

Datasheet for #sbcw12471 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.

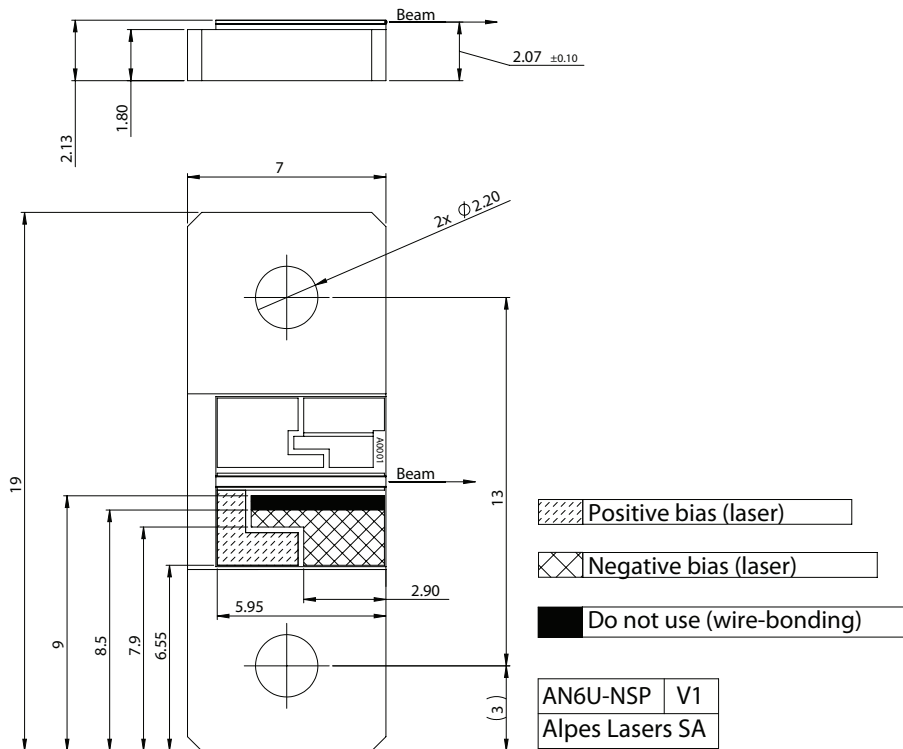


Figure 1: Mechanical and electrical interface for #sbcw12471 DN

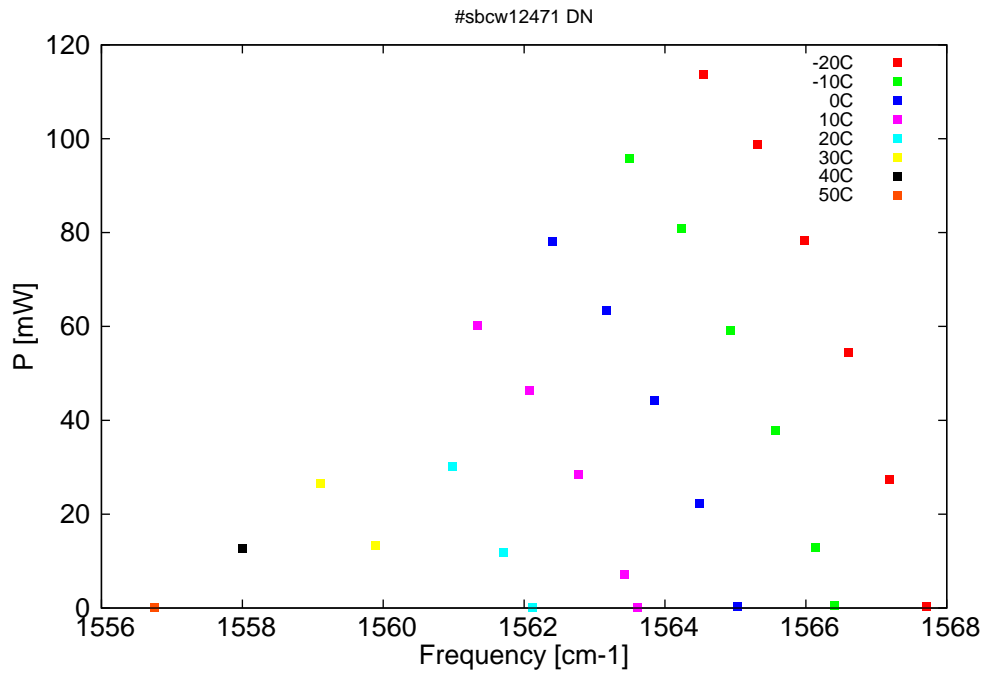


Figure 2: Output power as a function of the singlemode emission frequencies and temperatures

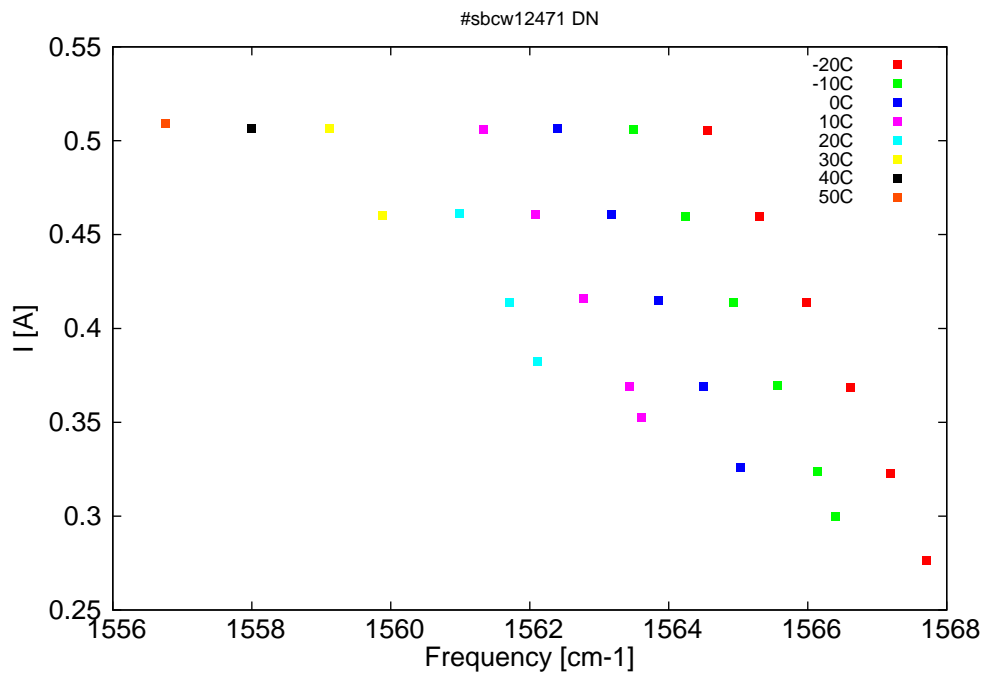


Figure 3: Applied DC current as a function of singlemode emission frequencies and temperatures

λ [nm]	ν [cm ⁻¹]	P[mW]	Temp[°C]	U_{LASER} [V]	I[A]
6378.7	1567.7	0.3	-20	11.15	0.277
6380.8	1567.2	27.4	-20	11.51	0.323
6383.2	1566.6	54.5	-20	11.87	0.368
6385.8	1566	78.3	-20	12.2	0.414
6388.5	1565.3	98.7	-20	12.53	0.459
6391.6	1564.6	113.7	-20	12.87	0.506
6384	1566.4	0.5	-10	11.07	0.3
6385.1	1566.1	12.8	-10	11.25	0.324
6387.5	1565.6	37.9	-10	11.59	0.37
6390	1564.9	59.2	-10	11.93	0.414
6392.9	1564.2	80.8	-10	12.26	0.46
6395.9	1563.5	95.9	-10	12.59	0.506
6389.6	1565	0.3	0	11.01	0.326
6391.8	1564.5	22.2	0	11.32	0.369
6394.4	1563.9	44.3	0	11.65	0.415
6397.3	1563.2	63.4	0	11.98	0.461
6400.4	1562.4	78.1	0	12.31	0.507
6395.4	1563.6	0.2	10	10.96	0.353
6396.2	1563.4	7.1	10	11.06	0.369
6398.9	1562.8	28.5	10	11.4	0.416
6401.7	1562.1	46.4	10	11.72	0.461
6404.8	1561.3	60.2	10	12.04	0.506
6401.6	1562.1	0.1	20	10.94	0.382
6403.2	1561.7	11.8	20	11.15	0.414
6406.2	1561	30.1	20	11.48	0.461
6410.7	1559.9	13.2	30	11.25	0.46
6413.9	1559.1	26.6	30	11.57	0.507
6418.5	1558	12.7	40	11.35	0.507
6423.6	1556.8	0	50	11.2	0.509

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

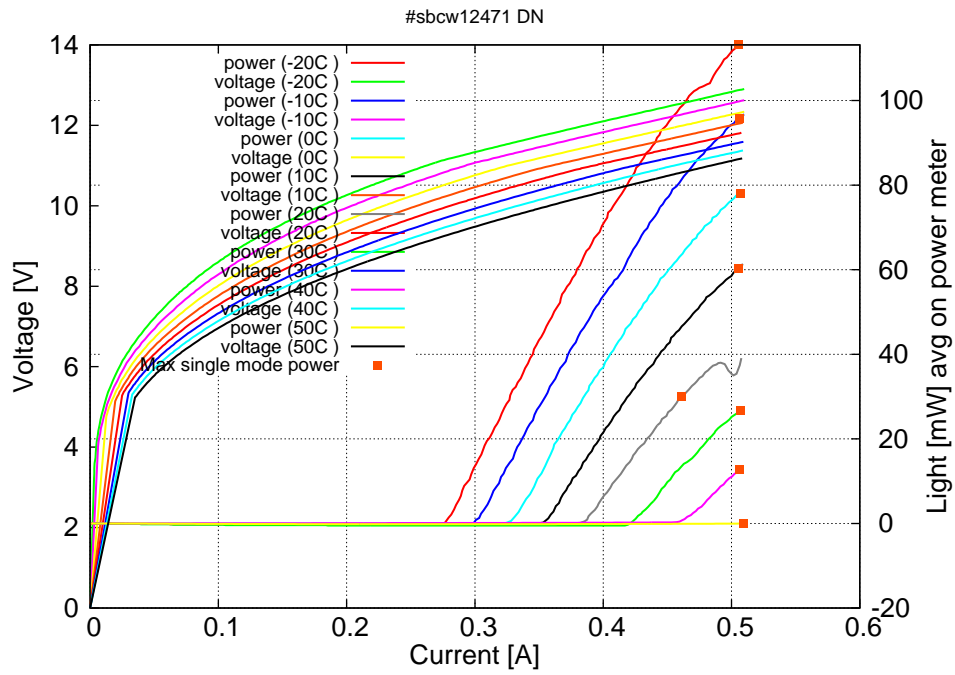


Figure 4: voltage and avg power vs current in continuous-wave operation (the solid squares indicate the maximum singlemode emitted power)

Note: at -20C: $I_{th}=0.27A$ / $V_{th}=11.1V$ (2-wires measurements). Maximum operation current: 0.51A for all temperatures.

Figure 3: spectra at different temperatures for various DC currents

