

## Features :

- Universal AC input / Full range(up to 277VAC)
- Built-in constant current limiting circuit with adjustable OCP level
- Protections:Short circuit/Over load/Over voltage/Over temperature
- Built-in active PFC function
- Small and compact size
- Cooling by free air convection
- 100% full load burn-in test
- High reliability,low cost
- Suitable for built-in applications of LED lighting
- 2 years warranty

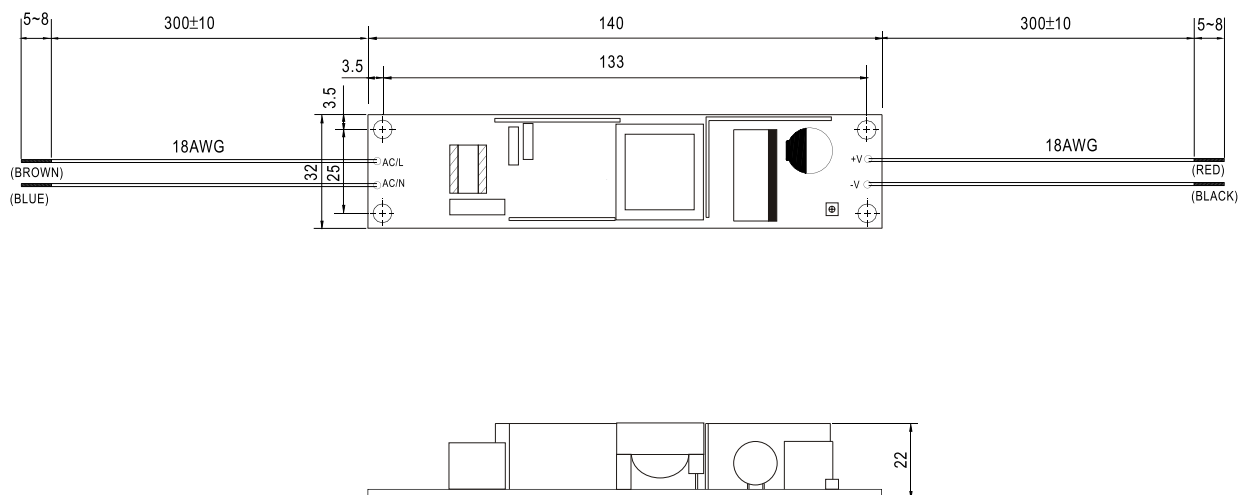


## SPECIFICATION

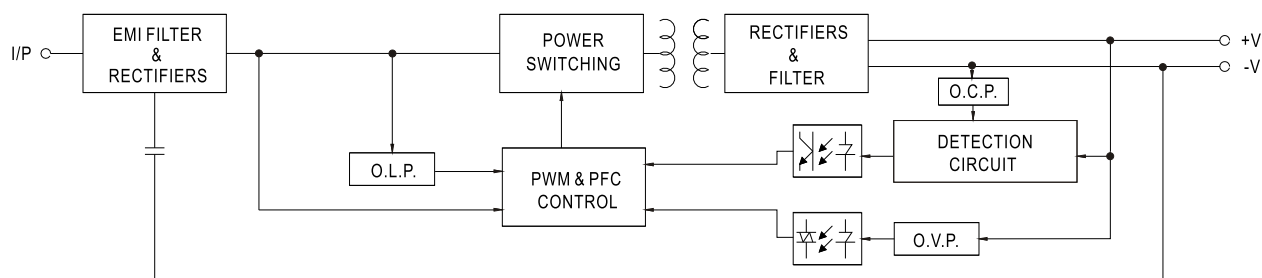
| MODEL            |                                             | PLP-20-12                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PLP-20-18  | PLP-20-24 | PLP-20-36 | PLP-20-48 |
|------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|-----------|-----------|-----------|
| OUTPUT           | DC VOLTAGE                                  | 12V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 18V        | 24V       | 36V       | 48V       |
|                  | LED OPERATION VOLTAGE <small>Note.5</small> | 9 ~ 12V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 13.5 ~ 18V | 18 ~ 24V  | 27 ~ 36V  | 36 ~ 48V  |
|                  | RATED CURRENT                               | 1.6A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 1.1A       | 0.8A      | 0.55A     | 0.42A     |
|                  | CURRENT RANGE                               | 0 ~ 1.6A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0 ~ 1.1A   | 0 ~ 0.8A  | 0 ~ 0.55A | 0 ~ 0.42A |
|                  | CURRENT ADJ. RANGE                          | 75% ~ 100%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |           |           |           |
|                  | RATED POWER                                 | 19.2W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 19.8W      | 19.2W     | 19.8W     | 20.2W     |
|                  | RIPPLE & NOISE (max.) <small>Note.2</small> | 2.5Vp-p                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3.0Vp-p    | 3.0Vp-p   | 3.0Vp-p   | 3.8Vp-p   |
|                  | VOLTAGE TOLERANCE <small>Note.3</small>     | ±10%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |           |           |           |
|                  | LINE REGULATION                             | ±3.0%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |           |           |
|                  | LOAD REGULATION                             | ±10%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |            |           |           |           |
| SETUP, RISE TIME |                                             | 2300ms, 200ms / 230VAC    3000ms, 200ms / 115VAC at full load                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |           |           |           |
| INPUT            | VOLTAGE RANGE <small>Note.4</small>         | 90 ~ 277VAC    127~392VDC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |           |           |           |
|                  | FREQUENCY RANGE                             | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |           |           |           |
|                  | POWER FACTOR                                | PF>0.9/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |            |           |           |           |
|                  | EFFICIENCY(Typ.)                            | 80%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 81%        | 82%       | 83%       | 83.5%     |
|                  | AC CURRENT                                  | 0.4A/115VAC    0.2A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |           |           |           |
|                  | INRUSH CURRENT(max.)                        | 40A/230VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |           |           |           |
|                  | LEAKAGE CURRENT                             | 0.5mA / 240VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |           |           |           |
| PROTECTION       | OVER CURRENT <small>Note.5</small>          | 95 ~ 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                                | 14 ~ 16V                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 19 ~ 22V   | 27 ~ 34V  | 41 ~ 46V  | 54 ~ 60V  |
|                  |                                             | Protection type : Shut off o/p voltage, clamping by zener diode                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |            |           |           |           |
| ENVIRONMENT      | OVER TEMPERATURE                            | 110℃ ±10℃ (TSW1)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |           |           |           |
|                  |                                             | Protection type : Shut down o/p voltage, recovers automatically after temperature goes down                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |           |           |           |
|                  | WORKING TEMP.                               | -30 ~ +60℃ (Refer to output load derating curve)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |           |           |           |
|                  | WORKING HUMIDITY                            | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |            |           |           |           |
|                  | STORAGE TEMP., HUMIDITY                     | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |           |           |           |
|                  | TEMP. COEFFICIENT                           | ±0.06%/℃ (0 ~ 50℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |            |           |           |           |
| SAFETY & EMC     | VIBRATION                                   | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |            |           |           |           |
|                  | SAFETY STANDARDS                            | TUV EN61347-1, EN61347-2-13, UL8750 approved                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |            |           |           |           |
|                  | WITHSTAND VOLTAGE                           | I/P-O/P:3.75KVAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |           |           |           |
|                  | ISOLATION RESISTANCE                        | I/P-O/P:100M Ohms/500VDC / 25℃ / 70%RH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |            |           |           |           |
|                  | EMI CONDUCTION & RADIATION                  | Compliance to EN55015                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |           |           |
|                  | HARMONIC CURRENT                            | Compliance to EN61000-3-2 Class C(≥75% load);EN61000-3-3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |            |           |           |           |
| OTHERS           | EMS IMMUNITY                                | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level, criteria A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |            |           |           |           |
|                  | MTBF                                        | 643.6Khrs min.    MIL-HDBK-217F (25℃)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |            |           |           |           |
|                  | DIMENSION                                   | 140*32*22(L*W*H)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |            |           |           |           |
| PACKING          |                                             | 0.12kg;60pcs/9.2kg/0.62CUFT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |            |           |           |           |
| NOTE             |                                             | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.<br>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.<br>3. Tolerance : includes set up tolerance, line regulation and load regulation.<br>4. Derating may be needed under low input voltage, please check the static characteristic for more details.<br>5. Constant current operation region is within 75% ~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.<br>6. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. |            |           |           |           |

## Mechanical Specification

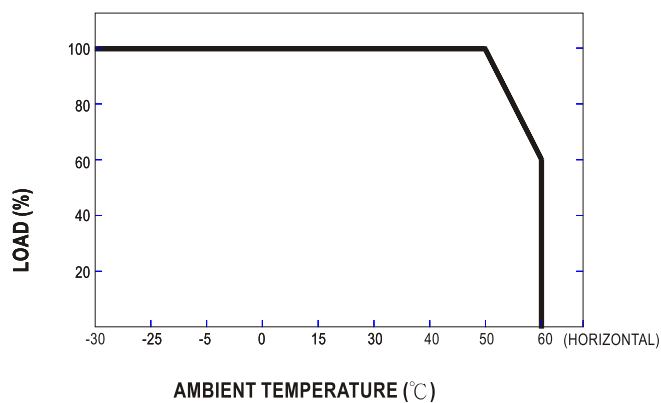
Unit:mm



## Block Diagram



## Derating Curve



## Static Characteristics

