

Datasheet for #sbcw24293 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 #sbcw24293 DN

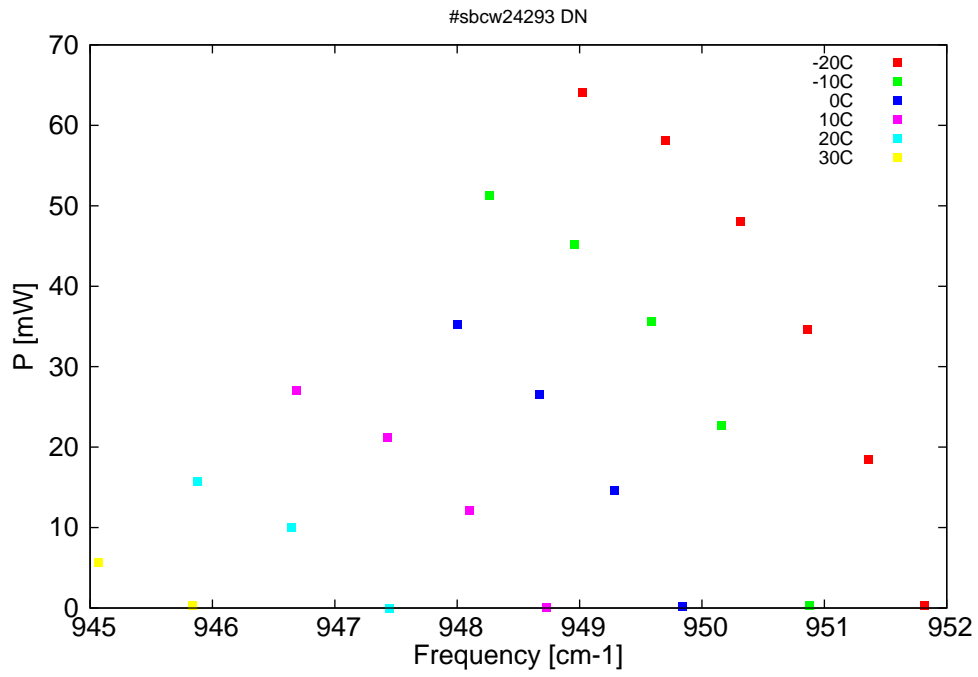


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

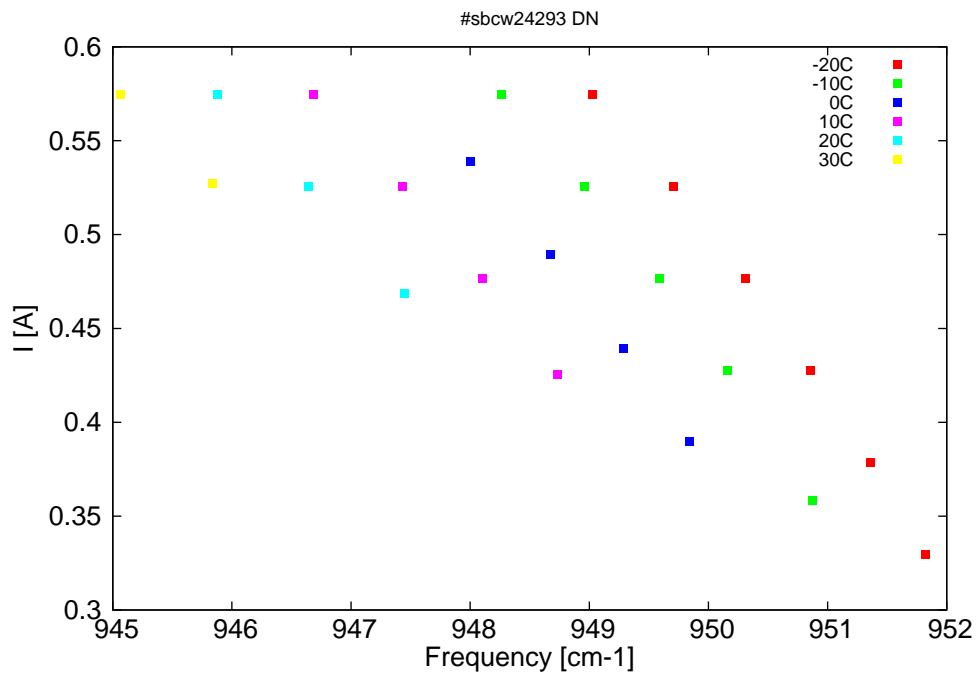


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
10506.2	951.8	0.4	-20	9	0.33
10511.2	951.4	18.4	-20	9.33	0.379
10516.8	950.9	34.7	-20	9.65	0.428
10522.8	950.3	48	-20	9.97	0.477
10529.6	949.7	58.1	-20	10.29	0.526
10537.1	949	64.2	-20	10.62	0.575
10516.6	950.9	0.3	-10	9.12	0.358
10524.6	950.2	22.7	-10	9.58	0.428
10530.9	949.6	35.6	-10	9.9	0.477
10537.9	949	45.2	-10	10.23	0.526
10545.6	948.3	51.3	-10	10.57	0.575
10528	949.8	0.3	0	9.27	0.39
10534.2	949.3	14.6	0	9.6	0.439
10541	948.7	26.5	0	9.93	0.489
10548.5	948	35.2	0	10.27	0.539
10540.4	948.7	0.1	10	9.45	0.425
10547.4	948.1	12.1	10	9.79	0.477
10554.9	947.4	21.2	10	10.13	0.526
10563.2	946.7	27	10	10.48	0.575
10554.7	947.4	0	20	9.69	0.469
10563.6	946.6	10	20	10.09	0.526
10572.2	945.9	15.7	20	10.44	0.575
10572.7	945.8	0.4	30	10.06	0.527
10581.3	945.1	5.7	30	10.4	0.575

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

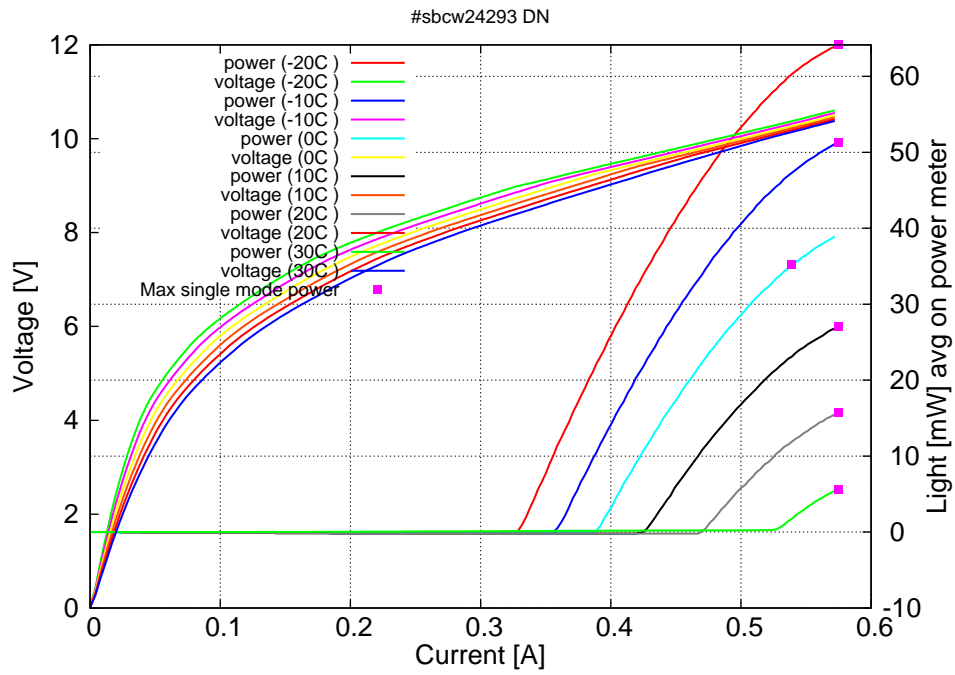


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.32A$ / $V_{th}=9.0V$ (2-wires measurements). Maximum operation current: 0.575A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

