



## ■ Features

- Universal AC input / Full range (up to 277VAC)
- 2 pole AC inlet IEC320-C8
- 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

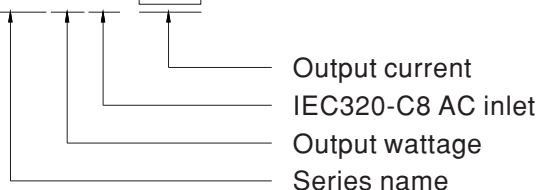
- Indoor LED lighting
- Office lighting
- Commercial lighting
- Indoor LED decorative lighting

## ■ Description

GSC40B series is a 40W external desktop 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-Pin (Class II, no FG) international standard inlet IEC320-C8, 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 GSC40B conform to the ErP regulation required by European Union for lighting systems as well.

## ■ Model Encoding

**GSC 40 B - 350**





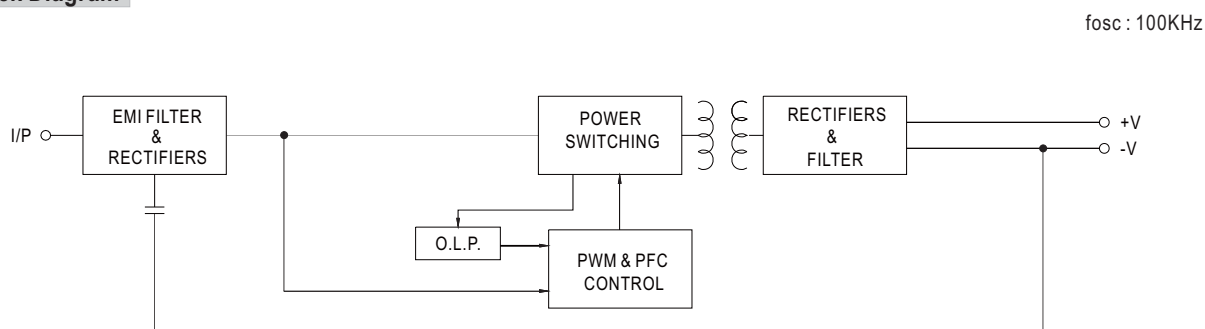
## 40W Single Output LED Power Supply

## GSC40B series

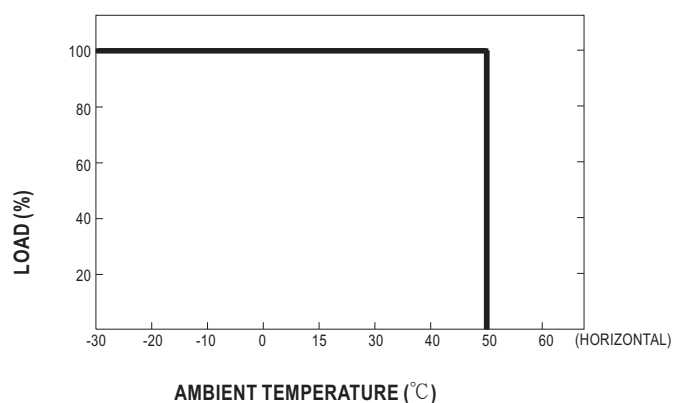
### SPECIFICATION

| MODEL           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | GSC40B-350                                                                                                        | GSC40B-500   | GSC40B-700   | GSC40B-1050 | GSC40B-1400 |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|--------------|--------------|-------------|-------------|
| OUTPUT          | RATED CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 350mA                                                                                                             | 500mA        | 700mA        | 1050mA      | 1400mA      |
|                 | OPERATING VOLTAGE RANGE <small>Note.4</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 50 ~ 100V                                                                                                         | 40 ~ 80V     | 29 ~ 58V     | 19 ~ 38V    | 14 ~ 28V    |
|                 | CURRENT ACCURACY <small>Note.3</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ± 8.0%                                                                                                            |              |              |             |             |
|                 | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 35W                                                                                                               | 40W          | 40.4W        | 39.6W       | 39.2W       |
|                 | RIPPLE & NOISE (max.) <small>Note.2</small>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 11.6Vp-p                                                                                                          | 8Vp-p        | 5.8Vp-p      | 3.8Vp-p     | 2.9Vp-p     |
|                 | NO LOAD OUTPUT VOLTAGE (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 120V                                                                                                              | 100V         | 80V          | 55V         | 40V         |
| 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.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 89.5%                                                                                                             | 89.5%        | 88.5%        | 87.5%       | 87%         |
|                 | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.7A/115VAC                                                                                                       | 0.35A/230VAC | 0.25A/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, GB19510.1, GB19510.14 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, GB17743, GB17625.1                         |              |              |             |             |
|                 | EMC IMMUNITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Compliance to EN61000-4-2,3,4,5,6,8,11,EN61547, light industry level, criteria A                                  |              |              |             |             |
| OTHERS          | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 358.9K hrs min.    MIL-HDBK-217F (25℃)                                                                            |              |              |             |             |
|                 | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 79*54*33mm (L*W*H)                                                                                                |              |              |             |             |
|                 | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 275g ; 60pcs / 17.5kg / CARTON                                                                                    |              |              |             |             |
| CONNECTOR       | PLUG                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 2.1φ * 5.5φ * 11mm, tuning fork type, center positive for stock                                                   |              |              |             |             |
|                 | CABLE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | See page 4                                                                                                        |              |              |             |             |
| 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. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.<br>5. 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. |                                                                                                                   |              |              |             |             |

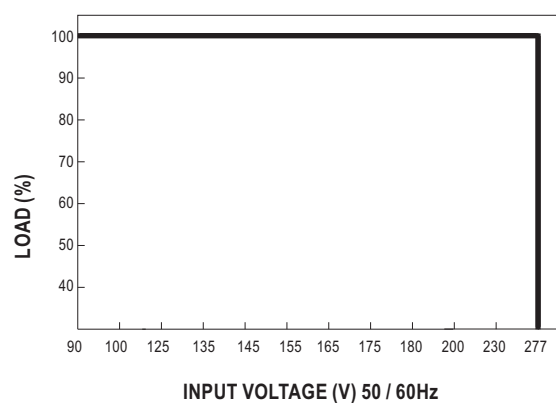
## Block Diagram



## Derating Curve

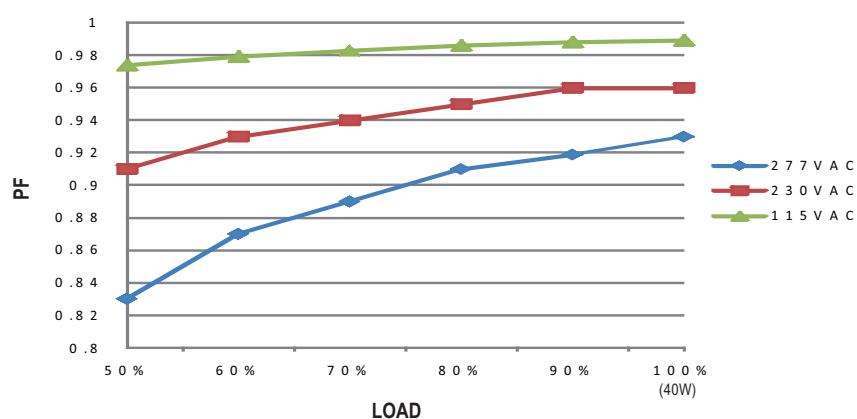


## Static Characteristics



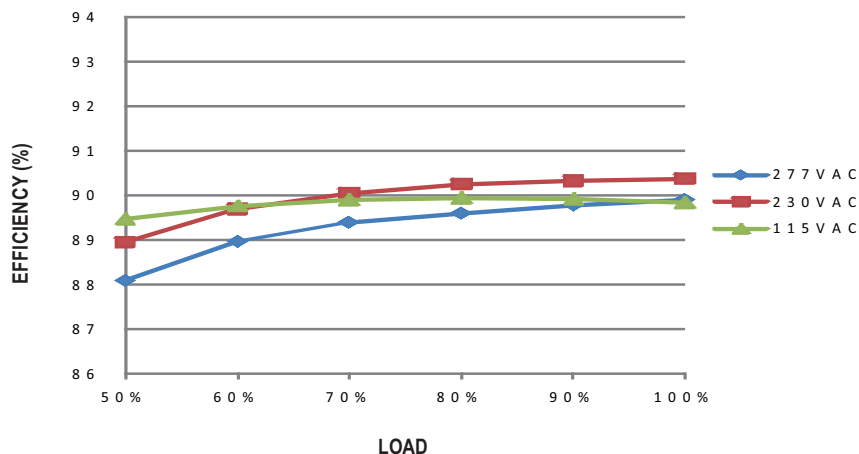
## Power Factor Characteristic

### Constant Current Mode



### ■ EFFICIENCY vs LOAD (GSC40B-350)

GSC40B series possess superior working efficiency that up to 89.5% can be reached in field applications.



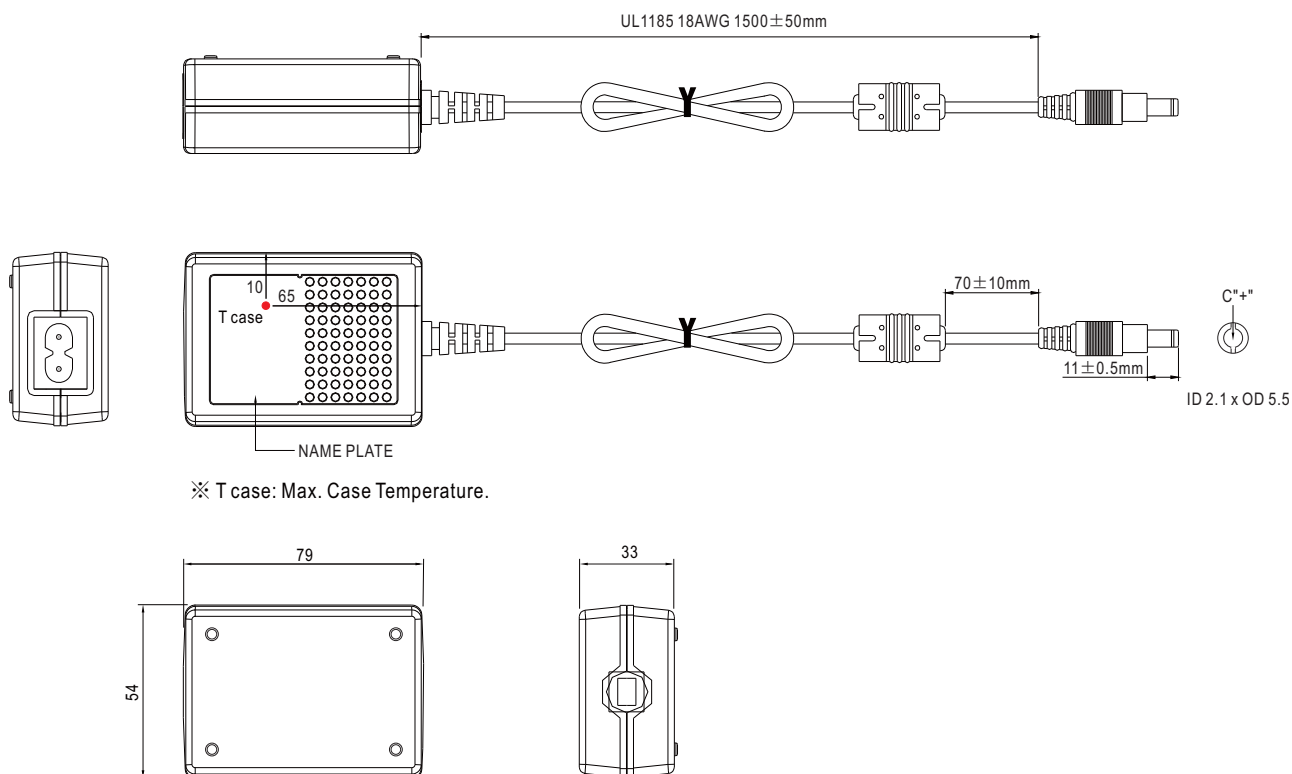
### ■ AC input voltage drop vs. Output current characteristics

|                     |      |      |      |      |
|---------------------|------|------|------|------|
| AC input drop       | 10%  | 8%   | 5%   | 3%   |
| I <sub>o</sub> 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>