



A. Features

IP 20

- High Efficiency (Up to 89%).
- Active Power Factor Correction (Typical 0.95).
- Isolation Class II
- All-Round Protection: OVP/SCP/OTP/OPP.
- Fully isolated plastic case with IP20 and damp location.
- Class 2 and SELV.



B. Description

The **HEC-55LTN-36QSAA** Series operate from a 90 ~ 305Vac input range. They are designed to be highly efficient and highly reliable. Features include over voltage protection, short circuit protection, and over temperature protection.

C. Models

| Output Current | Input Voltage Range Note 1 | Output Voltage Range Note 4 | Max. Output Power | Efficiency Note 2 | Power Factor Note 2 | Model Number |
|----------------|-------------------------------|--------------------------------|-------------------|----------------------|------------------------|------------------|
| 1500mA | 90 ~ 305Vac | 18-36V | 55 W | 89% | 0.95 | HEC-55LTN-36QSAA |

D. Electronic Specifications

- Input Specifications

| Parameter | Min. | Typ. | Max. | Notes |
|----------------------|------|------|----------|---|
| Input Voltage (V) | 90 | - | 305 | |
| Input Frequency (Hz) | 47 | | 63 | |
| Input AC Current (A) | - | - | 0.7 | Measured at full load and 100Vac input. |
| | - | - | 0.3 | Measured at full load and 240Vac input. |
| Leakage Current (mA) | - | - | 0.7 | At 240Vac 60Hz input. |
| Inrush Current (A) | - | - | 40 | At 220Vac input 25°C Cold Start. Duration=100µs, 10%Ipk-10%Ipk. |
| Inrush Current (I2t) | | - | 0.16 A2s | |
| Power Factor | 0.9 | - | - | At 277Vac input, full load. |
| THD (%) | - | 20 | 25 | |





- Output Specifications

| Parameter | Min. | Typ. | Max. | Notes |
|--|------|------|-------------------------|---|
| Output Current (mA) I _o = 1500 mA | 1425 | | 1575 | |
| No Load Output Voltage (V) I _o = 1500 mA | - | - | 50 | There will be no damage or hazardous conditions occurred with no loading. |
| Output Ripple Voltage (V) | ---- | ---- | 1% V _{omax} | Measured by 20 MHz bandwidth oscilloscopes and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor. |
| Output Voltage Overshoot (%) | - | - | 110 | At full load condition. |
| Line Regulation (%) | - | - | ±3 | |
| Load Regulation (%) | - | - | ±5 | |
| Turn-on Delay Time (s) | - | 0.5 | 1.0 | Measured at 220Vac input. |

- General Specifications

| Parameter | Min. | Typ. | Max. | Notes |
|--|-----------------|---------|------|---|
| Efficiency (%) I _o = 1500 mA | | | 88 | Measured at full load and 120Vac input. |
| Efficiency (%) I _o = 1500 mA | | | 89 | Measured at full load and 277Vac input. |
| MTBF (hours) | 320,000 | - | | Measured at full load 50°C ambient temperature (MIL-HDBK-217F). |
| Life Time (hours) | | 100,000 | - | Measured at rated input voltage with full load, Case temperature=60°C @ T _c point. See life time vs. T _c curve for the details. |
| Case Temperature (°C) | - | - | 80 | |
| Dimensions Millimeters(L × W × H) | 201 × 62 × 30.5 | | | |
| Net Weight (g) | - | - | - | |

- Protection Functions

| Parameter | Min. | Typ. | Max. | Notes |
|-----------------------------|--|------|---------------------------|--|
| Over Voltage Protection | | | 1.50 V _{omax} | In the event of an over-voltage condition, the LED Drives shall Shut down o/p voltage, re-power on to recover. |
| Over Temperature Protection | Shut down o/p voltage with re-power on to recovery. | | | |
| Short Circuit Protection | No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed. | | | |





- Environmental Specifications

| Parameter | Min. | Typ. | Max. | Notes |
|----------------------------|------|------|------|--|
| Operating Temperature (°C) | -40 | - | +60 | Humidity: 20% RH to 80% RH; See Derating Curve for more details. |
| Storage Temperature (°C) | -40 | - | +80 | Humidity: 10% RH to 90% RH. |

- Safety and EMC Compliance

| Safety Category <small>Note 6</small> | Standard |
|---------------------------------------|--|
| UL/CUL | UL8750, UL1310 Class 2, CSA C22.2 NO. 223-M91 Class 2. |
| CE | EN 61347-1, EN61347-2-13. |
| EMI Standards | Notes |
| EN 55015 | Conducted emission Test & Radiated emission Test. |
| EN 61000-3-2 | Harmonic current emissions. |
| EN 61000-3-3 | Voltage fluctuations & flicker. |
| FCC Part 15 | FCC 47 CFR Part 15 Subpart B, ICES-003 Issue 4 ANSI C63.4-2003 |
| EMS Standards | Notes |
| EN 61000-4-2 | Electrostatic Discharge (ESD): 8 KV air discharge, 4 KV contact discharge. |
| EN 61000-4-3 | Radio-Frequency Electromagnetic Field Susceptibility Test-RS. |
| EN 61000-4-4 | Electrical Fast Transient / Burst-EFT: Level 2, Criteria A. |
| EN 61000-4-5 | Surge Immunity Test: AC Power Line: line to line 1 KV. |
| EN 61000-4-6 | Conducted Radio Frequency Disturbances Test-CS. |
| EN 61000-4-8 | Power Frequency Magnetic Field Test. |
| EN 61000-4-11 | Voltage Dips. |
| EN 61547 | Electromagnetic Immunity Requirements Applies To Lighting Equipment. |

Notes:

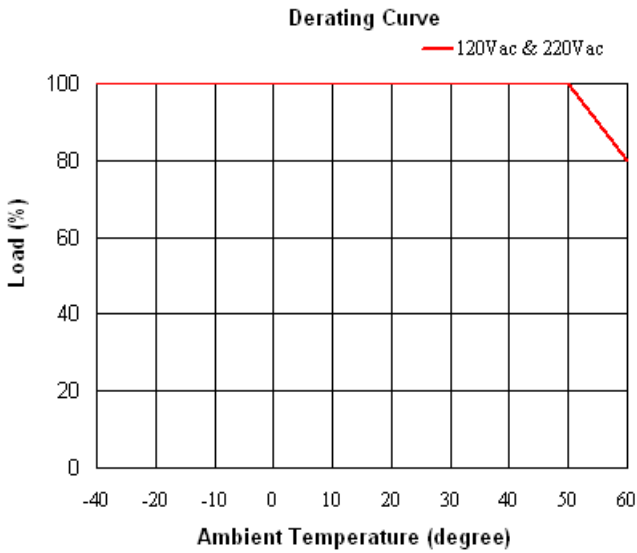
1. Normal input voltage range 100~277Vac.
2. Measured at input 220V with a full load.
3. All specifications are typical at 25 °C unless otherwise stated.
4. Constant current operation region is preferably 60%~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design.
5. Derating may be needed under low input voltages. Please check the static curve for more details.
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



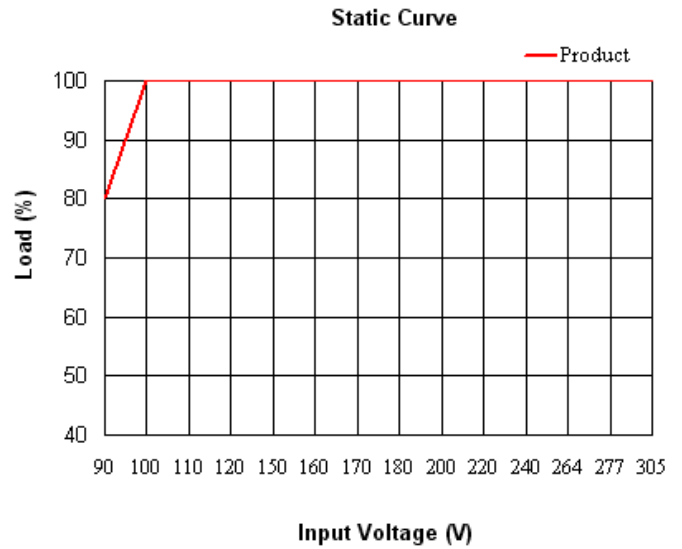


E. Electronic Curve

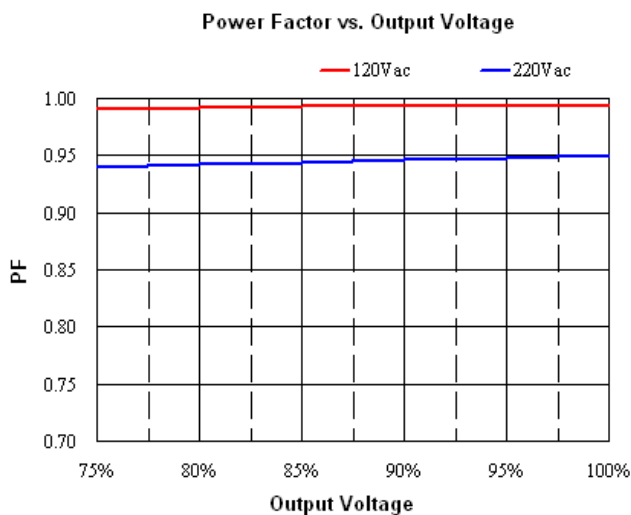
- Derating Curve



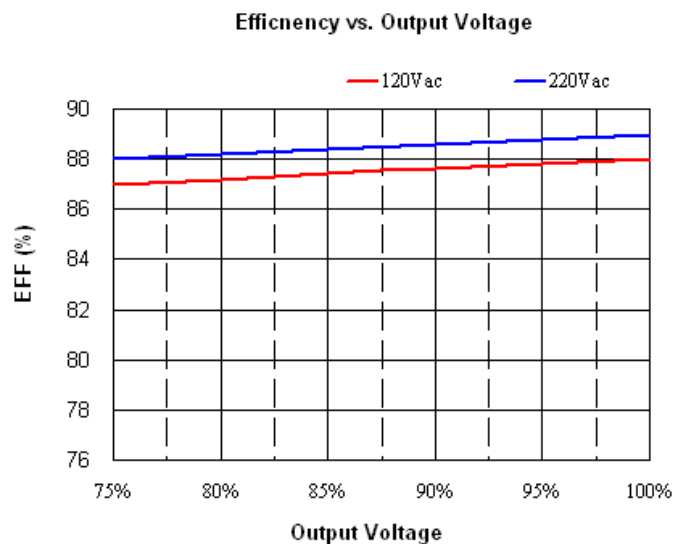
- Static Curve



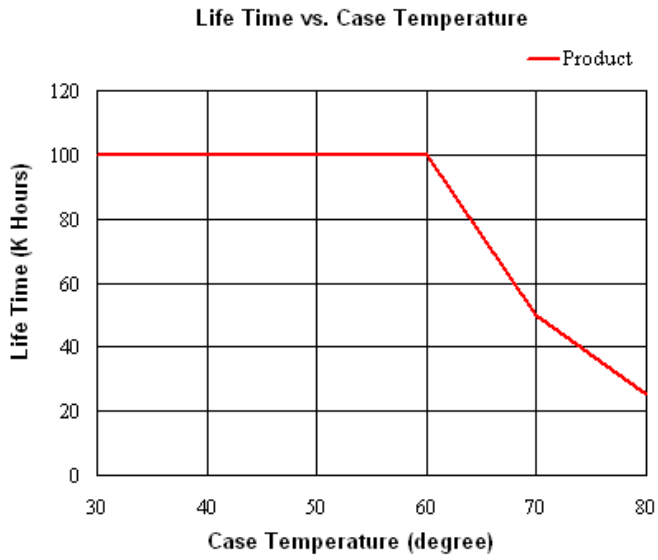
- Power Factor Characteristics Curve



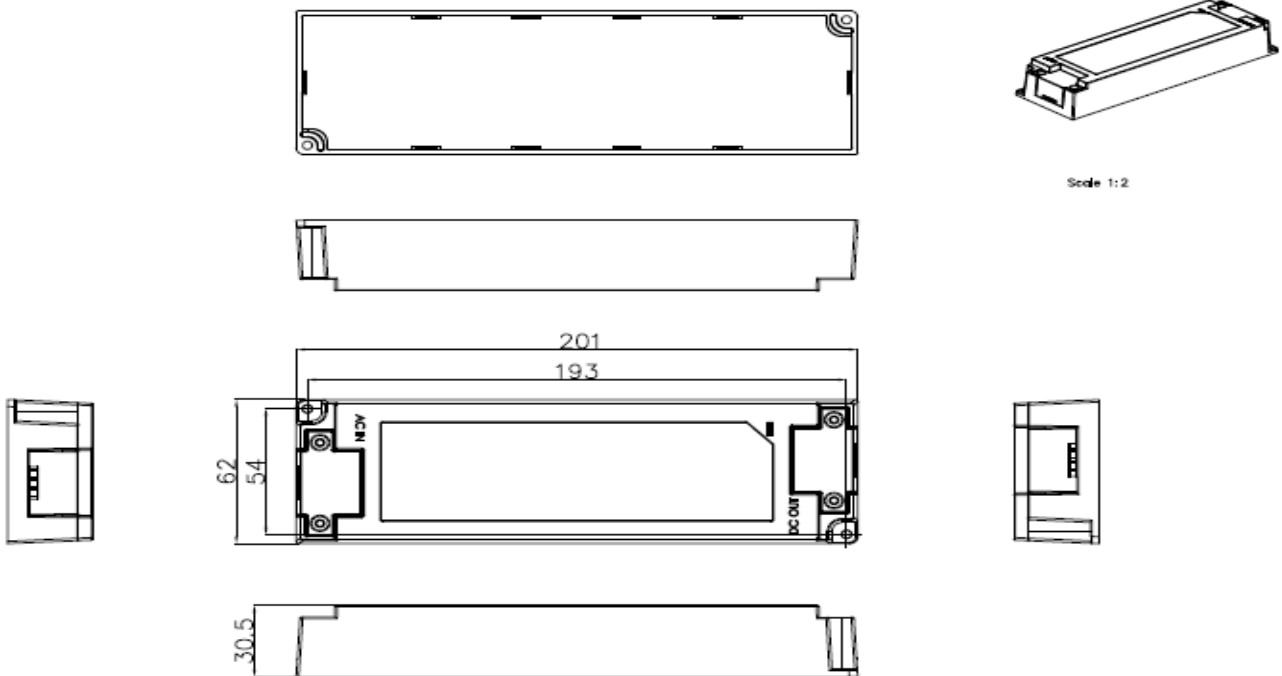
- Efficiency Characteristics Curve



- Life Time vs. Case Temperature Curve



F. Mechanical Outline





High Quality
Evolution
Commitment

HEC-55LTN-36QSAA Rev A

G. RoHS Compliance Outline

Our products comply with the European Directive 2011/65/EU, calling for the elimination of lead and other hazardous substances from electronic products.

H. Revision History

| Change Date | Rev. | Description of Change | | |
|-------------|------|-----------------------|------|----|
| | | Item | From | To |
| 2013-11-01 | A | Datasheets Release | / | / |

