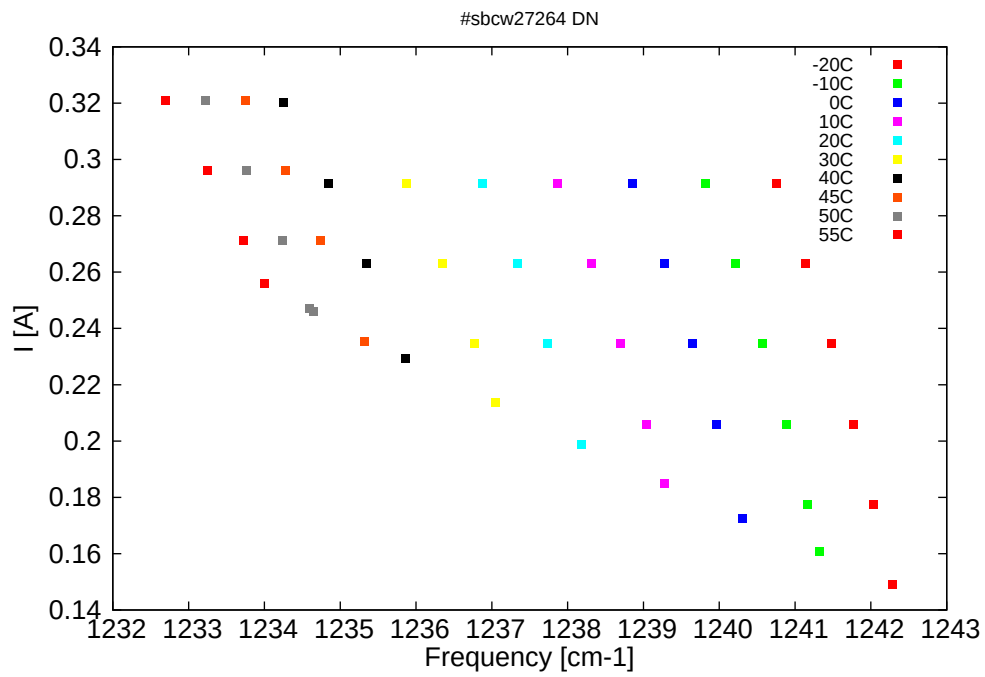


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
8049.6	1242.3	0.4	-20	6.88	0.149
8051.3	1242	19.4	-20	7.14	0.178
8053	1241.8	39.3	-20	7.39	0.206
8054.9	1241.5	58.6	-20	7.65	0.235
8057.1	1241.1	76.9	-20	7.92	0.263
8059.6	1240.8	92.9	-20	8.23	0.292
8055.9	1241.3	0.5	-10	6.96	0.161
8057	1241.2	11.1	-10	7.12	0.178
8058.8	1240.9	30.1	-10	7.38	0.206
8060.8	1240.6	49	-10	7.65	0.235
8063.1	1240.2	66.6	-10	7.93	0.263
8065.7	1239.8	82.2	-10	8.24	0.292
8062.5	1240.3	0.7	0	7.05	0.173
8064.7	1240	21.4	0	7.37	0.206
8066.8	1239.6	39.7	0	7.65	0.235
8069.2	1239.3	56.6	0	7.93	0.263
8071.9	1238.9	71.7	0	8.26	0.292
8069.3	1239.3	0.2	10	7.16	0.185
8070.8	1239	12.4	10	7.36	0.206
8073	1238.7	29.7	10	7.65	0.235
8075.5	1238.3	46.1	10	7.95	0.263
8078.4	1237.9	60.2	10	8.28	0.292
8076.4	1238.2	0.7	20	7.28	0.199
8079.3	1237.7	20.8	20	7.65	0.235
8081.9	1237.3	36.5	20	7.96	0.263
8084.9	1236.9	49.9	20	8.3	0.292
8083.7	1237.1	0.5	30	7.43	0.214
8085.5	1236.8	11.2	30	7.65	0.235
8088.3	1236.4	26	30	7.97	0.263
8091.5	1235.9	38.5	30	8.32	0.292
8091.5	1235.9	0.5	40	7.59	0.229
8094.9	1235.3	16.4	40	7.97	0.263
8098.2	1234.8	28	40	8.33	0.292
8102.1	1234.3	36.7	40	8.73	0.32
8095.1	1235.3	0.3	45	7.66	0.235
8098.8	1234.7	15.8	45	8.09	0.271
8101.9	1234.3	25.4	45	8.41	0.296
8105.3	1233.8	32.1	45	8.76	0.321
8099.4	1234.7	0.3	50	7.78	0.246
8099.8	1234.6	0.6	50	7.79	0.247
8102.2	1234.2	10.7	50	8.09	0.271
8105.3	1233.8	19.8	50	8.41	0.296
8108.8	1233.2	26.3	50	8.77	0.321
8103.7	1234	0.5	55	7.89	0.256
8105.5	1233.7	6.4	55	8.09	0.271
8108.7	1233.2	15.2	55	8.41	0.296
8112.3	1232.7	21.2	55	8.77	0.321

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

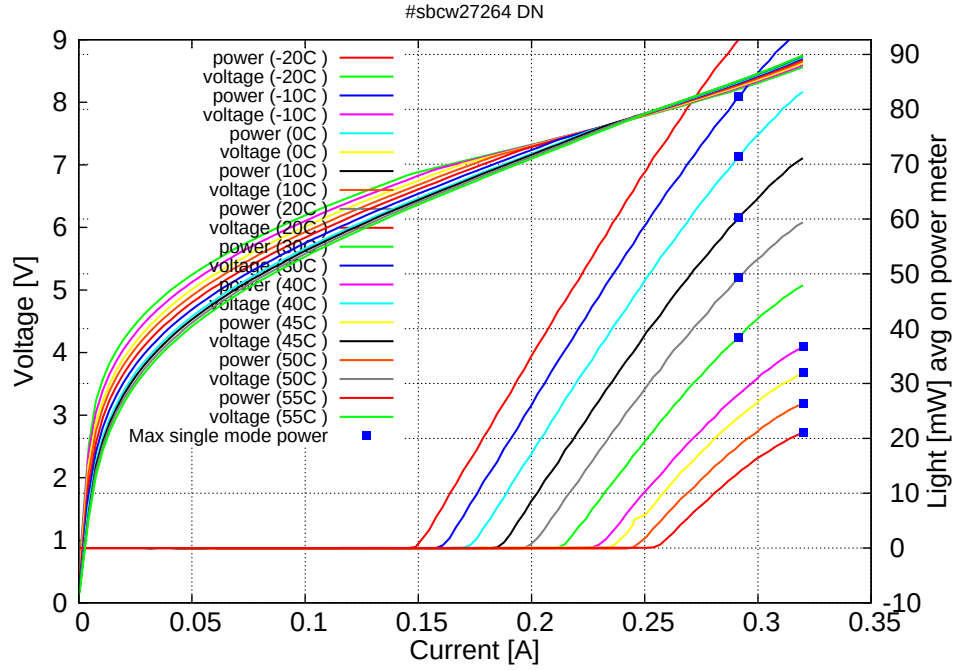


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.15\text{A}$ / $V_{th}=6.9\text{V}$ (2-wires measurements). Maximum operation current: 0.30A between -20C and 30C, 0.32A between 40C and 55C.

Figure 3: spectra at different temperatures for various DC currents

