

Datasheet for #sbcw20226 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 #sbcw20226 DN

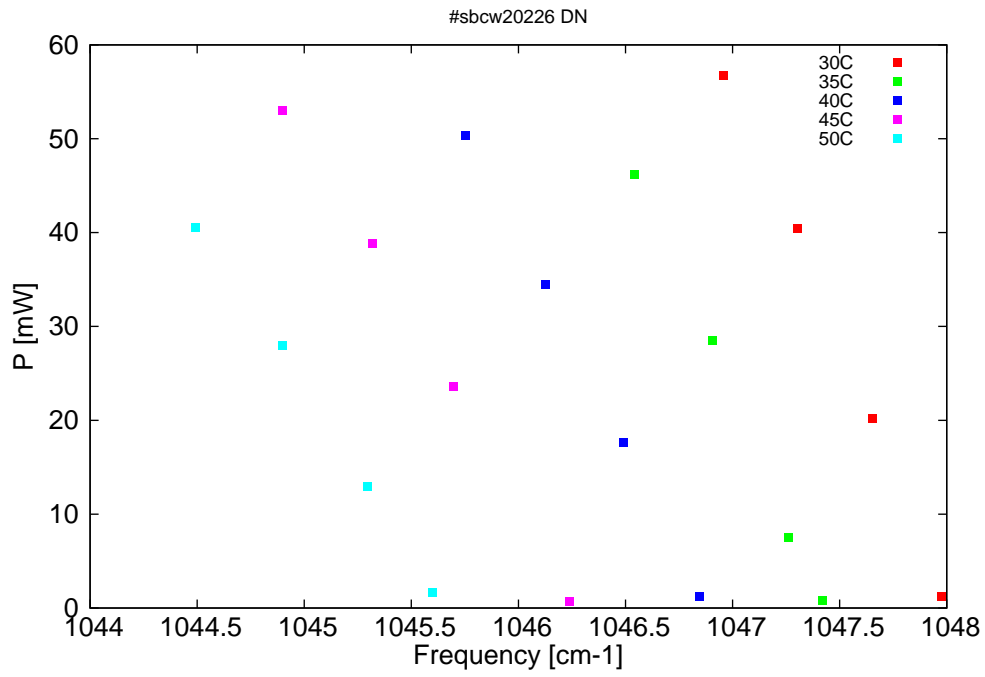


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

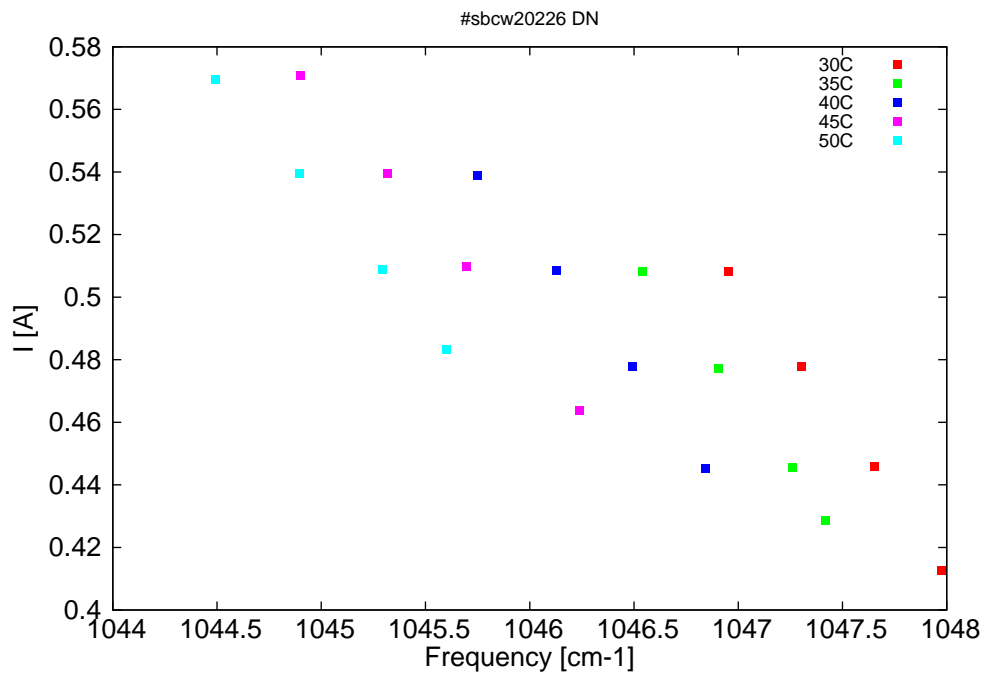


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
9542.2	1048	1.3	30	10.04	0.413
9545.1	1047.7	20.2	30	10.27	0.446
9548.3	1047.3	40.5	30	10.49	0.478
9551.5	1047	56.7	30	10.7	0.508
9547.3	1047.4	0.8	35	10.12	0.429
9548.7	1047.3	7.6	35	10.23	0.445
9552	1046.9	28.5	35	10.45	0.477
9555.3	1046.5	46.2	35	10.67	0.508
9552.5	1046.8	1.2	40	10.2	0.445
9555.7	1046.5	17.7	40	10.43	0.478
9559.1	1046.1	34.5	40	10.64	0.508
9562.5	1045.8	50.4	40	10.85	0.539
9558	1046.2	0.6	45	10.3	0.464
9563	1045.7	23.6	45	10.62	0.51
9566.5	1045.3	38.8	45	10.83	0.54
9570.3	1044.9	53	45	11.04	0.571
9563.9	1045.6	1.6	50	10.4	0.483
9566.7	1045.3	13	50	10.58	0.509
9570.3	1044.9	28	50	10.8	0.54
9574	1044.5	40.6	50	11	0.569

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

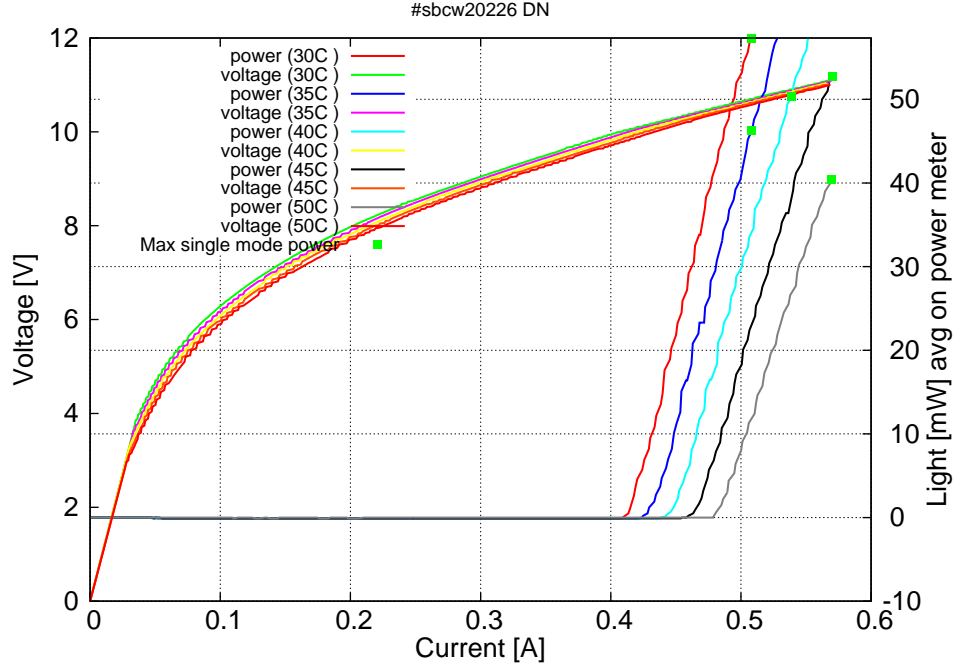


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

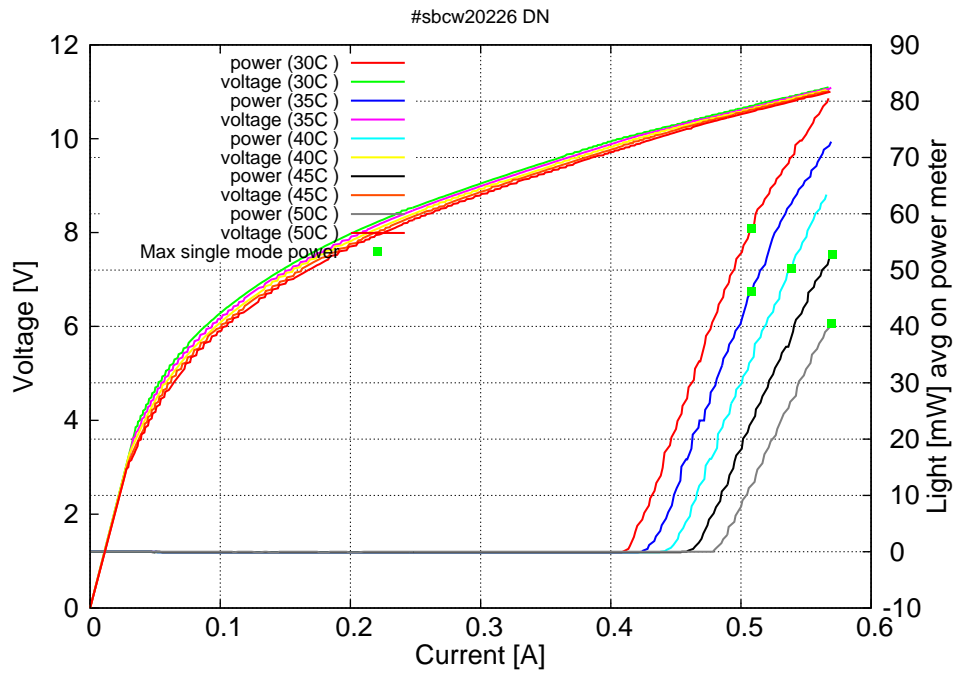


Figure 5: voltage and avg power vs current in continuous-wave operation (including the multimode region)

Note: at 30C: $I_{th}=0.41A$ / $V_{th}=10.0V$ (2-wires measurements). Maximum operation current: 0.51A between 30C and 35C, 0.54A at 40C, 0.57A between 45C and 50C.

Figure 4: spectra at different temperatures for various DC currents

