

Datasheet for #sbcw15127 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 bias and positive bias on the specific zones drawn below. 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.

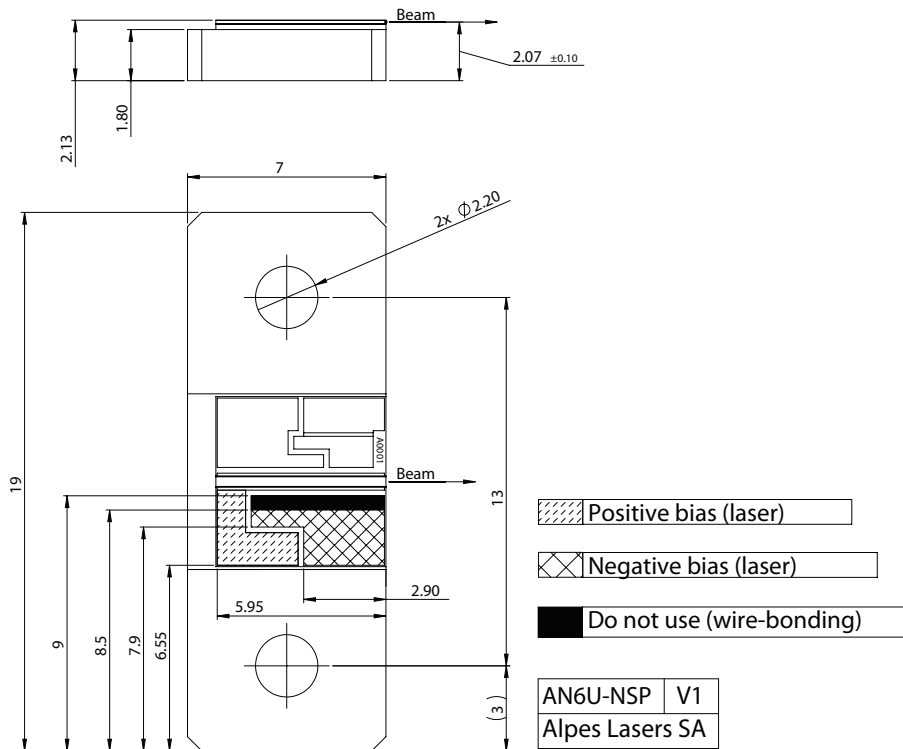


Figure 1: Mechanical and electrical interface for #sbcw15127 DN

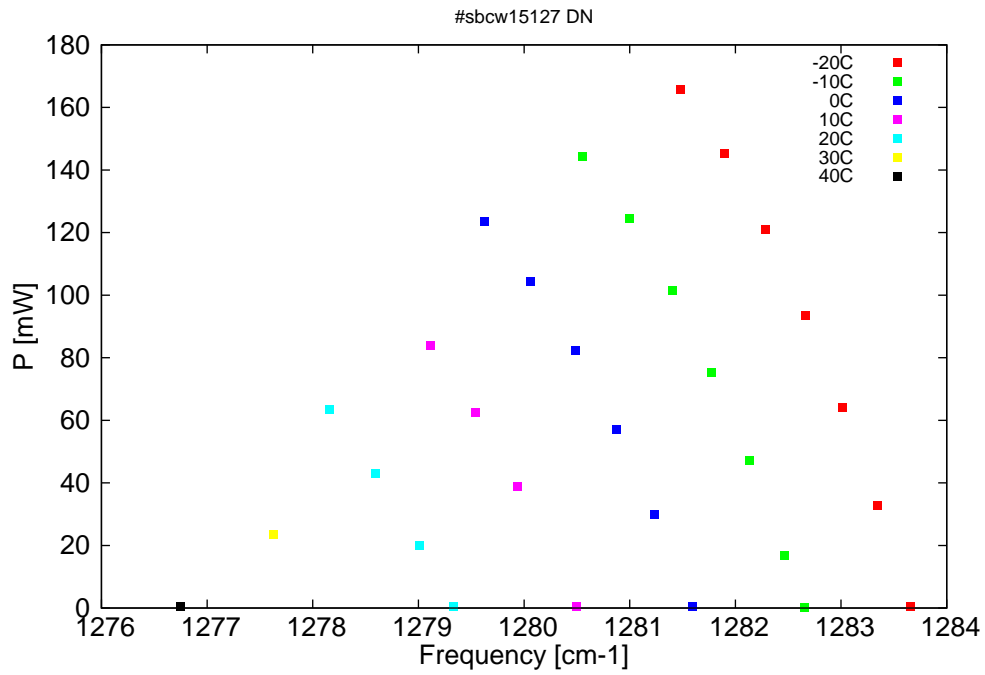


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

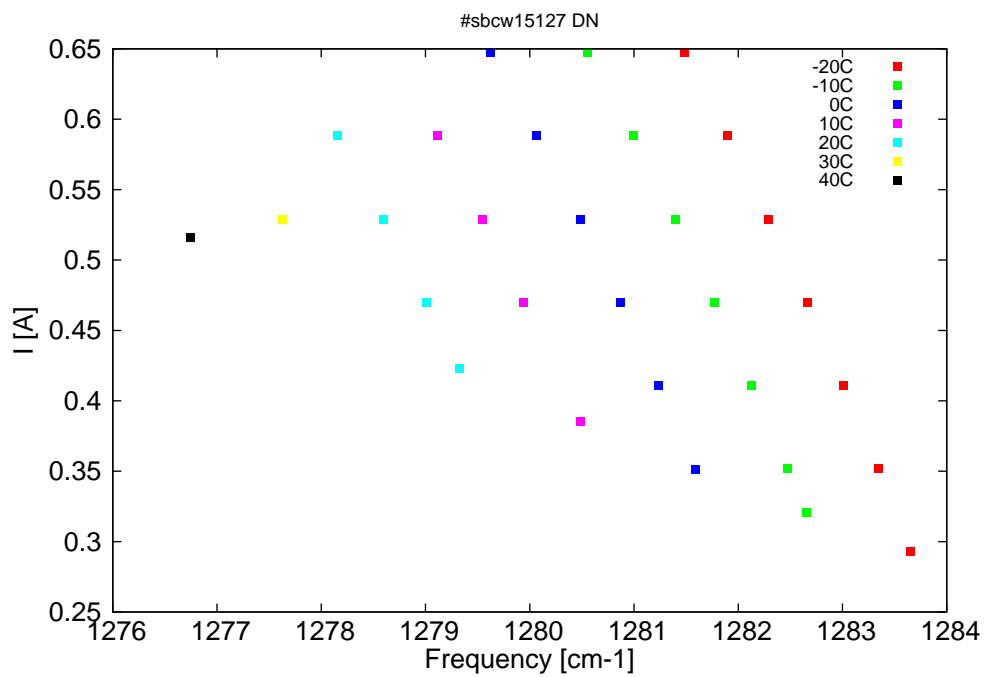


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
7790.3	1283.7	0.7	-20	8	0.293
7792.2	1283.3	32.9	-20	8.24	0.352
7794.2	1283	64.1	-20	8.46	0.411
7796.3	1282.7	93.6	-20	8.67	0.47
7798.6	1282.3	120.9	-20	8.86	0.529
7800.9	1281.9	145.1	-20	9.04	0.588
7803.5	1281.5	165.7	-20	9.21	0.647
7796.3	1282.7	0.3	-10	7.99	0.321
7797.5	1282.5	16.7	-10	8.11	0.352
7799.5	1282.1	47	-10	8.33	0.411
7801.7	1281.8	75.3	-10	8.54	0.47
7803.9	1281.4	101.6	-10	8.74	0.529
7806.4	1281	124.5	-10	8.93	0.588
7809.1	1280.6	144.2	-10	9.11	0.647
7802.8	1281.6	0.5	0	7.98	0.351
7805	1281.2	29.8	0	8.2	0.411
7807.2	1280.9	57.2	0	8.4	0.47
7809.6	1280.5	82.3	0	8.61	0.529
7812.1	1280.1	104.3	0	8.8	0.588
7814.8	1279.6	123.6	0	8.98	0.647
7809.5	1280.5	0.5	10	8.11	0.385
7812.9	1279.9	38.8	10	8.4	0.47
7815.3	1279.5	62.5	10	8.61	0.529
7817.9	1279.1	83.9	10	8.82	0.588
7816.6	1279.3	0.3	20	8.13	0.423
7818.6	1279	20	20	8.29	0.47
7821.1	1278.6	43.1	20	8.49	0.529
7823.8	1278.2	63.6	20	8.7	0.588
7827	1277.6	23.6	30	8.42	0.529
7832.4	1276.7	0.4	40	8.28	0.516

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

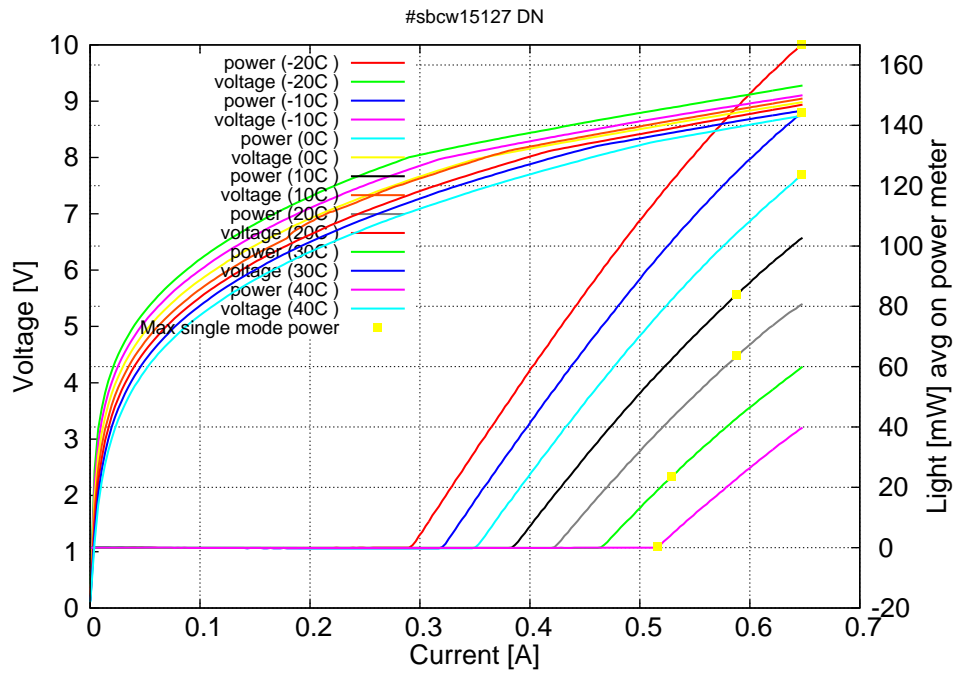


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.29A$ / $V_{th}=8.0V$ (2-wires measurements). Maximum operation current: 0.65A between -20C and 0C, 0.59A between 10C and 20C, 0.53A between 30C and 40C.

Figure 3: spectra at different temperatures for various DC currents

