

Datasheet for #sbcw17793 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 #sbcw17793 DN

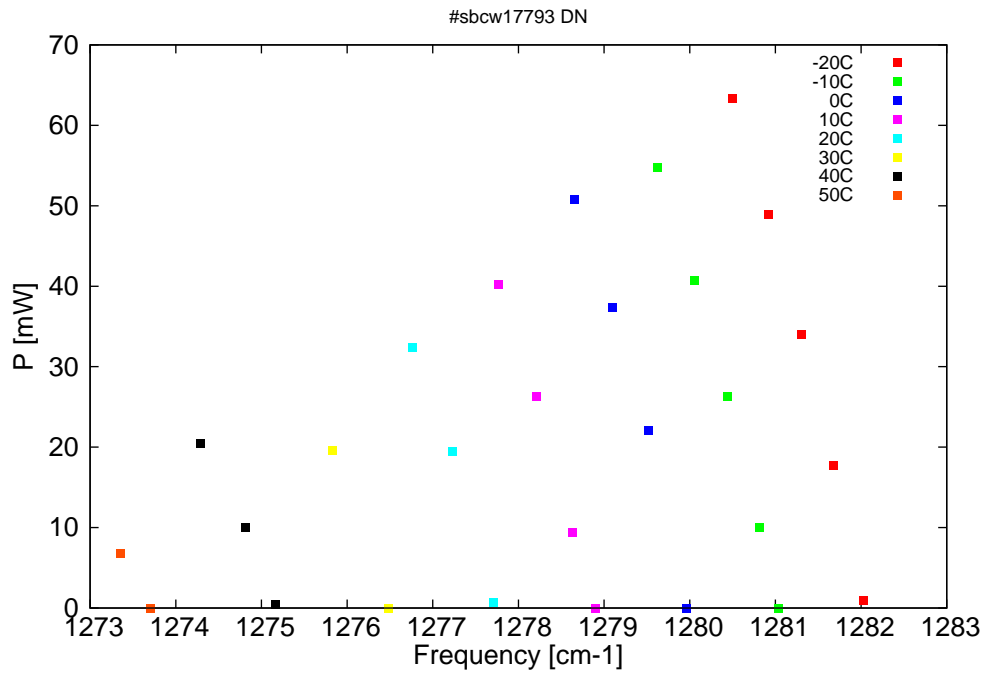


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

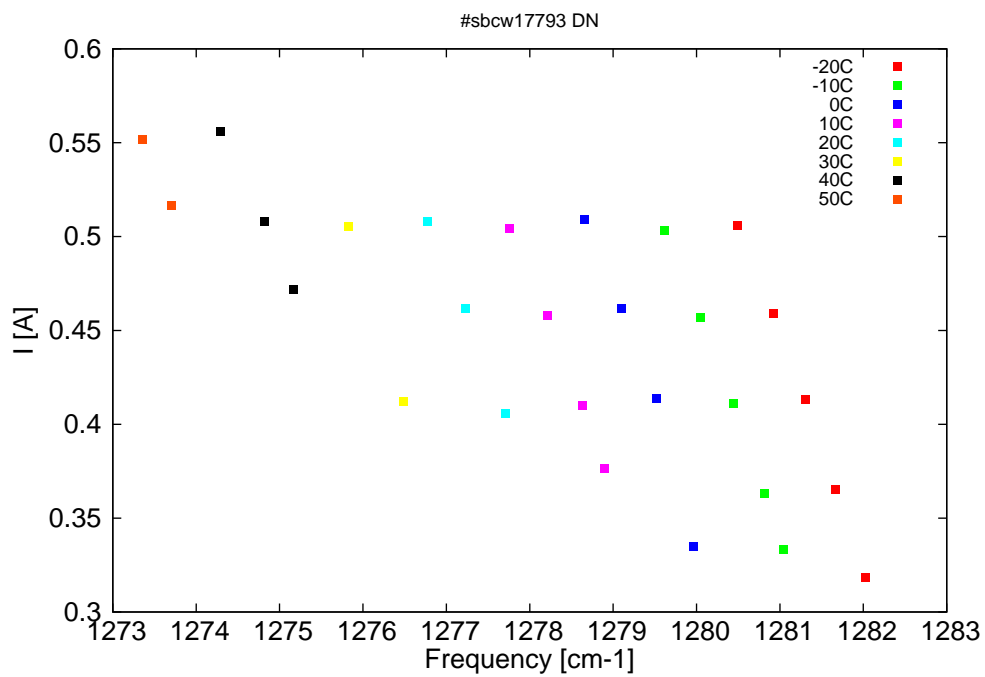


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7800.2	1282	1	-20	8.65	0.319
7802.3	1281.7	17.7	-20	8.88	0.366
7804.5	1281.3	34	-20	9.09	0.413
7806.9	1280.9	48.9	-20	9.3	0.459
7809.5	1280.5	63.3	-20	9.49	0.506
7806.2	1281	0	-10	8.56	0.333
7807.5	1280.8	10	-10	8.7	0.363
7809.8	1280.4	26.2	-10	8.92	0.411
7812.2	1280.1	40.7	-10	9.12	0.457
7814.8	1279.6	54.8	-10	9.32	0.503
7812.7	1280	0	0	8.53	0.335
7815.5	1279.5	22	0	8.78	0.414
7818	1279.1	37.3	0	8.99	0.462
7820.7	1278.7	50.7	0	9.19	0.509
7819.2	1278.9	0	10	8.44	0.376
7820.8	1278.6	9.4	10	8.62	0.41
7823.4	1278.2	26.2	10	8.83	0.458
7826.2	1277.8	40.2	10	9.03	0.505
7826.5	1277.7	0.6	20	8.49	0.406
7829.4	1277.2	19.4	20	8.72	0.462
7832.3	1276.8	32.3	20	8.92	0.508
7834	1276.5	0	30	8.51	0.412
7838	1275.8	19.6	30	8.8	0.505
7842.1	1275.2	0.5	40	8.55	0.472
7844.3	1274.8	10	40	8.71	0.508
7847.5	1274.3	20.4	40	8.91	0.556
7851.1	1273.7	0	50	8.67	0.517
7853.3	1273.4	6.8	50	8.8	0.551

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

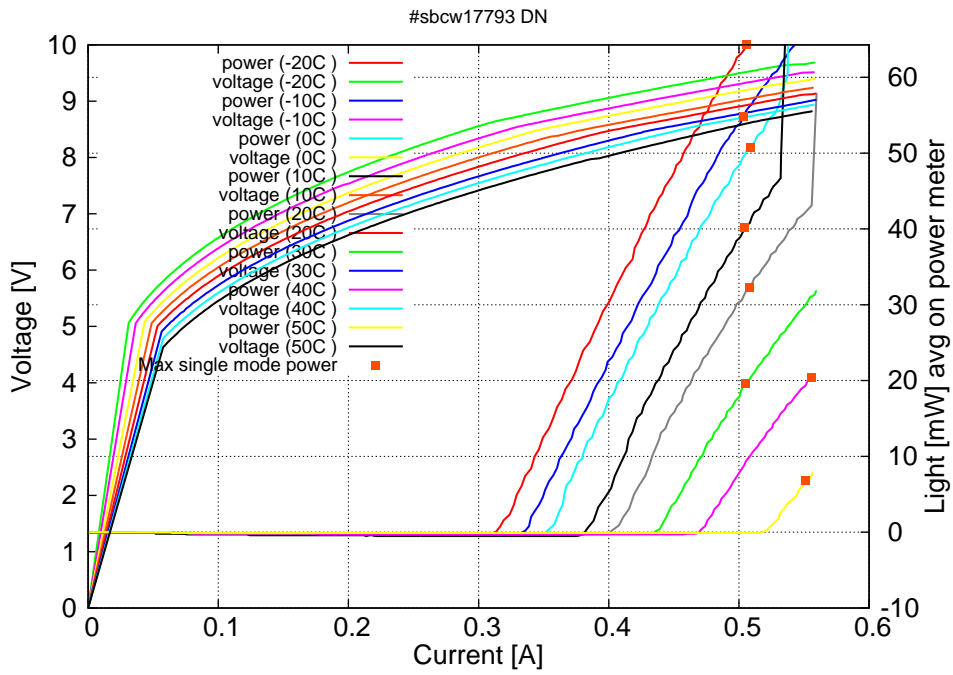


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.31A$ / $V_{th}=8.6V$ (2-wires measurements). Maximum operation current: 0.51A between -20C and 30C, 0.56A between 40C and 50C.

Figure 3: spectra at different temperatures for various DC currents

