A. Features

IP20

- High Efficiency (Up to 91%).
- Active Power Factor Correction (Typical 0.96).
- Isolation Class I (With FG)
- All-Round Protection: SCP/OTP/OCP/OPP.
- Fully isolated plastic case with IP20 and damp location.

B. Description

The ***HEC-100LVN-XXTSAF*** Series operate from a 90 ~ 264Vac input range. They are designed to be highly efficient and highly reliable. Features include short circuit protection, over current protection and over temperature protection.

C. Models

Output Current	Input Voltage Range Note 1	Output Voltage	Max. Output Power	Efficiency Note 2	Power Factor Note 2	Model Number
8.33A	90 ~ 264Vac	12V	100 W	91%	0.96	HEC-100LVN-12TSAF
7.69A	90 ~ 264Vac	13V	100 W	91%	0.96	HEC-100LVN-13TSAF
4.17A	90 ~ 264Vac	24V	100 W	91%	0.96	HEC-100LVN-24TSAF
3.85A	90 ~ 264Vac	26V	100 W	91%	0.96	HEC-100LVN-26TSAF

D. Electronic Specifications

- Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage (V)	90	-	264	
Input Frequency (Hz)	47		63	
Input AC Current (A)	-	-	2.0	Measured at full load and 100Vac input.
	-	-	1.0	Measured at full load and 240Vac input.
Leakage Current (mA)	-	-	0.7	At 277Vac 60Hz input.
Inrush Current (A)	-	-	40	At 220Vac input 25℃ Cold Start. Duration=100μs, 10%Ipk-10%Ipk.
Inrush Current (I2t)		-	0.16 A2s	
Power Factor	0.9	-	-	At 230Vac input, full load.
THD (%)	-	20	25	

- Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage (V)				
Vo = 12V	11.4		12.6	
Vo = 13V	12.35		13.65	
Vo = 24V	22.8		25.2	
Vo = 26V	24.7		27.3	
No Load Output Voltage (V)				
Vo = 12V			12.6	
Vo = 13V	-	-	13.65	There will be no damage or hazardous conditions occurred with no loading.
Vo = 24V			25.2	
Vo = 26V			27.3	
Output Ripple Voltage (V)	-	-	1% Vo max	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 (%)				
Vo = 12V			90	
Vo = 13V	-	-	90	Measured at full load and 120Vac input.
Vo = 24V			90	
Vo = 26V			90	
Efficiency (%)				
Vo = 12V			91	
Vo = 13V	-	-	91	Measured at full load and 220Vac input.
Vo = 24V			91	
Vo = 26V			91	
MTBF (hours)	320,000	-		Measured at full load 50℃ ambient temperature (MIL-HDBK-217F).
Life Time (hours)		100,000	-	Measured at rated input voltage with full load, Case temperature=60℃ @ Tc point.See life time vs. Tc curve for the details.

Case Temperature (℃)	-	-	90	
Dimensions Millimeters(L × W × H)	200 × 69 × 36			

- Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Current Protection			1.5 Io	Hiccup mode. The power supply shall be self-recovery when the fault condition is removed.
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 (℃)	-40	-	+50	Humidity: 20% RH to 80% RH; See Derating Curve for more details.
Storage Temperature (℃)	-40	-	+80	Humidity: 10% RH to 90% RH.

- Safety and EMC Compliance

Safety Category	Standard
UL/CUL	UL8750, UL 1012, CSA C22.2 No. 107.1
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.

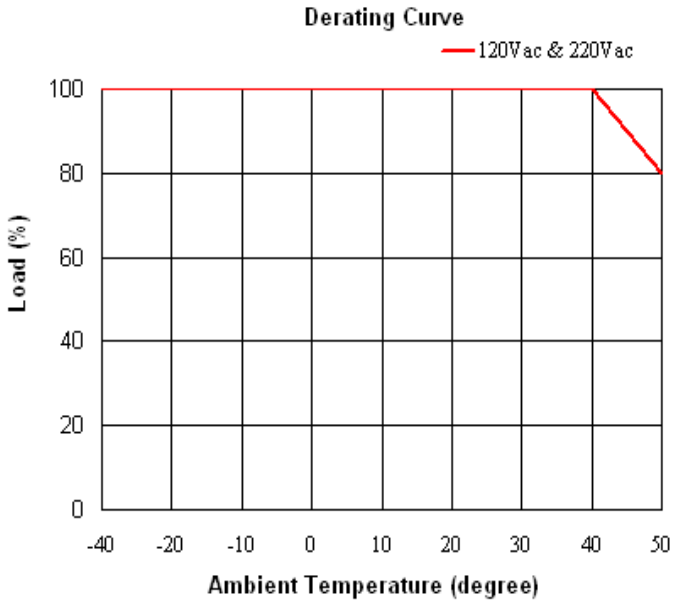
EN 61000-4-8	Power Frequency Magnetic Field Test.
EN 61000-4-11	Voltage Dips.
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment.

Notes:

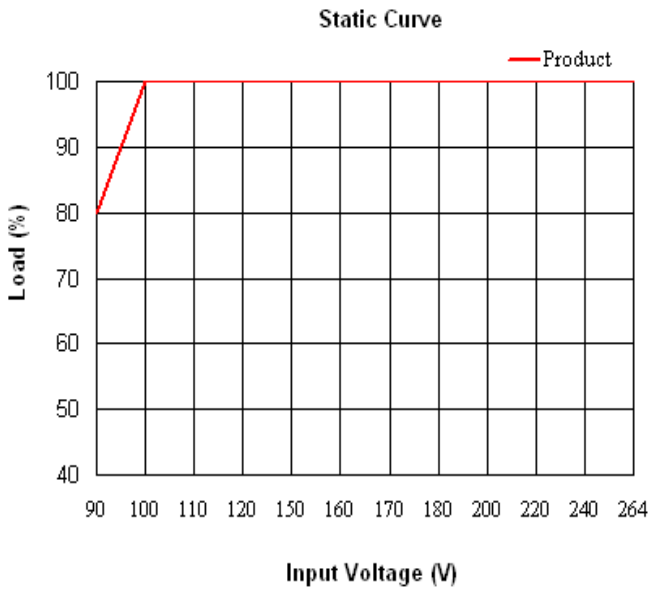
1. Normal input voltage range 100~240Vac.
2. Measured at input 220V with a full load.
3. All specifications are typical at 25 °C unless otherwise stated.
4. Derating may be needed under low input voltages. Please check the static curve for more details.
5. The power supply is considered as a component 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

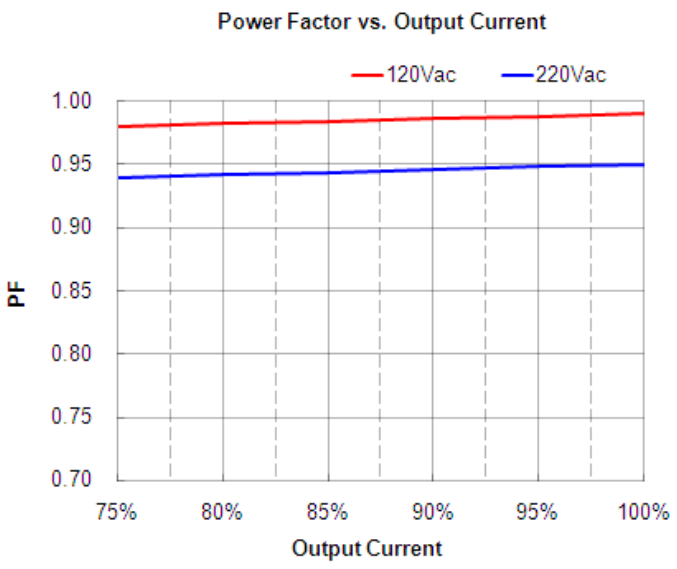
- Derating Curve



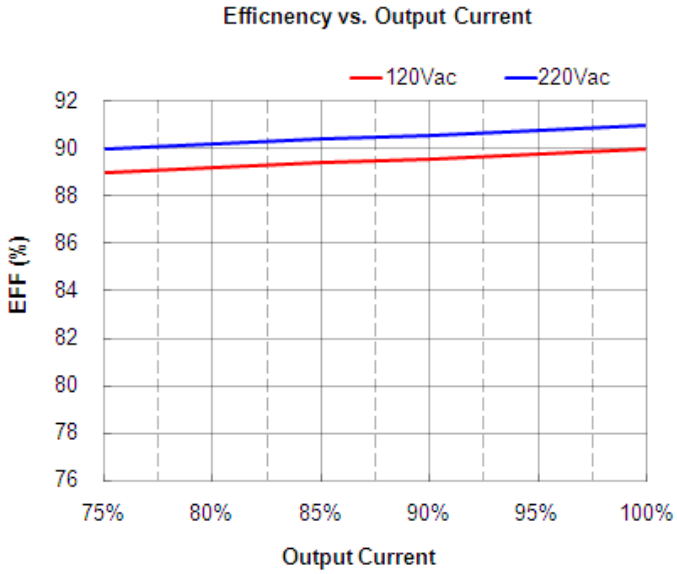
- Static Curve



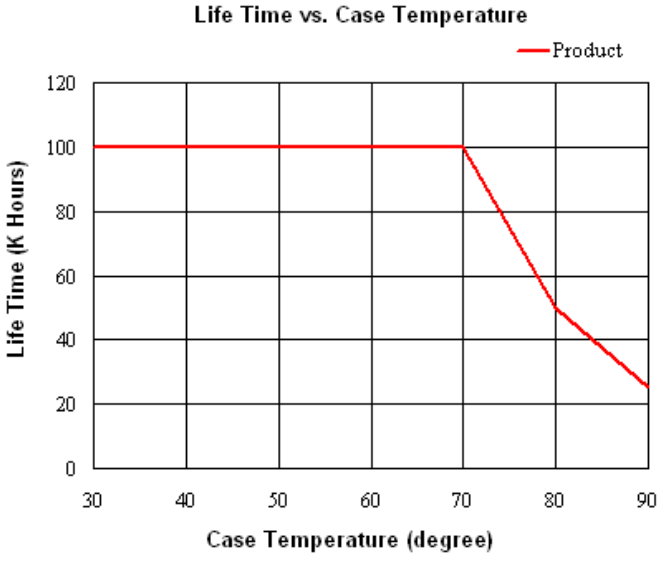
- Power Factor Characteristics Curve



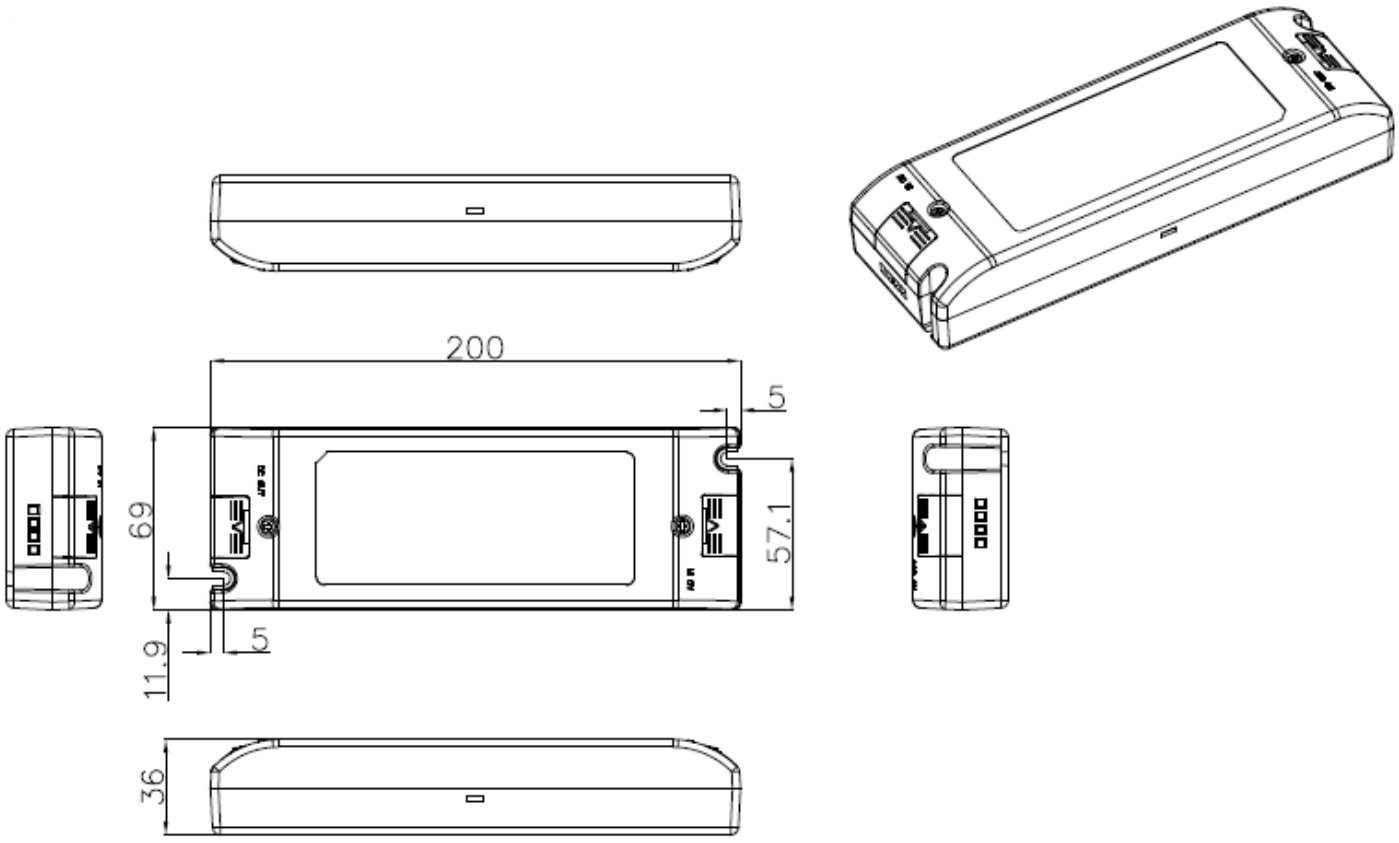
- Efficiency Characteristics Curve



- Life Time vs. Case Temperature Curve



F. Mechanical Outline



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
2013-09-10	A	Datasheets Release	/	/
2014-05-06	A1.0	Revised Static Curve	/	/