Datasheet for #sbcw19982 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.

![Diagram of mechanical and electrical interface](image)

Figure 1: Mechanical and electrical interface for #sbcw19982 DN (please note that AlN submount numbering is A0M4W)
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
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<th>$\nu$ [cm$^{-1}$]</th>
<th>$P$ [mW]</th>
<th>Temp [°C]</th>
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<th>$I$ [A]</th>
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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: $I_{th}=0.11A$ / $V_{th}=8.7V$ (2-wires measurements). Maximum operation current: 0.235A for all temperatures.
Figure 3: Spectra at different temperatures for various DC currents.

-10°C 0.113A
-10°C 0.143A
-10°C 0.164A
-10°C 0.186A
-10°C 0.207A
-10°C 0.229A
0°C 0.126A
0°C 0.144A
0°C 0.166A
0°C 0.188A
0°C 0.211A
0°C 0.232A
10°C 0.135A
10°C 0.166A
10°C 0.188A
10°C 0.210A
10°C 0.232A
20°C 0.149A
20°C 0.166A
20°C 0.188A
20°C 0.210A
20°C 0.229A
30°C 0.162A
30°C 0.188A
30°C 0.210A
30°C 0.232A
35°C 0.173A
35°C 0.191A
35°C 0.214A
35°C 0.236A
40°C 0.180A
40°C 0.210A
40°C 0.229A
50°C 0.203A
50°C 0.229A