



60W Constant Current Mode LED Driver

HBG-60-P series



■ Features

- Constant Current mode output
- Circular shape PCB type design with class II design
- Built-in active PFC function
- Class 2 power unit
- Typical lifetime >50000 hours
- 5 years warranty

■ Applications

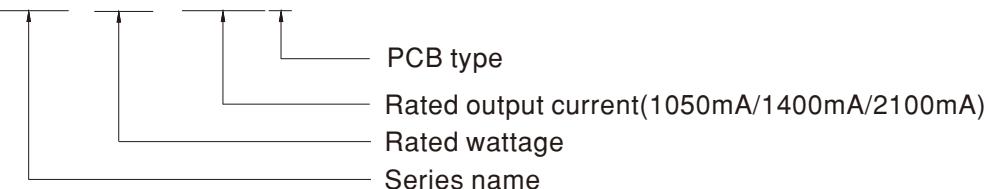
- LED bay lighting
- LED stage lighting
- LED spot lighting
- LED down lighting

■ Description

HBG-60-P series is a 60W AC/DC PCB type LED driver featuring the circular shape design. It operates from 90~295VAC and offers the constant current output models with different rated current between 1050mA and 2100mA. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -40°C ~ +70°C ambient temperature under free air convection.

■ Model Encoding

HBG - 60 - 1050 P





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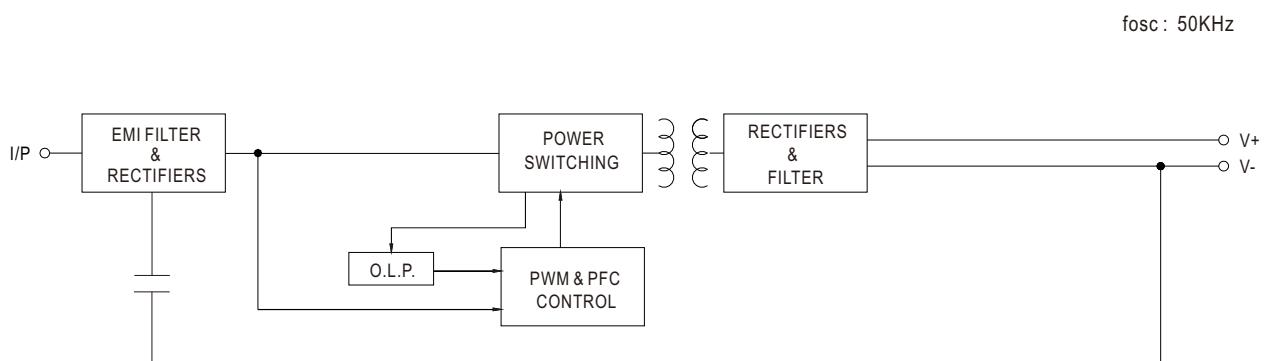
SPECIFICATION

| MODEL | HBG-60-1050P | HBG-60-1400P | HBG-60-2100P |
|--------------|---|--|--------------|
| OUTPUT | RATED CURRENT | 1050mA | 1400mA |
| | RATED POWER | 57.75W | 60.2W |
| | CONSTANT CURRENT REGION Note.2 | 37 ~ 55V | 28 ~ 43V |
| | OPEN CIRCUIT VOLTAGE(max.) | 60V | 50V |
| | CURRENT ADJ. RANGE | 680 ~ 1050mA | 910 ~ 1400mA |
| | CURRENT RIPPLE | 25% max. @rated current | |
| | CURRENT TOLERANCE | ±5.0% | |
| INPUT | SET UP TIME Note.4 | 500ms / 230VAC 1200ms / 115VAC | |
| | VOLTAGE RANGE Note.3 | 90 ~ 295VAC 127 ~ 417VDC (Please refer to "STATIC CHARACTERISTIC" section) | |
| | FREQUENCY RANGE | 47 ~ 63Hz | |
| | POWER FACTOR | PF>0.97/115VAC, PF>0.95/230VAC, PF>0.9/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section) | |
| | TOTAL HARMONIC DISTORTION | THD< 20%(@load≥65%/115V,230VAC; @load≥75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION(THD)" section) | |
| | EFFICIENCY (Typ.) | 90% | 89% |
| | AC CURRENT (Typ.) | 0.7A/115VAC 0.4A/230VAC 0.3A/277VAC | |
| | INRUSH CURRENT (Typ.) | COLD START 45A(twidth=100μs measured at 50% Ipeak) at 230VAC; Per NEMA 410 | |
| | MAX. No. of PSUs on 16A CIRCUIT BREAKER | 28 units (circuit breaker of type B) / 32 units (circuit breaker of type C) at 230VAC | |
| | LEAKAGE CURRENT | <0.75mA / 277VAC | |
| PROTECTION | OVER CURRENT | Hiccup mode, recovers automatically after fault condition is removed | |
| | OVER TEMPERATURE | Shut down o/p voltage, re-power on to recover | |
| ENVIRONMENT | WORKING TEMP. | Ta=-40 ~ +70°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section) | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 60°C) | |
| | VIBRATION | 10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes | |
| SAFETY & EMC | SAFETY STANDARDS | UL8750, CSA C22.2 No. 250.13-12, ENEC BS EN/EN61347-1 & BS EN/EN61347-2-13, BS EN/EN62384, GB19510.14, GB19510.1 independent, EAC TP TC 004 approved | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC | |
| | ISOLATION RESISTANCE | I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH | |
| | EMC EMISSION Note.8 | Compliance to BS EN/EN55015, GB17743, GB17625.1, BS EN/EN61000-3-2 Class C (@load≥65%); BS EN/EN61000-3-3, EAC TP TC 020 | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, BS EN/EN55024, light industry level(surge immunity: Line-Line:2KV), EAC TP TC 020 | |
| OTHERS | MTBF | 1504.1K hrs min. Telcordia SR-332 (Bellcore) ; 452Khrs min. MIL-HDBK-217F (25°C) | |
| | DIMENSION | ø 99mm *26mm (D * H) | |
| | PACKING | 0.21Kg; 45pcs/ 10.4Kg/ 1.03CUFT | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. 2. Please refer to "DRIVING METHODS OF LED MODULE". 3. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 4. Length of set up time is measured at cold first start. Turning ON/OFF the driver may lead to increase of the set up time. 5. The driver 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. 6. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED driver can only be used behind a switch without permanently connected to the mains. 7. Please refer to the warranty statement on MEAN WELL's website at http://www.meanwell.com ※ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx | | |

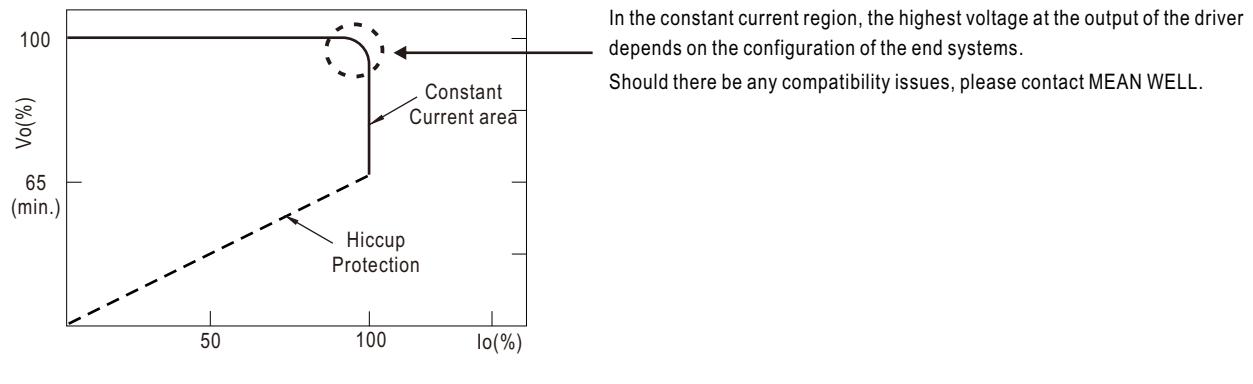


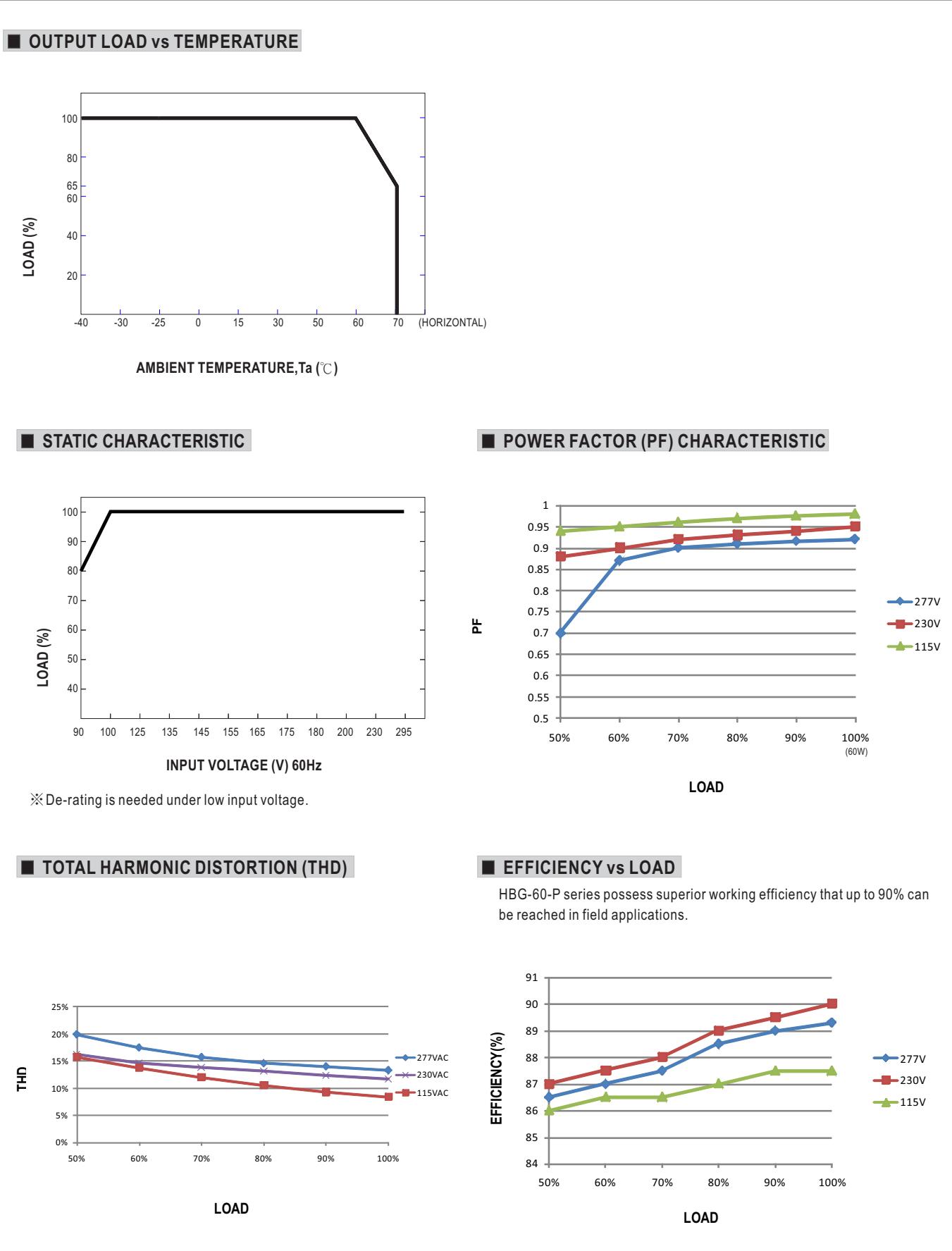
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■ BLOCK DIAGRAM**■ DRIVING METHODS OF LED MODULE**

※ This series works in constant current mode to directly drive the LEDs.







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■ MECHANICAL SPECIFICATION

Unit:mm

