

Datasheet for #sbcw22370 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 #sbcw22370 DN

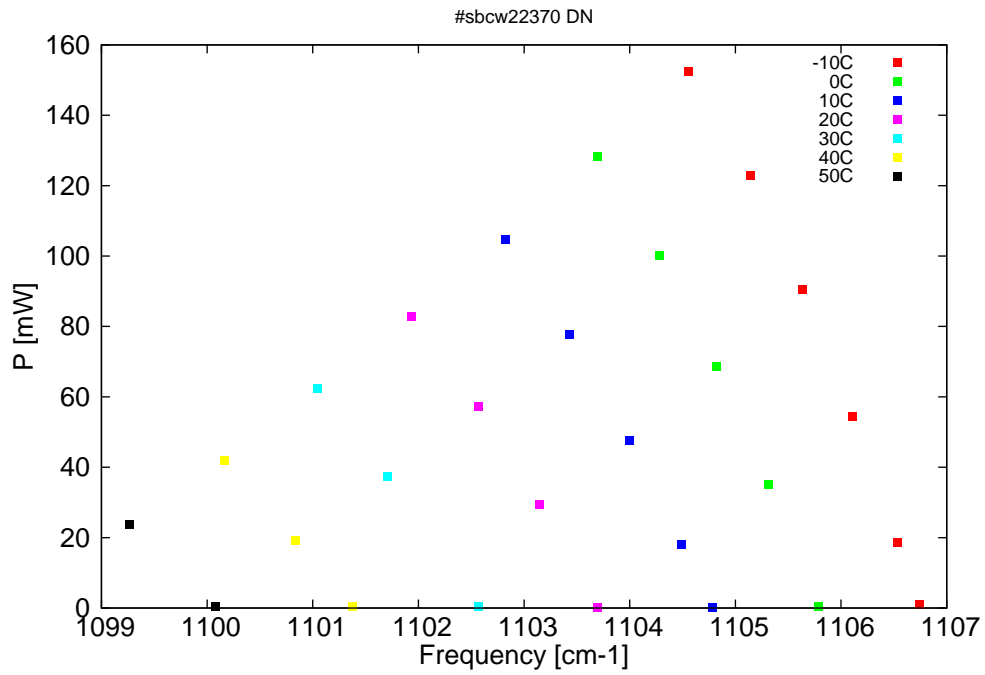


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

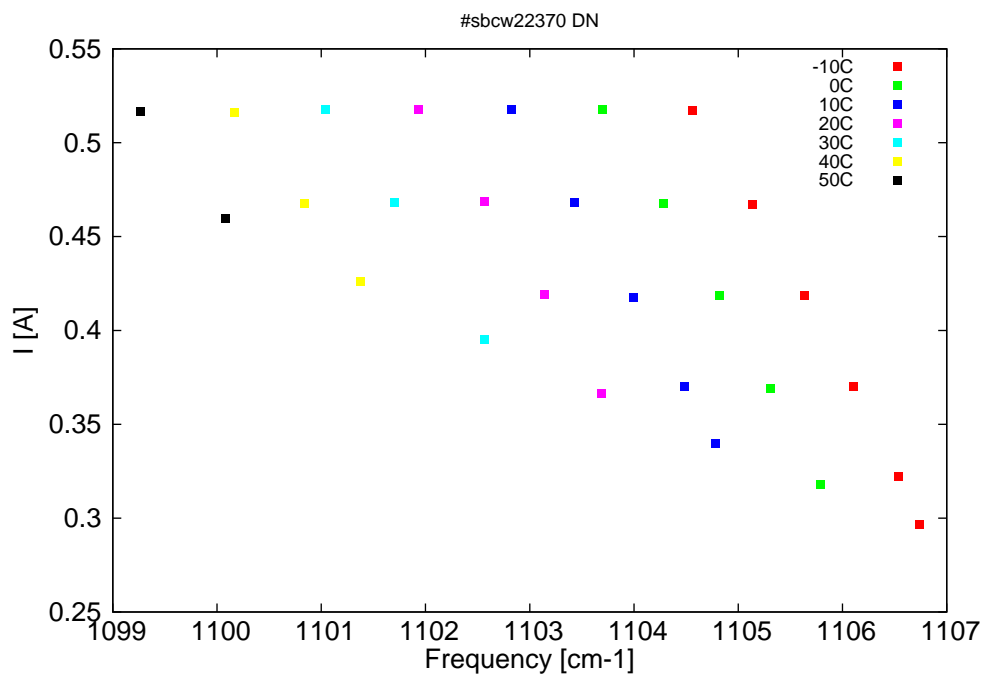


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9035.6	1106.7	1	-10	9.53	0.296
9037.2	1106.5	18.6	-10	9.73	0.322
9040.7	1106.1	54.4	-10	10.08	0.37
9044.6	1105.6	90.4	-10	10.43	0.419
9048.6	1105.1	123	-10	10.75	0.467
9053.4	1104.6	152.4	-10	11.11	0.517
9043.3	1105.8	0.6	0	9.64	0.318
9047.2	1105.3	35.1	0	10.02	0.369
9051.3	1104.8	68.6	0	10.38	0.419
9055.6	1104.3	100.1	0	10.72	0.468
9060.4	1103.7	128.2	0	11.08	0.517
9051.5	1104.8	0.2	10	9.76	0.34
9054	1104.5	18	10	9.99	0.37
9058	1104	47.6	10	10.34	0.418
9062.6	1103.4	77.7	10	10.69	0.468
9067.7	1102.8	104.8	10	11.05	0.518
9060.5	1103.7	0.2	20	9.91	0.366
9065	1103.1	29.3	20	10.31	0.419
9069.7	1102.6	57.4	20	10.67	0.469
9074.9	1101.9	82.9	20	11.03	0.518
9069.7	1102.6	0.5	30	10.09	0.395
9076.8	1101.7	37.4	30	10.63	0.468
9082.3	1101	62.3	30	11.01	0.518
9079.5	1101.4	0.4	40	10.29	0.426
9084	1100.8	19.1	40	10.6	0.468
9089.5	1100.2	41.9	40	10.97	0.516
9090.3	1100.1	0.3	50	10.52	0.46
9097	1099.3	23.6	50	10.96	0.517

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

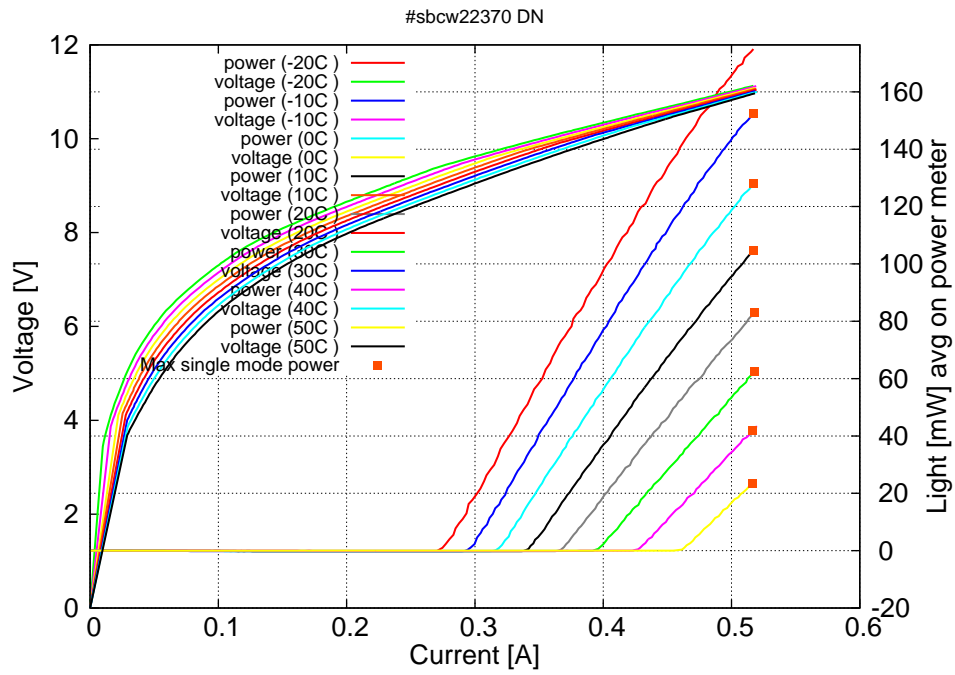


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.27A$ / $V_{th}=9.4V$ (2-wires measurements). Maximum operation current: 0.52A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

