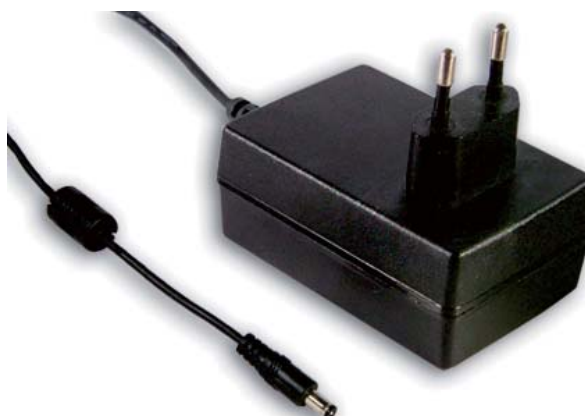




## ■ Features

- Universal AC input / Full range (up to 277VAC)
- 2 pole EURO plug
- Built-in active PFC function
- Constant current design
- Protections: Short circuit
- Cooling by free air convection
- Fully isolated plastic case
- Class II power unit, no FG
- No load power consumption < 0.15W
- Low cost, high reliability
- 100% full load burn-in test
- 3 years warranty

## ■ Applications

- Indoor LED lighting
- Office lighting
- Commercial lighting
- Indoor LED decorative lighting

## ■ Description

GSC18E series is a 18W external wall-mounted LED power supply with PFC function. The design of this product is based on the “plug and play” concept for adaptors. The AC input side exploits the 2-Pole (Class II, no FG) standard European plug, and the output side is equipped with the highly accepted DC connector (2.1x5.5x11mm) in the market. This product accepts 90~277VAC input and offers various constant current output models with 350mA/500mA/700mA/1050mA/1400mA. The design complies with the lighting requirements of EMI EN55015 and the harmonic current demand per EN61000-3-2 Class C. In addition, the no load power consumption is less than 0.15W, and the setup time is less than 500ms, making GSC18E conform to the ErP regulation required by European Union for lighting systems as well.

## ■ Model Encoding

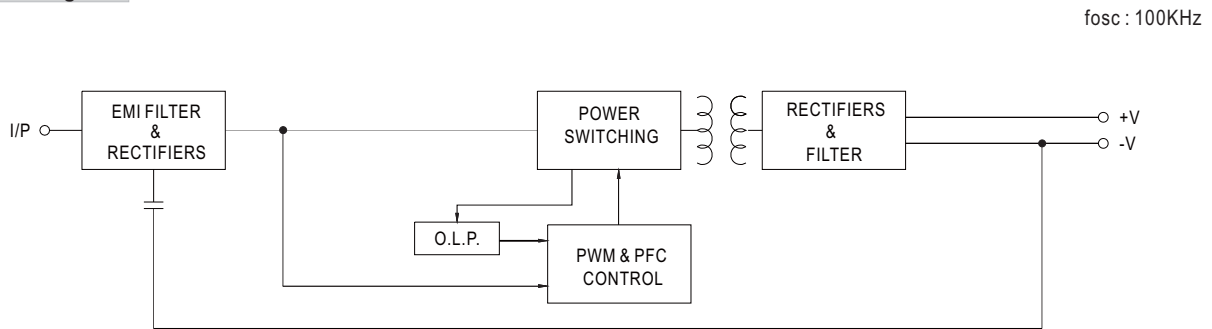
**GSC 18 E - 350**

Output current  
European 2 pin AC inlet  
Output wattage  
Series name

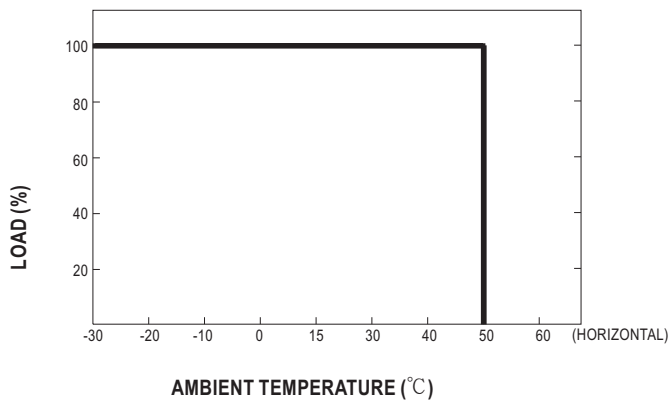
**SPECIFICATION**

| MODEL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | GSC18E-350                                                                                                        | GSC18E-500 | GSC18E-700 | GSC18E-1050 | GSC18E-1400 |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|------------|------------|-------------|-------------|
| OUTPUT       | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 350mA                                                                                                             | 500mA      | 700mA      | 1050mA      | 1400mA      |
|              | OPERATING VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 26 ~ 52V                                                                                                          | 18 ~ 36V   | 13 ~ 26V   | 8 ~ 17V     | 6 ~ 13V     |
|              | CURRENT ACCURACY <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ± 8.0%                                                                                                            |            |            |             |             |
|              | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 18.2W                                                                                                             | 18W        | 18.2W      | 17.9W       | 18.2W       |
|              | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 4.6Vp-p                                                                                                           | 3Vp-p      | 2.5Vp-p    | 1.6Vp-p     | 1.6Vp-p     |
|              | NO LOAD OUTPUT VOLTAGE (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 70V                                                                                                               | 50V        | 35V        | 25V         | 18V         |
|              | SETUP TIME                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 500ms / 230VAC    1000ms / 115VAC at full load                                                                    |            |            |             |             |
| INPUT        | VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 90 ~ 277VAC    127 ~ 392VDC                                                                                       |            |            |             |             |
|              | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 47 ~ 63Hz                                                                                                         |            |            |             |             |
|              | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | PF>0.98/115VAC, PF>0.92/230VAC, PF>0.91/277VAC at full load (Please refer to "Power Factor Characteristic" curve) |            |            |             |             |
|              | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Total harmonic distortion will be lower than 20% when output loading is 75% or higher                             |            |            |             |             |
|              | EFFICIENCY (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 89%                                                                                                               | 88.5%      | 88.5%      | 87%         | 85.5%       |
|              | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.6A/115VAC    0.3A/230VAC    0.2A/277VAC                                                                         |            |            |             |             |
|              | INRUSH CURRENT(max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | COLD START 17A(twidth=110μs measured at 50% Ipeak) at 230VAC                                                      |            |            |             |             |
|              | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <0.5mA / 240VAC                                                                                                   |            |            |             |             |
| PROTECTION   | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Hiccup mode, recovers automatically after fault condition is removed.                                             |            |            |             |             |
| ENVIRONMENT  | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -30 ~ +50℃ (Refer to "Derating Curve")                                                                            |            |            |             |             |
|              | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 20 ~ 95% RH non-condensing                                                                                        |            |            |             |             |
|              | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | -40 ~ +80℃, 10 ~ 95% RH                                                                                           |            |            |             |             |
|              | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ± 0.03%/℃ (0 ~ 50℃)                                                                                               |            |            |             |             |
|              | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes                                           |            |            |             |             |
| SAFETY & EMC | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Dekra GS/ENEC EN61347-1, EN61347-2-13 listed, EN62384 approved                                                    |            |            |             |             |
|              | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | I/P-O/P:3.75KVAC                                                                                                  |            |            |             |             |
|              | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | I/P-O/P:100M Ohms / 500VDC / 25℃ / 70% RH                                                                         |            |            |             |             |
|              | EMC EMISSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Compliance to EN55015, EN61000-3-2 Class C (≥ 50% load) ; EN61000-3-3                                             |            |            |             |             |
|              | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Compliance to EN61000-4-2,3,4,5,6,8,11,EN61547, light industry level, criteria A                                  |            |            |             |             |
| OTHERS       | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 338.3K hrs min.    MIL-HDBK-217F (25℃)                                                                            |            |            |             |             |
|              | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 79*54*33mm (L*W*H)                                                                                                |            |            |             |             |
|              | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 191g ; 60pcs / 12.5kg / CARTON                                                                                    |            |            |             |             |
| CONNECTOR    | PLUG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.1φ * 5.5φ * 11mm, tuning fork type, center positive for stock                                                   |            |            |             |             |
|              | CABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | See page 4 ; Other type available by customer requested                                                           |            |            |             |             |
| 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. Please see "AC input voltage drop vs. output current characteristics" table.<br>4. Constant current operation region is within 50% ~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>5. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers. |                                                                                                                   |            |            |             |             |

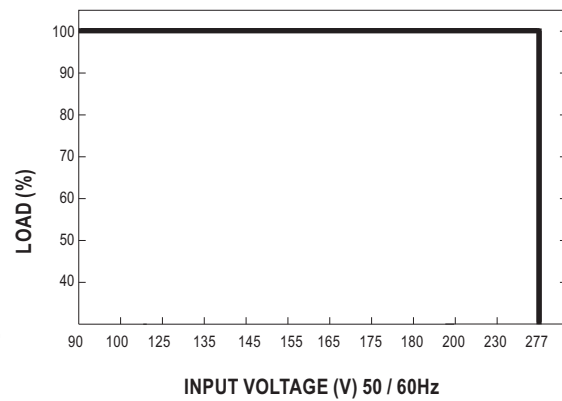
### ■ Block Diagram



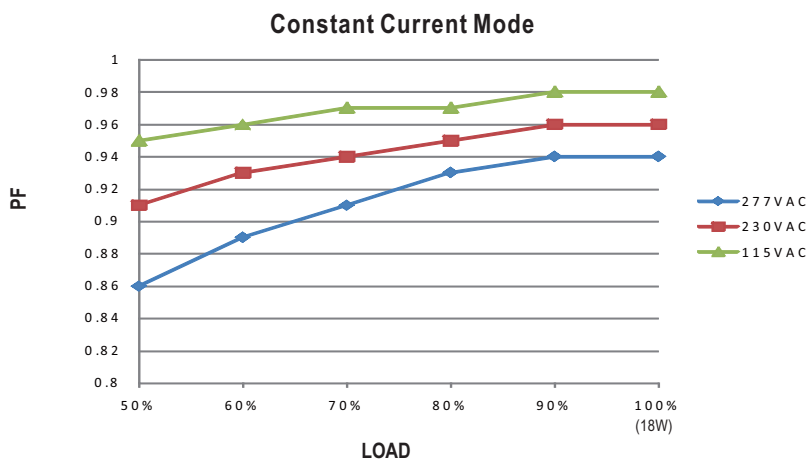
### ■ Derating Curve



### ■ Static Characteristics

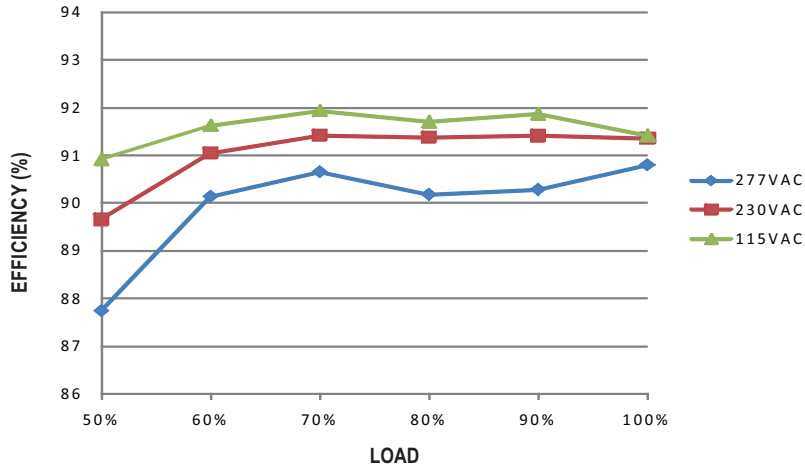


### ■ Power Factor Characteristic



## ■ EFFICIENCY vs LOAD (GSC18E-350)

GSC18E series possess superior working efficiency that up to 89% can be reached in field applications.



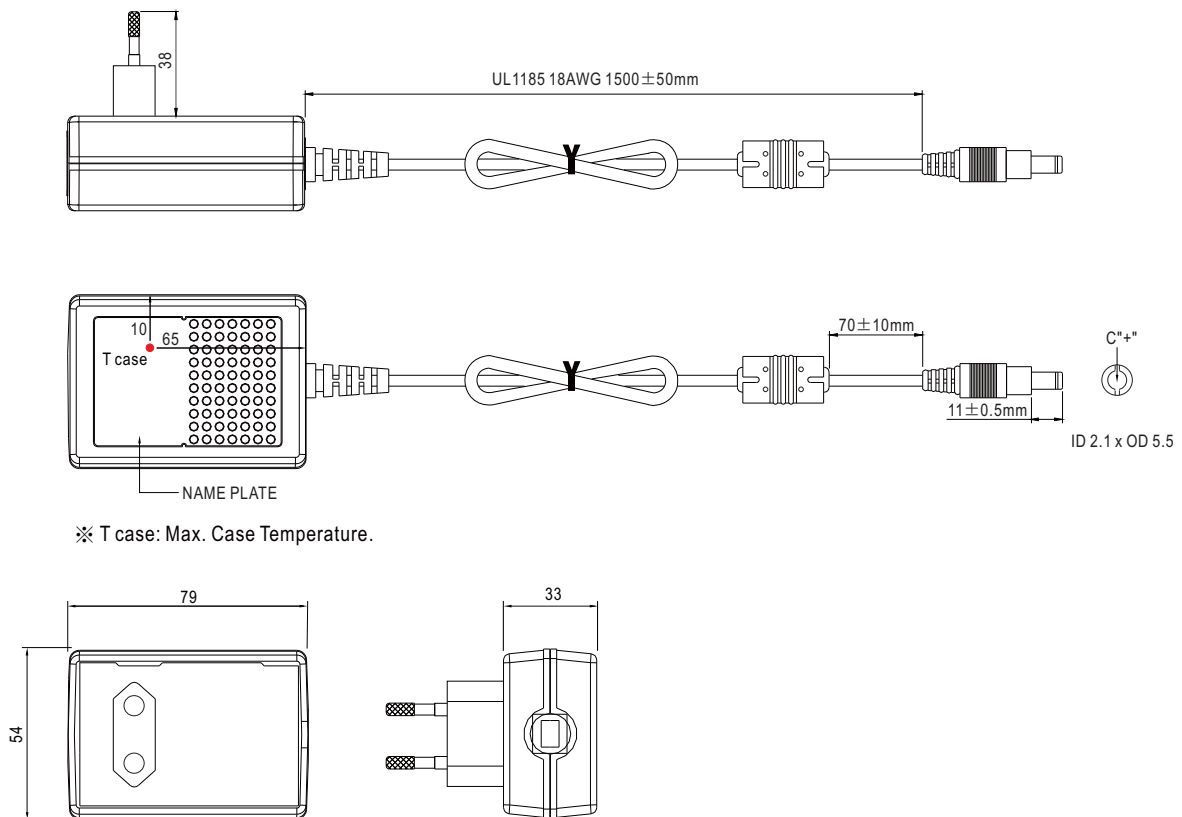
## ■ AC input voltage drop vs. Output current characteristics

|               |      |      |      |      |
|---------------|------|------|------|------|
| AC input drop | 10%  | 8%   | 5%   | 3%   |
| Io drop       | <25% | <23% | <15% | <10% |

Note : Output current will return to the rated value within 80ms

## ■ Mechanical Specification

Unit:mm



## ■ Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>