Features
- Constant Voltage + Constant Current mode output
- Metal housing with class 1 design
- Standby power consumption <0.5W at remote off
- IP67 / IP65 rating for indoor or outdoor installations
- Function options: output adjustable via potentiometer;
  3 in 1 dimming (dim-to-off)
- Typical lifetime >62000 hours
- 7 years warranty

Applications
- LED high-bay lighting
- Parking space lighting
- LED fishing lamp
- LED greenhouse lighting
- Type “HL” for use in Class I, Division 2 hazardous (Classified) location.

Description
HLG-600H series is a 600W AC/DC LED driver featuring the dual mode constant voltage and constant current output. HLG-600H operates from 90 ~ 305VAC and offers models with different rated voltage ranging between 12V and 54V. Thanks to the high efficiency up to 96%, with the fanless design, the entire series is able to operate for -40°C ~ +90°C case temperature under free air convection. The design of metal housing and IP67/IP65 ingress protection level allows this series to fit both indoor and outdoor applications. HLG-600H is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for LED lighting system.

Model Encoding
HLG - 600H - [15] [A]

<table>
<thead>
<tr>
<th>Type</th>
<th>IP Level</th>
<th>Function</th>
<th>Note</th>
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<tbody>
<tr>
<td>A</td>
<td>IP65</td>
<td>Io and Vo adjustable through built-in potentiometer</td>
<td>In Stock</td>
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<tr>
<td>B</td>
<td>IP67</td>
<td>3 in 1 dimming function (0~10VDC, 10V PWM signal and resistance)</td>
<td>In Stock</td>
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<tr>
<td>AB</td>
<td>IP65</td>
<td>Io and Vo adjustable through built-in potentiometer &amp; 3 in 1 dimming function (0~10VDC,10V PWM signal and resistance)</td>
<td>In Stock</td>
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<tr>
<td>Blank</td>
<td>IP67</td>
<td>Io and Vo fixed</td>
<td>In Stock</td>
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**SPECIFICATION**

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<tr>
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<tbody>
<tr>
<td>DC VOLTAGE</td>
<td>±15V</td>
<td>±15V</td>
<td>±15V</td>
<td>±15V</td>
<td>±15V</td>
<td>±15V</td>
<td>±15V</td>
<td>±15V</td>
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<tr>
<td>CURRENT CONSTANT REGION</td>
<td>15V</td>
<td>20V</td>
<td>25V</td>
<td>30V</td>
<td>35V</td>
<td>40V</td>
<td>45V</td>
<td>50V</td>
<td>55V</td>
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<tr>
<td>RATED CURRENT</td>
<td>40A</td>
<td>38A</td>
<td>28A</td>
<td>25A</td>
<td>20A</td>
<td>16.7A</td>
<td>14.3A</td>
<td>12.5A</td>
<td>11.2A</td>
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<tr>
<td>RATED POWER</td>
<td>480W</td>
<td>540W</td>
<td>600W</td>
<td>600W</td>
<td>601.2W</td>
<td>600.6W</td>
<td>600W</td>
<td>604.8W</td>
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<tr>
<td>RIPPLE &amp; NOISE</td>
<td>150mVp-p</td>
<td>150mVp-p</td>
<td>150mVp-p</td>
<td>150mVp-p</td>
<td>200mVp-p</td>
<td>250mVp-p</td>
<td>250mVp-p</td>
<td>350mVp-p</td>
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<tr>
<td>VOLTAGE ADJ. RANGE</td>
<td>Adjustable for A-Type only (via built-in potentiometer)</td>
<td>10.2 ~ 12.6V</td>
<td>12.7 ~ 15.8V</td>
<td>17 ~ 21V</td>
<td>20.4 ~ 25.2V</td>
<td>25.5 ~ 31.5V</td>
<td>30.6 ~ 37.8V</td>
<td>35.7 ~ 44.1V</td>
<td>40.8 ~ 50.4V</td>
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<tr>
<td>CURRENT ADJ. RANGE</td>
<td>Adjustable for A-Type only (via built-in potentiometer)</td>
<td>20 ~ 40A</td>
<td>18 ~ 36A</td>
<td>14 ~ 28A</td>
<td>12.5 ~ 25A</td>
<td>10 ~ 20A</td>
<td>8.3 ~ 16.7A</td>
<td>7.1 ~ 14.3A</td>
<td>6.2 ~ 12.5A</td>
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<tr>
<td>TOTAL VOLTAGE</td>
<td>2.3%</td>
<td>±2.2%</td>
<td>±1.5%</td>
<td>±1.5%</td>
<td>±1.0%</td>
<td>±1.0%</td>
<td>±1.0%</td>
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</tr>
<tr>
<td>VOLTAGE &amp; CURRENT</td>
<td>2.0%</td>
<td>±1.5%</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
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<td>25mVp-p</td>
<td>25mVp-p</td>
<td>35mVp-p</td>
<td>35mVp-p</td>
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<tr>
<td>SETUP, RISE TIME</td>
<td>500ms, 80ms</td>
<td>115VAC, 230VAC</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>HOLD UP TIME (Typ.)</td>
<td>15ms / 115VAC, 230VAC</td>
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<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

### INPUT

- **VOLTAGE RANGE**: 90 ~ 305VAC 127 ~ 431VDC (Please refer to "STATIC CHARACTERISTIC" section)
- **FREQUENCY RANGE**: 47 ~ 63Hz
- **POWER FACTOR (Typ.)**: PF=0.98/115VAC, PF=0.95/230VAC, PF=0.93/277VAC @ full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)
- **TOTAL HARMONIC DISTORTION**: THD ≤ 2% at full load; ≤ 5% at 230VAC @ load ≤ 75% @ 277VAC (Please refer to "TOTAL HARMONIC DISTORTION (THD)" section)
- **EFFICIENCY**:
  - 230VAC: 92% 93.5% 94.5% 95% 95% 95.5% 96% 96% 96% 96%
  - 277VAC: 92.5% 93.5% 94.5% 95% 95% 95.5% 96% 96% 96% 96%
- **AC CURRENT (Typ.)**: 7A / 115VAC 3.3A / 230VAC 2.9A / 277VAC
- **INrush CURRENT (Typ.)**: Cold start 70A (inrush=1000A is measured at 50% load) at 230VAC; Per NEMA 410
- **MAX. No. of PSUs on 16A CIRCUIT BREAKER**: 1 unit (circuit breaker of type B) / 2 units (circuit breaker of type C) at 230VAC
- **LEAKAGE CURRENT**: <0.75mA @ 277VAC
- **STANDBY POWER CONSUMPTION**: <0.5W at remote off
- **OVER CURRENT**: Constant current limiting, recover automatically after fault condition is removed
- **SHORT CIRCUIT**: Constant current limiting, recover automatically after fault condition is removed
- **OVER VOLTAGE**: 13 ~ 16V 16.5 ~ 20.5V 22 ~ 26V 26 ~ 30V 32.5 ~ 36.5V 39.5 ~ 43.5V 48 ~ 50V 52.5 ~ 56.5V 59 ~ 63V
- **OVER TEMPERATURE**: Shut down o/p voltage, re-power on to recover
- **REMOTE ON/OFF CONTROL**: Power on: "High" 2 ~ 5V or Open circuit; Power off: "Low" <0 ~ 0.5V or Short circuit
- **5V STANDBY**: 5V±0.5V: tolerance ±5%, ripple ±100mVp-p/peak
- **WORKING TEMP.**: Ta≤ 40 ~ 90°C (Please refer to "OUTPUT LOAD vs TEMPERATURE" section)
- **MAX. CASE TEMP.**: Tcase ≤ 90°C
- **WORKING HUMIDITY**: 20 ~ 95% RH non-condensing
- **STORAGE TEMP., HUMIDITY**: 40 ~ +85°C, 10% ~ 95% RH non-condensing
- **TEMP. COEFFICIENT**: ±0.003%/°C (0 ~ 60°C)
- **VIBRATION**: 10 ~ 500Hz, 5G, 12.5 m/s², frequency for 72min. each along X, Y, Z axes
- **SAFETY STANDARDS**: UL60950-1, UL60950-1 (Type HL), CSA C22.2 No. 250.13-12, ENEC EN61347-1, EN61347-2-13 independent, EN62384, IP55 or IP67, IEC61347-3-2, CCC GB4943.1, EAC TP TC 004, AS/NZS 60950.1 by CE, KC61347-1, KC61347-2-13(for 24A, 36A, 48A, 54A only) approved
- **WITHSTAND VOLTAGE**: UP-O/P: 3.75kVAC UP-FG: 2kVAC O/P-FG: 1.5kVAC
- **EMC EMISSION**: Compliance to EN55032 (CISPR32) Class B, EN55015, EN61000-3-2 Class C @ load<25% ; EN61000-3-3, EAC TPC TC 020 ; KC KN15, KN16547(for 24A, 36A, 48A, 54A only)
- **EMC IMMUNITY**: Compliance to EN61000-4-2,4,3,5,6,8,11, EN61547, EN55024, light industry level (surge immunity Line-Earth 4kV, Line-Line 2kV), EAC TPC TC 020 ; KC KN15, KN61547(for 24A, 36A, 48A, 54A only)
- **OTHERS**: MTBF 76.9khrs min. MIL-HDBK-217F (25°C)
- **DIMENSION**: 280*144*48.5mm (L*W*H)
- **PACKING**: 2kg 4pcs/16.6kg/0.5CUF

### NOTE
- 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.
- 2. Ripple & noise is measured at 20mV of bandwidth by using a 12” twisted pair wire terminated with a 0.1uf & 47uf parallel capacitor.
- 3. Tolerance: includes set up tolerance, line regulation and load regulation.
- 4. Please refer to "DRIVING METHODS OF LED MODULE".
- 5. Deviation may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.
- 6. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.
- 7. The model certified for CCC(#B19510.15, GB19510.1, GB17434 and GB17625.1) is an optional model.
- 8. This series meets the typical life expectancy of 62,000 hours of operation when Tcase, particularly point (or TEMP, per DLC), is about 75°C or less.
- 9. Please refer to the warranty statement on MEAN WELL’s website at http://www.meanwell.com
- 10. The driver is considered a component which will be installed into a final equipment. All the EMC tests are being executed by mounting the unit on a 360mm x 360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."
- 11. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
- 12. For any application note and IP water proof function installation caution, please refer our user manual before using.

File Name: HLG-600H-SPEC 2019-05-07
**DRIVING METHODS OF LED MODULE**

※ This series is able to work in either Constant Current mode (a direct drive way) or Constant Voltage mode (usually through additional DC/DC driver) to drive the LEDs.

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

Should there be any compatibility issues, please contact TRC Electronics for details.

Typical output current normalized by rated current (%)
DIMMING OPERATION

※ 3 in 1 dimming function (for B-Type)
- Output constant current level can be adjusted by applying one of the three methodologies between DIM+ and DIM-:
  - 0 ~ 10VDC, or 10V PWM signal or resistance.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.
- Dimming source current from power supply: 100μA (typ.)

◎ Applying additive 0 ~ 10VDC

◎ Applying additive 10V PWM signal (frequency range 100Hz ~ 3KHz):

◎ Applying additive resistance:

Note: 1. Min. dimming level is about 6% and the output current is not defined when 0%< Iout<6%.
2. The output current could drop down to 0% when dimming input is about 0kΩ or 0Vdc, or 10V PWM signal with 0% duty cycle.
**TRC ELECTRONICS, INC.**

Providing exceptional customer service since 1982

**LED Driver • Constant Voltage + Constant Current • 600W**

**MEAN WELL HLG-600H Series**

**OUTPUT LOAD vs TEMPERATURE**

If HLG-600H operates in constant current mode with the rated current, the maximum workable Ta is 55°C.

**STATIC CHARACTERISTICS**

※ De-rating is needed under low input voltage.

**TOTAL HARMONIC DISTORTION (THD)**

※ 48V Model, Tcase at 80°C

**EFFICIENCY vs LOAD**

HLG-600H series possess superior working efficiency that up to 96% can be reached in field applications.

※ 48V Model, Tcase at 80°C

File Name: HLG-600H-SPEC 2019-05-07
LED Driver • Constant Voltage + Constant Current • 600W
MEAN WELL HLG-600H Series

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