

Datasheet for #sbcw20372 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 #sbcw20372 DN (please note that AlN submount numbering is A0M4X)

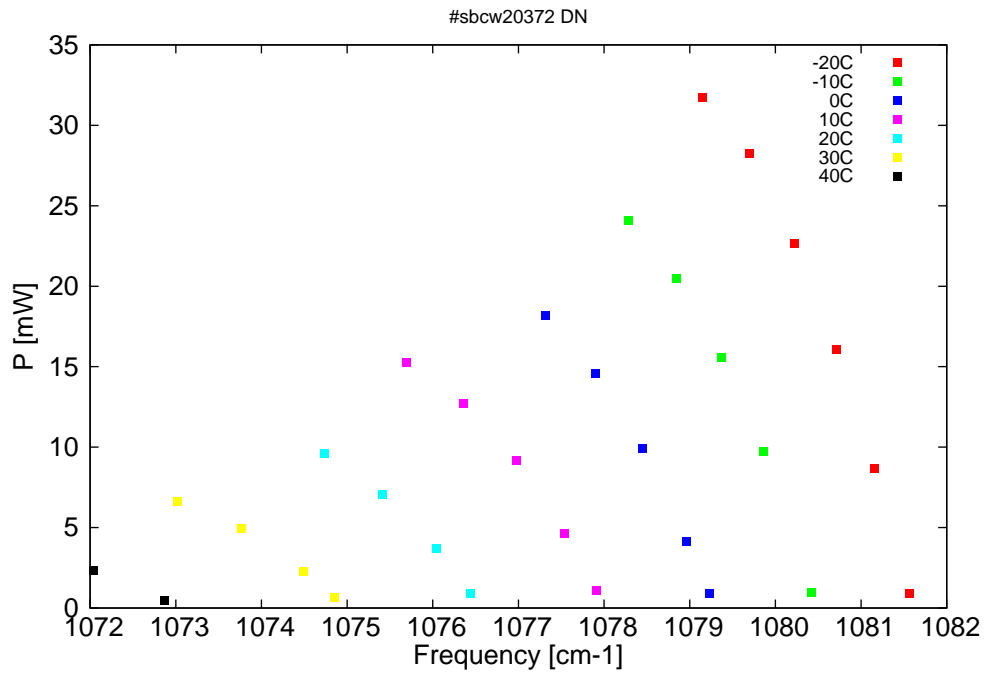


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

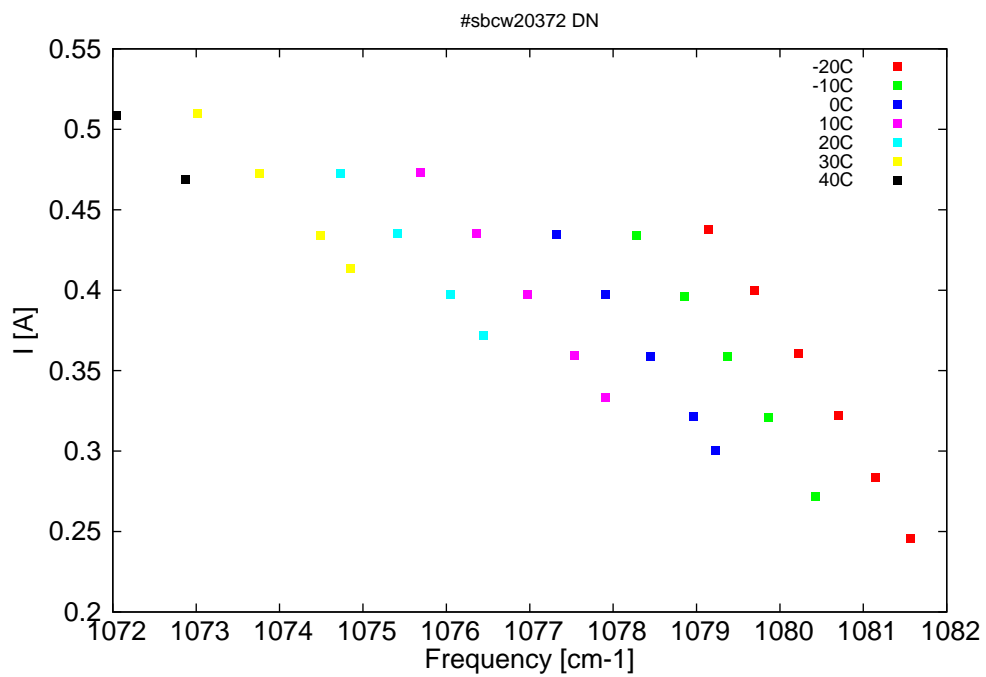


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9245.9	1081.6	0.9	-20	9.89	0.245
9249.4	1081.2	8.7	-20	10.24	0.284
9253.2	1080.7	16.1	-20	10.58	0.322
9257.3	1080.2	22.7	-20	10.91	0.361
9261.9	1079.7	28.2	-20	11.25	0.4
9266.6	1079.1	31.7	-20	11.58	0.438
9255.6	1080.4	1	-10	9.98	0.272
9260.5	1079.9	9.7	-10	10.41	0.321
9264.7	1079.4	15.6	-10	10.73	0.359
9269.1	1078.9	20.5	-10	11.06	0.396
9274	1078.3	24.1	-10	11.39	0.434
9265.9	1079.2	0.9	0	10.13	0.301
9268.2	1079	4.2	0	10.31	0.321
9272.5	1078.5	9.9	0	10.64	0.359
9277.3	1077.9	14.6	0	10.97	0.397
9282.3	1077.3	18.2	0	11.3	0.435
9277.2	1077.9	1.1	10	10.32	0.334
9280.5	1077.5	4.6	10	10.55	0.36
9285.3	1077	9.2	10	10.88	0.398
9290.6	1076.4	12.7	10	11.22	0.436
9296.4	1075.7	15.2	10	11.55	0.473
9289.9	1076.4	0.9	20	10.56	0.372
9293.3	1076	3.7	20	10.79	0.398
9298.8	1075.4	7.1	20	11.12	0.435
9304.6	1074.7	9.6	20	11.45	0.472
9303.6	1074.8	0.7	30	10.81	0.414
9306.8	1074.5	2.3	30	10.99	0.434
9313.1	1073.8	5	30	11.33	0.472
9319.5	1073	6.6	30	11.67	0.51
9320.8	1072.9	0.5	40	11.19	0.469
9328	1072	2.3	40	11.55	0.508

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

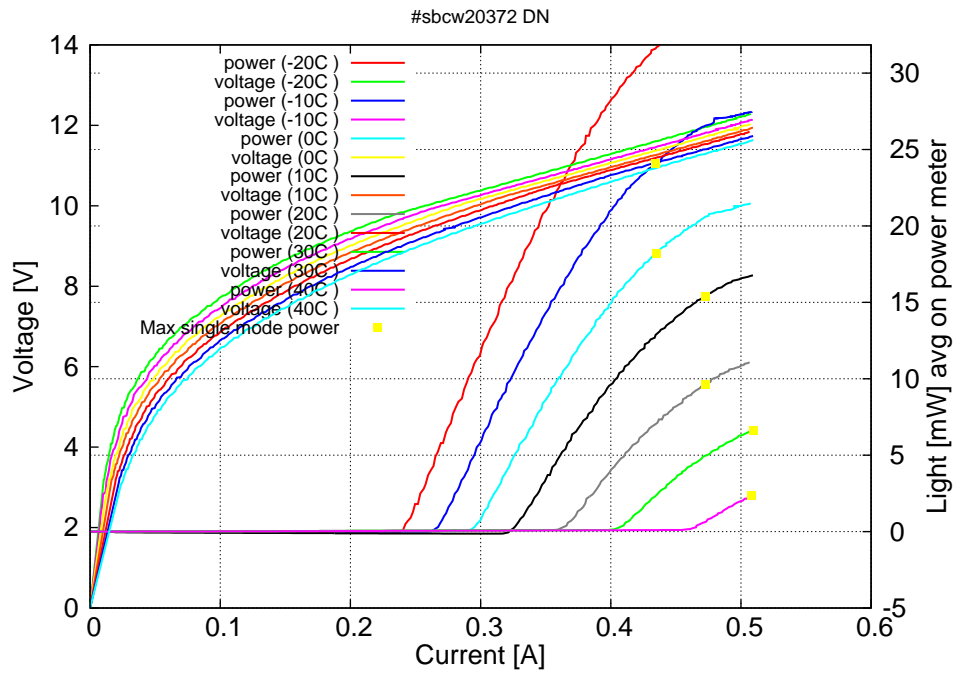


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.24A$ / $V_{th}=9.8V$ (2-wires measurements). Maximum operation current: 0.44A between -20C and 0C, 0.475A between 10C and 20C, 0.51A between 30C and 40C.

Figure 3: spectra at different temperatures for various DC currents

