

Datasheet for #sbcw9673 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 #sbcw9673 DN

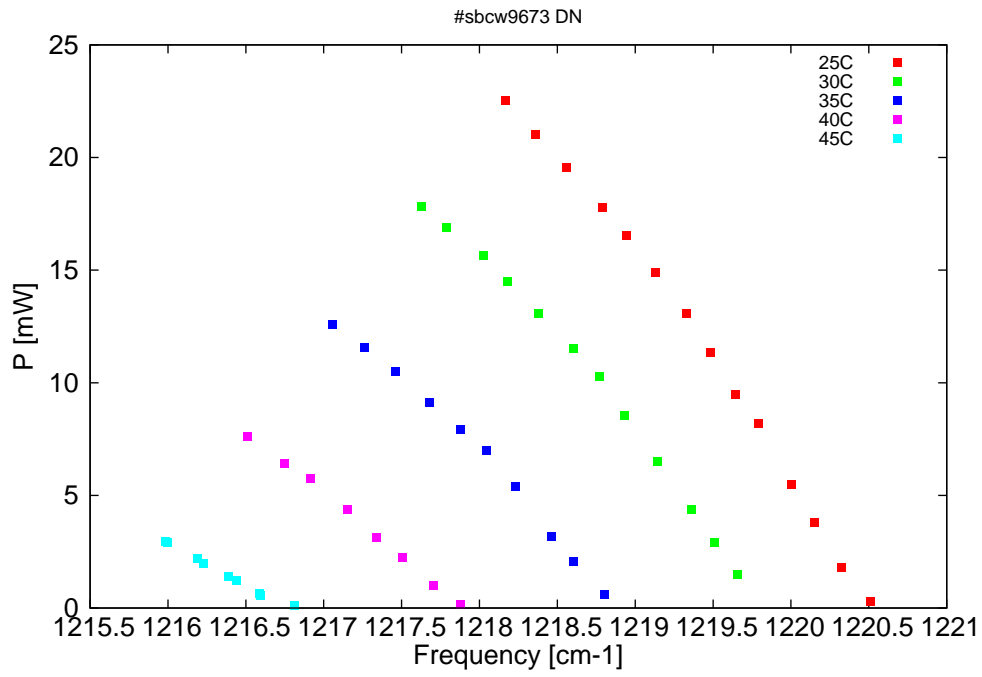


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

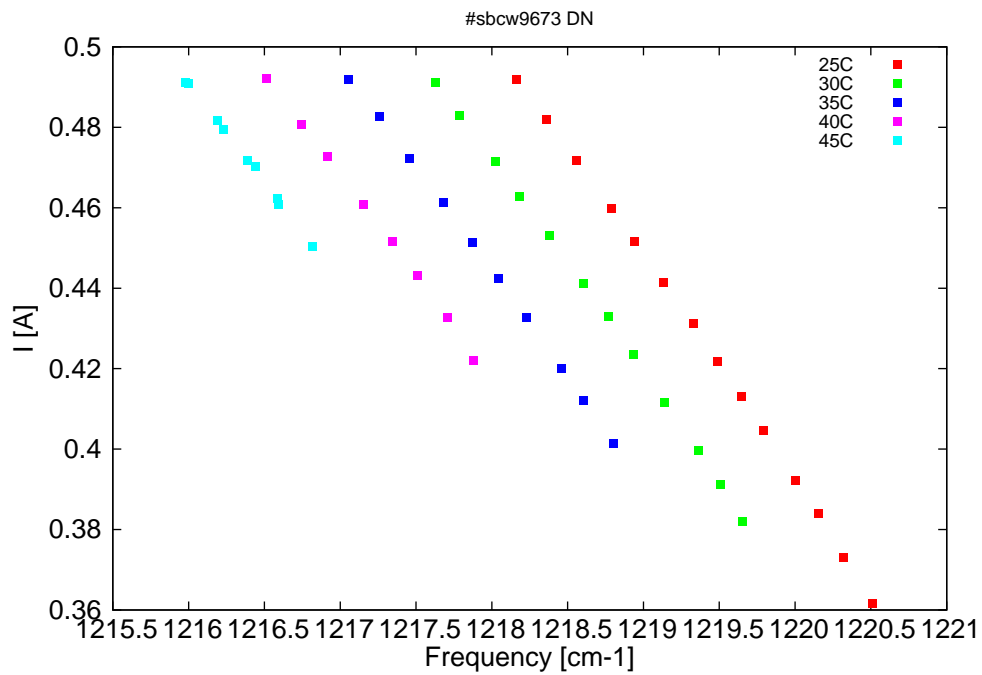


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
8193.3	1220.5	0.3	25	7.68	0.362
8194.6	1220.3	1.8	25	7.73	0.373
8195.7	1220.2	3.8	25	7.77	0.384
8196.7	1220	5.5	25	7.81	0.392
8198.1	1219.8	8.2	25	7.86	0.405
8199.1	1219.6	9.5	25	7.9	0.413
8200.2	1219.5	11.4	25	7.94	0.422
8201.2	1219.3	13.1	25	7.98	0.431
8202.6	1219.1	14.9	25	8.02	0.441
8203.8	1218.9	16.5	25	8.07	0.452
8204.9	1218.8	17.8	25	8.1	0.46
8206.4	1218.6	19.6	25	8.16	0.472
8207.7	1218.4	21	25	8.2	0.482
8209.1	1218.2	22.5	25	8.25	0.492
8199	1219.7	1.5	30	7.75	0.382
8200	1219.5	2.9	30	7.79	0.391
8201	1219.4	4.4	30	7.82	0.4
8202.5	1219.1	6.5	30	7.88	0.412
8203.9	1218.9	8.6	30	7.93	0.424
8205	1218.8	10.3	30	7.97	0.433
8206.1	1218.6	11.5	30	8	0.441
8207.6	1218.4	13.1	30	8.06	0.453
8209	1218.2	14.5	30	8.1	0.463
8210	1218	15.6	30	8.14	0.471
8211.6	1217.8	16.9	30	8.19	0.483
8212.7	1217.6	17.8	30	8.23	0.491
8204.8	1218.8	0.6	35	7.82	0.401
8206.1	1218.6	2.1	35	7.86	0.412
8207.1	1218.5	3.2	35	7.9	0.42
8208.6	1218.2	5.4	35	7.95	0.433
8209.9	1218	7	35	8	0.443
8211	1217.9	7.9	35	8.04	0.451
8212.3	1217.7	9.1	35	8.08	0.461
8213.8	1217.5	10.5	35	8.13	0.472
8215.2	1217.3	11.6	35	8.18	0.483
8216.6	1217.1	12.6	35	8.22	0.492
8211	1217.9	0.2	40	7.89	0.422
8212.2	1217.7	1	40	7.93	0.433
8213.5	1217.5	2.2	40	7.98	0.443
8214.6	1217.3	3.1	40	8.02	0.452
8215.9	1217.2	4.4	40	8.06	0.461
8217.5	1216.9	5.8	40	8.12	0.473
8218.6	1216.7	6.4	40	8.15	0.481
8220.2	1216.5	7.6	40	8.21	0.492
8218.2	1216.8	0.1	45	8	0.45
8219.7	1216.6	0.5	45	8.05	0.461
8219.7	1216.6	0.6	45	8.06	0.462
8220.7	1216.4	1.2	45	8.09	0.47
8221.1	1216.4	1.4	45	8.1	0.472

*continued on next page*

$\lambda$ [nm]	$\nu$ [cm <sup>-1</sup> ]	P[mW]	Temp[°C]	$U_{LASER}$ [V]	I[A]
8222.1	1216.2	2	45	8.13	0.479
8222.4	1216.2	2.2	45	8.15	0.482
8223.7	1216	2.9	45	8.19	0.491
8223.8	1216	3	45	8.19	0.491

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

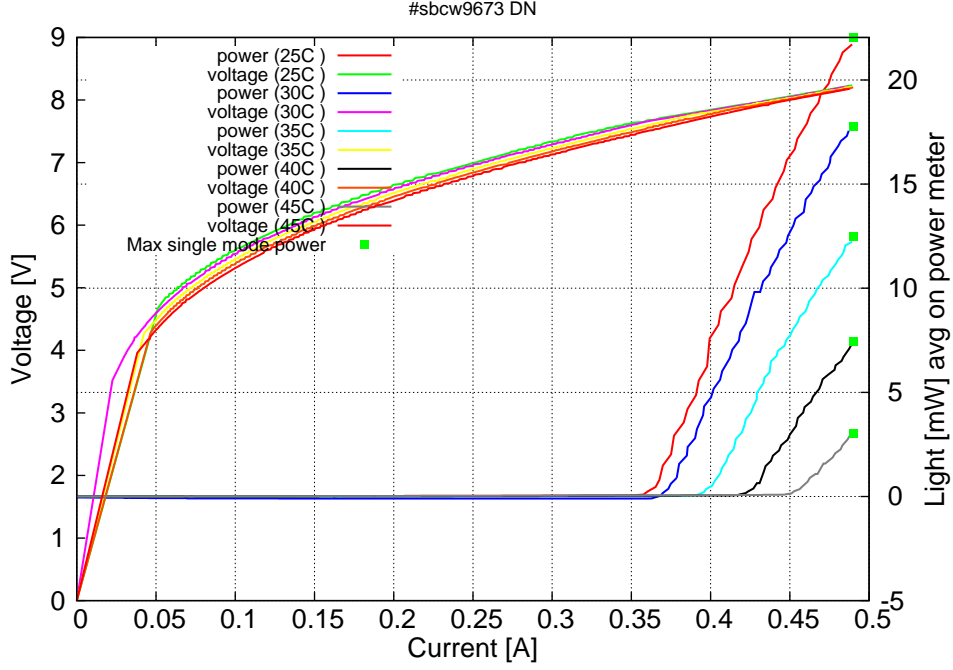


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at 25C:  $I_{th}=0.35A$  /  $V_{th}=7.6V$  (2-wires measurements). Maximum operation current: 0.49A between 25C and 45C.

Figure 3: spectra at different temperatures for various DC currents

