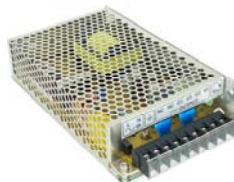




SUNPOWER TECHNOLOGY CORP.  
16F-1, No.150, Jian 1st Rd., Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C.).  
TEL: 886-2-8226-3100 FAX: 886-2-8226-3111  
http://www.sunpower.com.tw  
E-mail: sunpower@sunpower.com.tw

# SPS-N080-Dx Series

## Dual Output



159 x 95 x 38 mm  
6.26 x 3.74 x 1.50 inch



### Features:

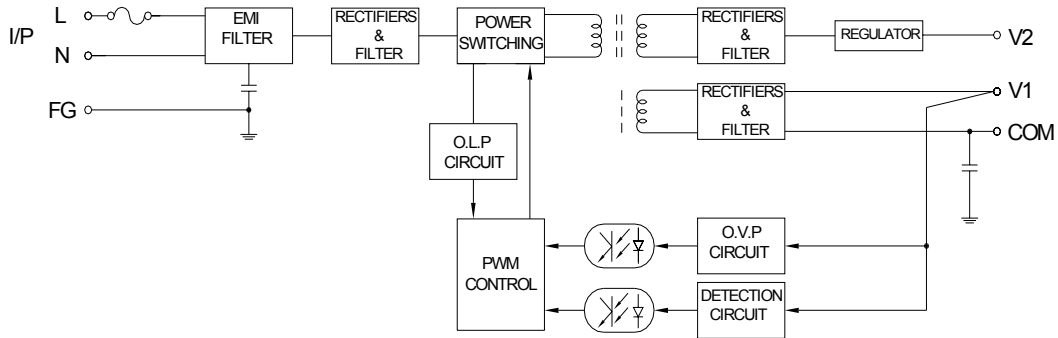
- \* Altitude during operation up to 9843ft ( 3000m )
- \* Power ON with LED indicator
- \* Built in EMI filter, low ripple noise
- \* Over voltage 、 over load & short circuit protection
- \* 100% full load burn-in test
- \* -20℃~70℃ Operating temperature
- \* UL, cUL, CB, CE approved
- \* 3 years warranty

### Specification:

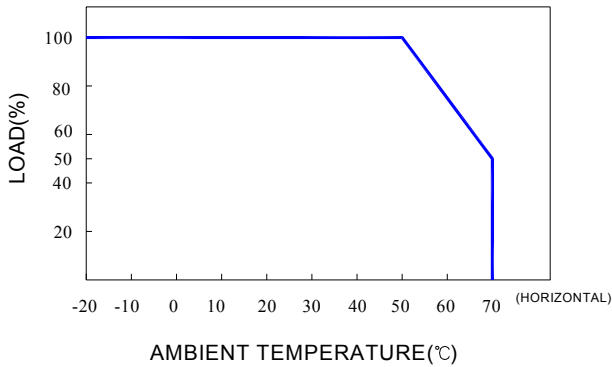
|                                |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------------|-------|--------------|-------|---------------------------------------------------------------------------|-------|-----------------------------------------|-------|
| INPUT                          | Voltage                                                                                                                                                                                                                                                                                                                                    | 88V ~ 264VAC universal full range or 125V ~ 375VDC.                                                                                                                                                                                   |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Frequency                                                                                                                                                                                                                                                                                                                                  | 47 ----- 63 Hz                                                                                                                                                                                                                        |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Current                                                                                                                                                                                                                                                                                                                                    | <2.5A@100V AC input, full load condition                                                                                                                                                                                              |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Inrush Current (TYP.)                                                                                                                                                                                                                                                                                                                      | 35A@115V , 70A@230V AC input, Cold start at 25℃ ambient                                                                                                                                                                               |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Leakage Current                                                                                                                                                                                                                                                                                                                            | <1.0mA @264V AC input                                                                                                                                                                                                                 |       |               |       |              |       |                                                                           |       |                                         |       |
| OUTPUT                         | MODEL No.                                                                                                                                                                                                                                                                                                                                  | SPS-N080-D1                                                                                                                                                                                                                           |       | SPS-N080-D2   |       | SPS-N080-D3  |       | SPS-N080-D4                                                               |       | SPS-N080-D8                             |       |
|                                | Output                                                                                                                                                                                                                                                                                                                                     | V1                                                                                                                                                                                                                                    | V2    | V1            | V2    | V1           | V2    | V1                                                                        | V2    | V1                                      | V2    |
|                                | Voltage                                                                                                                                                                                                                                                                                                                                    | 5V                                                                                                                                                                                                                                    | 12V   | 5V            | 24V   | 12V          | -12V  | 15V                                                                       | -15V  | 12V                                     | 24V   |
|                                | Min Load                                                                                                                                                                                                                                                                                                                                   | 0.5A                                                                                                                                                                                                                                  | 0A    | 0.5A          | 0A    | 0.3A         | 0A    | 0.3A                                                                      | 0A    | 0.3A                                    | 0A    |
|                                | Max Load                                                                                                                                                                                                                                                                                                                                   | 9A                                                                                                                                                                                                                                    | 4A    | 9A            | 2A    | 6.5A         | 3.4A  | 5A                                                                        | 2.6A  | 6.5A                                    | 2A    |
|                                | Output Tolerance ②                                                                                                                                                                                                                                                                                                                         | ±3%                                                                                                                                                                                                                                   | ±5%   | ±3%           | ±5%   | ±3%          | ±5%   | ±3%                                                                       | ±5%   | ±3%                                     | ±5%   |
|                                | Ripple Noise MAX. ③                                                                                                                                                                                                                                                                                                                        | 80mV                                                                                                                                                                                                                                  | 120mV | 80mV          | 200mV | 120mV        | 120mV | 150mV                                                                     | 150mV | 120mV                                   | 200mV |
|                                | Efficiency (TYP.)                                                                                                                                                                                                                                                                                                                          | 80%                                                                                                                                                                                                                                   |       | 81%           |       | 82%          |       | 83%                                                                       |       | 84%                                     |       |
|                                | Output MAX.                                                                                                                                                                                                                                                                                                                                | 80W                                                                                                                                                                                                                                   |       | 80W           |       | 80W          |       | 80W                                                                       |       | 80W                                     |       |
| PROTECTION                     | Over Voltage                                                                                                                                                                                                                                                                                                                               | 5.8~7V                                                                                                                                                                                                                                | ----- | 5.8~7V        | ----- | 13.8~16.8V   | ----- | 17.3~21.0V                                                                | ----- | 13.8~16.8V                              | ----- |
|                                | Over Load & Short Circuit                                                                                                                                                                                                                                                                                                                  | Shutdown and latch off, recover after re-start up or Auto Recovery.<br>When power supply over 105%~ 150% max load or short circuit acted, power supply will go into hiccup mode and recover automatically after the fault is removed. |       |               |       |              |       |                                                                           |       |                                         |       |
| ELEC. CHAR.                    | Rise time                                                                                                                                                                                                                                                                                                                                  | <30mS                                                                                                                                                                                                                                 |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Hold up time (TYP.)                                                                                                                                                                                                                                                                                                                        | >50mS@230V, >10mS@115V full load condition                                                                                                                                                                                            |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Setup time                                                                                                                                                                                                                                                                                                                                 | <1 Sec@100 ~ 240V AC                                                                                                                                                                                                                  |       |               |       |              |       |                                                                           |       |                                         |       |
| ENVIRONMENT                    | Temperature ④                                                                                                                                                                                                                                                                                                                              | Operating: -20 ~ +70℃ ; De-rating: 50 ~ 70℃: 2.5%/℃ ; Storage: -40 ~ +85℃                                                                                                                                                             |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Humidity                                                                                                                                                                                                                                                                                                                                   | Operating: 20% ~ 90% RH (non condensing) ; Storage: 10% ~ 95% RH (non condensing)                                                                                                                                                     |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Altitude                                                                                                                                                                                                                                                                                                                                   | 9843 ft ( ≒ 3000 m ) operating                                                                                                                                                                                                        |       |               |       |              |       |                                                                           |       |                                         |       |
| SAFETY                         | Withstand voltage                                                                                                                                                                                                                                                                                                                          | I/P-O/P:3KVAC, I/P-FG:1.8KVAC, O/P-FG:0.5KVAC, 1minute                                                                                                                                                                                |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Isolation resistance                                                                                                                                                                                                                                                                                                                       | I/P-O/P, I/P-FG, O/P-FG > 100MΩ/500VDC at 25℃ / 70% RH                                                                                                                                                                                |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Safety standard                                                                                                                                                                                                                                                                                                                            | UL 62368-1 2 <sup>nd</sup> Ed, 2014-12-01, CAN/CSA C22.2 No. 62368-1-14, 2 <sup>nd</sup> Ed, Issued: 2014-12-01, IEC 62368-1:2014                                                                                                     |       |               |       |              |       |                                                                           |       |                                         |       |
| EMC                            | EMI                                                                                                                                                                                                                                                                                                                                        | Test Items                                                                                                                                                                                                                            |       |               |       | Standard     |       |                                                                           |       | Test Level                              |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Conducted                                                                                                                                                                                                                             |       |               |       | EN 55032     |       |                                                                           |       | Class B                                 |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Radiated                                                                                                                                                                                                                              |       |               |       | EN 55032     |       |                                                                           |       | Class B                                 |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Harmonic                                                                                                                                                                                                                              |       |               |       | EN 61000-3-2 |       |                                                                           |       | Class A                                 |       |
|                                | EMS                                                                                                                                                                                                                                                                                                                                        | Voltage Flicker                                                                                                                                                                                                                       |       |               |       | EN 61000-3-3 |       |                                                                           |       | ---                                     |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Test Items                                                                                                                                                                                                                            |       |               |       | Standard     |       |                                                                           |       | Test Level                              |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | ESD                                                                                                                                                                                                                                   |       |               |       | EN 61000-4-2 |       |                                                                           |       | Level 3, 8KV air ; Level 2, 4KV contact |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Radiated                                                                                                                                                                                                                              |       |               |       | EN 61000-4-3 |       |                                                                           |       | Level 2                                 |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | EFT / Burst                                                                                                                                                                                                                           |       |               |       | EN 61000-4-4 |       |                                                                           |       | Level 2                                 |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Surge                                                                                                                                                                                                                                 |       |               |       | EN 61000-4-5 |       |                                                                           |       | Level 3, 1KV/Line-Line , 2KV/Line-Earth |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Conducted                                                                                                                                                                                                                             |       |               |       | EN 61000-4-6 |       |                                                                           |       | Level 2                                 |       |
|                                |                                                                                                                                                                                                                                                                                                                                            | Magnetic Field                                                                                                                                                                                                                        |       |               |       | EN 61000-4-8 |       |                                                                           |       | Level 2                                 |       |
| Voltage Dips and Interruptions |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                       |       | EN 61000-4-11 |       |              |       | >95% dip 0.5 period, 30% dip 25 periods<br>>95% interruptions 250 periods |       |                                         |       |
| OTHERS                         | Cooling                                                                                                                                                                                                                                                                                                                                    | Natural cooling.                                                                                                                                                                                                                      |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | M.T.B.F.                                                                                                                                                                                                                                                                                                                                   | 265.4K hours                                                                                                                                                                                                                          |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Dimension                                                                                                                                                                                                                                                                                                                                  | 159 x 95 x 38 mm (L*W*H)                                                                                                                                                                                                              |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | Packing                                                                                                                                                                                                                                                                                                                                    | N.W.: 0.516Kg / 1pc ; 30pcs / 1.2 CUFT / 1 CTN                                                                                                                                                                                        |       |               |       |              |       |                                                                           |       |                                         |       |
| NOTE                           | ① All measurements which not mentioned are based on 230VAC input, <b>output Max</b> at ambient 25℃ / 70%RH                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | ② Output tolerance included set up voltage, line regulation and load regulation.<br>The regulation is measured at the condition : when any of output is with 20% ~ 100% <b>max load</b> and the rest of each outputs are with 60% <b>max load</b> , Each output could work within <b>max load</b> but must under total <b>output max</b> . |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | ③ Ripple & noise are measured at 100~254VAC input with 10~50℃ condition and 20MHz of bandwidth by using a 10" ~15" twisted pair-wire terminated with a 0.1uF & a 47uF parallel capacitor.                                                                                                                                                  |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | ④ The operating temperature shall follow the de-rating curve in spec<br>The output load may be requested for decreasing as de-rating curve in spec when low input voltage is under 100VAC.                                                                                                                                                 |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |
|                                | ⑤ The power supply is considered a component of end-equipment. The end-equipment must be re-confirmed whether comply with EMC directives.                                                                                                                                                                                                  |                                                                                                                                                                                                                                       |       |               |       |              |       |                                                                           |       |                                         |       |

# SPS-N080-Dx Series

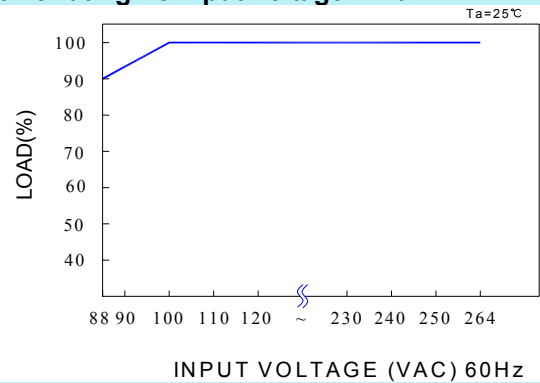
## Block Diagram : UD3-1



## De-rating Curve : E3

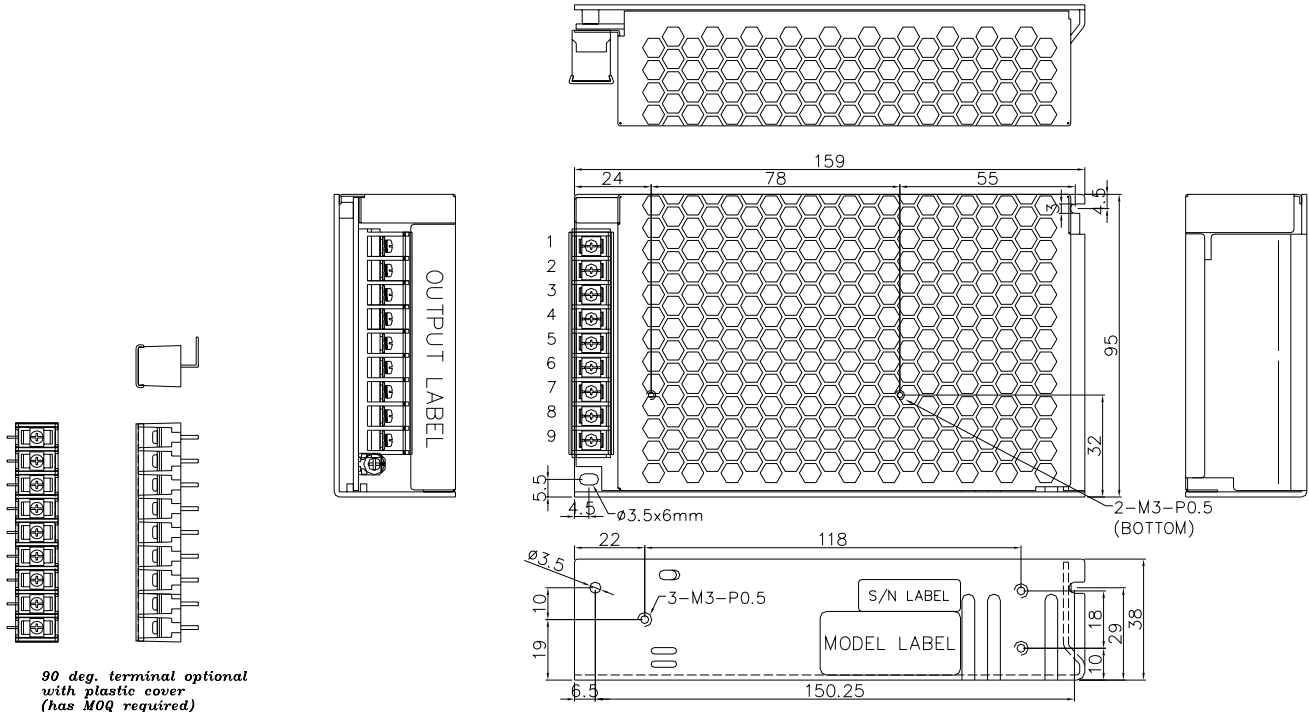


## Output De-rating Vs Input Voltage : M6



## Dimension:

(Unit: mm)



## NOTES

TERMINAL BLOCK: 9P, PITCH 7.62 mm WITH PC COVER

| Model No.         | 1 | 2 | 3  | 4   | 5   | 6   | 7  | 8   | 9   |
|-------------------|---|---|----|-----|-----|-----|----|-----|-----|
| SPS-N080-D1/D2/D8 | L | N | FG | N/C | N/C | GND | V1 | GND | V2  |
| SPS-N080-D3/D4    | L | N | FG | N/C | N/C | GND | V1 | V2  | GND |