

Datasheet for #sbcw20351 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 #sbcw20351 DN

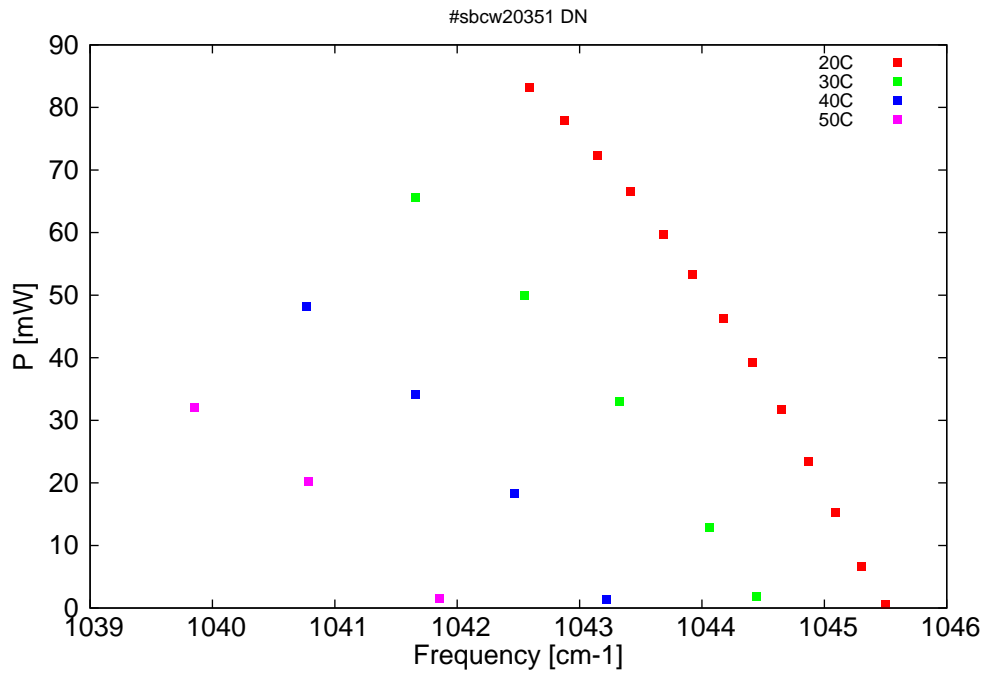


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

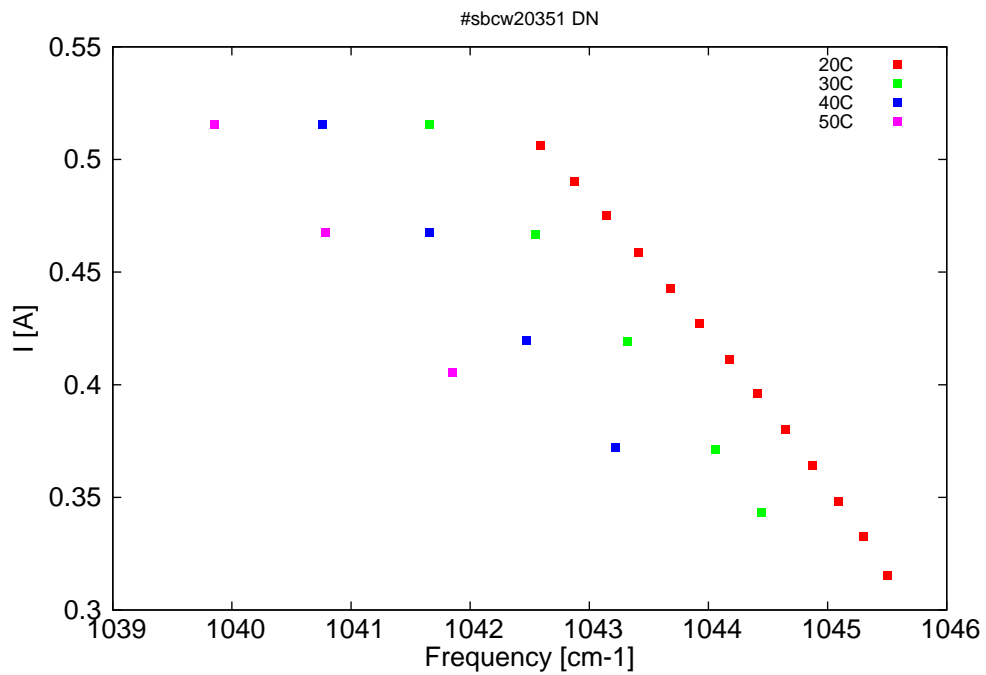


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9564.8	1045.5	0.6	20	9.28	0.315
9566.6	1045.3	6.7	20	9.39	0.332
9568.6	1045.1	15.2	20	9.51	0.348
9570.5	1044.9	23.5	20	9.63	0.364
9572.6	1044.6	31.7	20	9.75	0.38
9574.8	1044.4	39.2	20	9.87	0.396
9576.9	1044.2	46.2	20	9.98	0.411
9579.2	1043.9	53.4	20	10.1	0.427
9581.5	1043.7	59.7	20	10.21	0.443
9583.9	1043.4	66.5	20	10.33	0.459
9586.4	1043.1	72.3	20	10.45	0.475
9588.8	1042.9	77.9	20	10.56	0.49
9591.5	1042.6	83.3	20	10.68	0.506
9574.5	1044.4	1.8	30	9.44	0.343
9578	1044.1	12.8	30	9.65	0.371
9584.7	1043.3	32.9	30	10.02	0.419
9591.9	1042.5	50	30	10.37	0.467
9600.1	1041.7	65.6	30	10.73	0.516
9585.7	1043.2	1.4	40	9.61	0.372
9592.6	1042.5	18.3	40	9.97	0.42
9600	1041.7	34.2	40	10.33	0.468
9608.3	1040.8	48.2	40	10.7	0.515
9598.3	1041.9	1.5	50	9.81	0.406
9608.1	1040.8	20.3	50	10.29	0.467
9616.8	1039.9	32	50	10.66	0.515

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

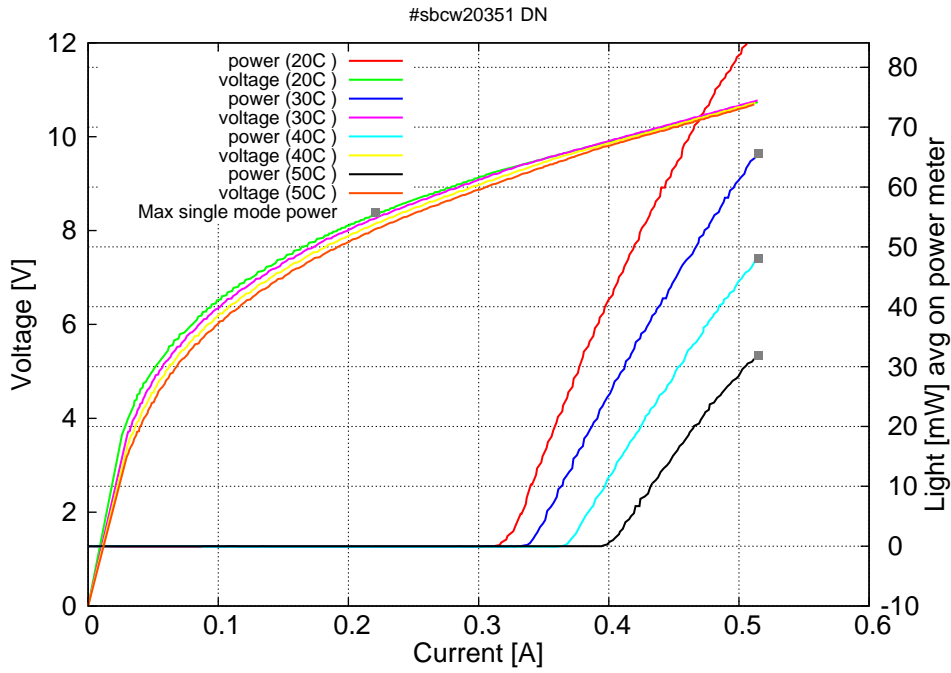


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

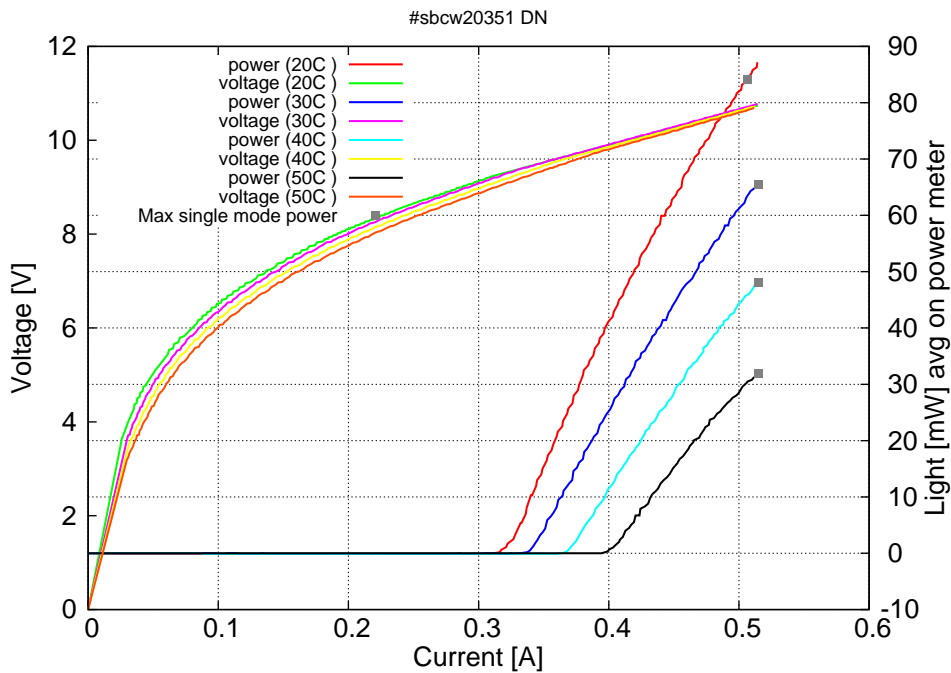


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at 20C: $I_{th}=0.315A$ / $V_{th}=9.2V$ (2-wires measurements). Maximum operation current: 0.40A between 0C and 5C, 0.43A at 10C, 0.46A at 15C, 0.515A between 20C and 50C.

Figure 4: spectra at different temperatures for various DC currents

