



## Features:

- Universal AC input / Full range
- Fully isolated plastic case with IP64 level
- Built-in constant current limiting circuit with adjustable OCP level
- Protections:Short circuit/Over load/Over voltage/Over temperature
- · Built-in active PFC function
- IP64 design for indoor or outdoor installations
- · Cooling by free air convection
- 100% full load burn-in test
- · High reliability
- Suitable for LED lighting and moving sign applications
- · Compliance to worldwide safety regulations for lighting

## **SPECIFICATION**



| MODEL           |                                | PLN-30-9  | PLN-30-12  | PLN-30-15  | PLN-30-20      | PLN-30-24      | PLN-30-27      | PLN-30-36  | PLN-30-48  |  |
|-----------------|--------------------------------|---|--|------------|----------------|----------------|----------------|------------|------------|--|
| OUTPUT          | DC VOLTAGE                     | 9V  | 12V  | 15V        | 20V            | 24V            | 27V            | 36V        | 48V        |  |
|                 | CONSTANT CURRENT REGION Note.6 | 6.3 ~ 9V  | 8.4 ~ 12V  | 10.5 ~ 15V | 14 ~ 20V       | 16.8 ~ 24V     | 18.9 ~ 27V     | 25.2 ~ 36V | 33.6 ~ 48V |  |
|                 | RATED CURRENT                  | 3.3A  | 2.5A   | 2A         | 1.5A           | 1.25A          | 1.12A          | 0.84A      | 0.63A      |  |
|                 | CURRENT RANGE                  | 0 ~ 3.3A  | 0 ~ 2.5A   | 0 ~ 2A     | 0 ~ 1.5A       | 0 ~ 1.25A      | 0 ~ 1.12A      | 0 ~ 0.84A  | 0 ~ 0.63A  |  |
|                 | RATED POWER                    | 29.7W   | 30W  | 30W        | 30W            | 30W            | 30.24W         | 30.24W     | 30.24W     |  |
|                 | RIPPLE & NOISE (max.) Note.2   | 2.6Vp-p   | 2Vp-p  | 2.6Vp-p    | 2.6Vp-p        | 2.6Vp-p        | 2.3Vp-p        | 4.5Vp-p    | 3.7Vp-p    |  |
|                 | VOLTAGE ADJ. RANGE Note.5      | -5% ~ 10%. Can be adjusted by internal potential meter SVR1   |  |            |                |                |                |            |            |  |
|                 | CURRENT ADJ. RANGE Note.5      | 3% ~ -25%. Can be adjusted by internal potential meter SVR2   |  |            |                |                |                |            |            |  |
|                 | VOLTAGE TOLERANCE Note.3       | ±10%  |  |            |                |                |                |            |            |  |
|                 | LINE REGULATION                | ±3.0%   |  |            |                |                |                |            |            |  |
|                 | LOAD REGULATION                | ±5.0%   |  |            |                |                |                |            |            |  |
|                 | SETUP TIME                     | 1500ms / 230VAC 3000ms / 115VAC at full load  |  |            |                |                |                |            |            |  |
| INPUT           | VOLTAGE RANGE                  | 90 ~ 264VAC 127 ~ 370VDC  |  |            |                |                |                |            |            |  |
|                 | FREQUENCY RANGE                | 47 ~ 63Hz   |  |            |                |                |                |            |            |  |
|                 | POWER FACTOR                   | PF ≥ 0.9 at 75 ~ 100% load, 115VAC / 230VAC   |  |            |                |                |                |            |            |  |
|                 | EFFICIENCY(Typ.)               | 80%   | 83%  | 84%        | 84%            | 85%            | 85%            | 86%        | 86%        |  |
|                 | AC CURRENT                     | 0.4A/115VAC   |  |            |                |                |                |            |            |  |
|                 | INRUSH CURRENT(max.)           | 40A/230VAC  |  |            |                |                |                |            |            |  |
|                 | LEAKAGE CURRENT                | <0.5mA / 240VAC   |  |            |                |                |                |            |            |  |
| PROTECTION      | OVER CURRENT Note.4            | 100 ~ 110%  |  |            |                |                |                |            |            |  |
|                 |                                | Protection type: Constant current limiting, recovers automatically after fault condition is removed |  |            |                |                |                |            |            |  |
|                 | SHORT CIRCUIT                  | Hiccup mode, recovers automatically after fault condition is removed.                               |  |            |                |                |                |            |            |  |
|                 | OVER VOLTAGE                   | 10 ~ 14V  | 14 ~ 16V   | 17 ~ 22V   | 23 ~ 26V       | 27 ~ 34V       | 31 ~ 35V       | 40 ~ 50V   | 53 ~ 63V   |  |
|                 |                                | Protection type : Shut down o/p voltage, re-power on to recover                                     |  |            |                |                |                |            |            |  |
|                 | OVER TEMPERATURE               | 95°C ±10°C (TSW1)   |  |            |                |                |                |            |            |  |
|                 |                                | Protection type : Shut down o/p voltage, re-power on to recover                                     |  |            |                |                |                |            |            |  |
| ENVIRONMENT     | WORKING TEMP.                  | -30 ~ +50°C (Refer to output load derating curve)   |  |            |                |                |                |            |            |  |
|                 | WORKING HUMIDITY               | 20 ~ 95% RH non-condensing  |  |            |                |                |                |            |            |  |
|                 | STORAGE TEMP., HUMIDITY        | -40 ~ +80°C, 10 ~ 95% RH  |  |            |                |                |                |            |            |  |
|                 | TEMP. COEFFICIENT              | ±0.06%/°C (0 ~ 50°C)  |  |            |                |                |                |            |            |  |
|                 | VIBRATION                      | 10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes                             |  |            |                |                |                |            |            |  |
| SAFETY &<br>EMC | SAFETY STANDARDS               | TUV EN61347-1, EN61347-2-13, CAN/CSA C22.2 No. 223-M91(except for 48V), IP64 approved               |  |            |                |                |                |            |            |  |
|                 | WITHSTAND VOLTAGE              | I/P-O/P:3.75KVAC  |  |            |                |                |                |            |            |  |
|                 | ISOLATION RESISTANCE           | I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH   |  |            |                |                |                |            |            |  |
|                 | EMI CONDUCTION & RADIATION     | Compliance to EN55015   |  |            |                |                |                |            |            |  |
|                 | HARMONIC CURRENT               | -   | Compliance to EN61000-3-2 Class C (pin ≥ 25W), Class D (>70% load) ; EN61000-3-3                     |            |                |                |                |            |            |  |
|                 | EMS IMMUNITY                   | Compliance to   | Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, EN61547, light industry level, criteria A |            |                |                |                |            |            |  |
| OTHERS          | MTBF                           | 621.4Khrs min   |  |            |                |                |                |            |            |  |
|                 | DIMENSION                      |   | 145*47*30mm (L*W*H)  |            |                |                |                |            |            |  |
|                 | PACKING                        |   | 0.22Kg; 60pcs/14.2Kg/1.25CUFT  |            |                |                |                |            |            |  |
|                 | All parameters NOT specia      | 0   |  |            | rated load and | 25°C of ambien | t temperature. |            |            |  |

- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
  Direct connecting to LEDs is not suggested for models with "RIPPLE & NOISE" >±10% and using additional drivers is highly recommended.
- 3. Tolerance : includes set up tolerance, line regulation and load regulation.
- 4. Please refer to OLP characteristics.
- 5. Output voltage can be adjusted through the SVR1 on the PCB; limit of output constant current level can be adjusted through the SVR2 on the PCB.
- 6. Constant current operation region is within 70% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.



