



ELECTRO-MECHANICS

90W Single Output Switching Power Supply

## PSDV900102U



■ Model Name : PSDV900102U

■ Features :

- Suitable for LED lighting application
- UL8750\_UL1310 Class 2
- For use in Dry and Damp Location
- Full-protection provided : OCP/OLP/OTP/SCP
- Non Dimming
- Non potting product



**SAMSUNG ELECTRO-MECHANICS CO., LTD**

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■ Electrical specification

No.	Item	Min	Typ	Max	Unit	Remark
1	Nominal Input Voltage	120		277	Vac	
2	Wide Input Voltage	108		305	Vac	
3	Maximum Input Current			1.2	Arms	
4	Nominal Input Frequency	50		60	Hz	
5	Wide Input Frequency	47		63	Hz	
6	Power Factor (PF)	0.9				1)
7	Total Harmonic Distortion (THD)			20	%	1)
8	Inrush Current	NEMA410				8)
9	Earth Leakage Current			1000	μA	
10	Output Voltage	30	38.8	42	Vdc	
11	Output Current	2197	2300	2404	mA	±4.5%
12	Output Current Ripple			10	%	1)
13	Output Peak Current			2990	mA	1)
14	Output Aging Current Differential			115	mA	2hr Aging
15	Turn-on Delay Time			750	ms	2)
16	Electrical Efficiency	87			%	3)
17	Output Open LED Protection	-	-	-	-	Auto-recovery
18	Output Short Circuit Protection	-	-	-	-	Auto-recovery
19	12V Output Short Circuit Protection	-	-	-	-	Auto-recovery
20	Over-temperature Protection	105			°C	Auto-recovery
21	Case Temperature (Tc)			85	°C	@Amb.50°C, Input 120Vac, Load(Typ.)
22	Storage Temperature	-40		90	°C	
23	Operating Temperature	-40		50	°C	
24	Insulation Resistance	100			MΩ	500Vdc between Input & Output
25	Differential Mode (Line to Line)	-4		4	kV	4)
26	Common Mode (Line to Ground)	-6		6	kV	4) 5)
27	Contact Discharge Test Voltage	-4		4	kV	6)
28	Air Discharge Test Voltage	-8		8	kV	6) 7)
29	Dielectric Withstand Voltage	Input to Output	1554		Vac	Apply for 1 minute 9)
30		Input to Case	1554		Vac	
31		Output to Case	500		Vdc	

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No.	Item	Min	Typ	Max	Unit	Remark
32	Vibration			3	G	
33	Humidity			90	%	

**Application Notes**

- 1) Test Condition: 120/277Vac 50/60Hz Input, LED Typ Load, Ambient Temperature 25°C
- 2) Test Condition: Input voltage 277Vac 60Hz, Room Temperature, Cold start
- 3) Test Condition: 240Vac Input, 1hr Aging, LED Typ Load and I<sub>max</sub>, Ambient Temperature 25°C
- 4) Surge Specification above is higher than IEC/EN 61000-4-5 (Differential 1kV, Common 2kV)
- 5) The metal case of the LED driver must be connected with F.G
- 6) ESD Specification above meets IEC/EN 61000-4-2 Requirements (Contact 4KV, Air 8KV)
- 7) The metal case of the driver should be grounded.
- 8) Input 120Vac, < 144A<sub>peak</sub>, < 0.7ms, < 41A<sub>2sec</sub>
- 9) Determined by Paragraph 8.4.2, UL8750, IEC/EN61347-1, IEC/EN61347-2-13

**Safety Standards**

Including safety requirements above, the LED driver complies with the following safety standards:

No.	Item	Description
1	UL8750	UL Safety Standards
2	IEC/EN 61000-3-2	Harmonic current emissions: Class C
3	IEC/EN 61000-3-3	Voltage Fluctuations and Flicker
4	IEC/EN 61000-4-2	Electrostatic Discharge (ESD): Contact 4kV, Air 8kV
5	IEC/EN 61000-4-3	Radio-frequency Electromagnetic Fields
6	IEC/EN 61000-4-4	Electrical Fast Transients (EFT)
7	IEC/EN 61000-4-5	Surges: Differential 1kV, Common 2kV
8	IEC/EN 61000-4-6	Injected Currents
9	IEC/EN 61000-4-8	Power Frequency Magnetic Fields
10	IEC/EN 61000-4-11	Voltage Dips and Short Interruptions

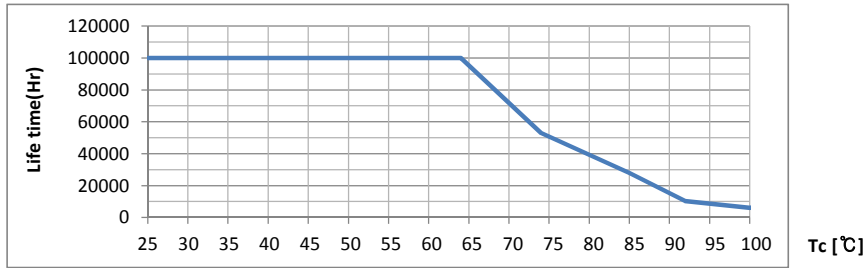


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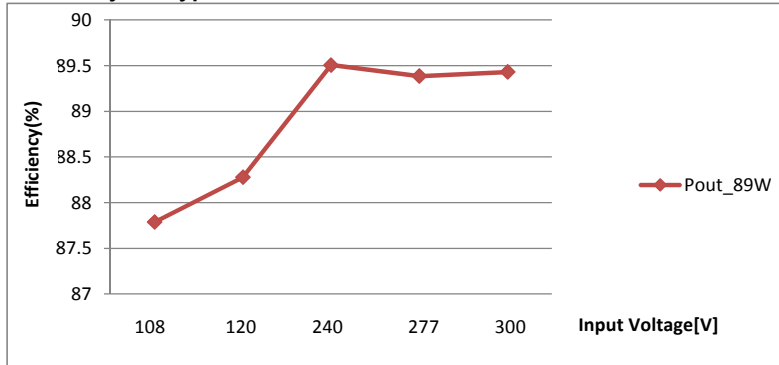
# PSDV900102U

## Life Time vs Tcase\_Typical Load

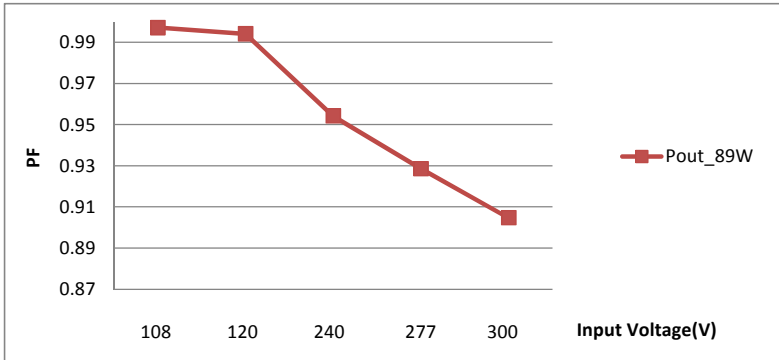


Remark) LED Driver has a rated lifetime of 50,000 hours @ Tc ≤ 75°C

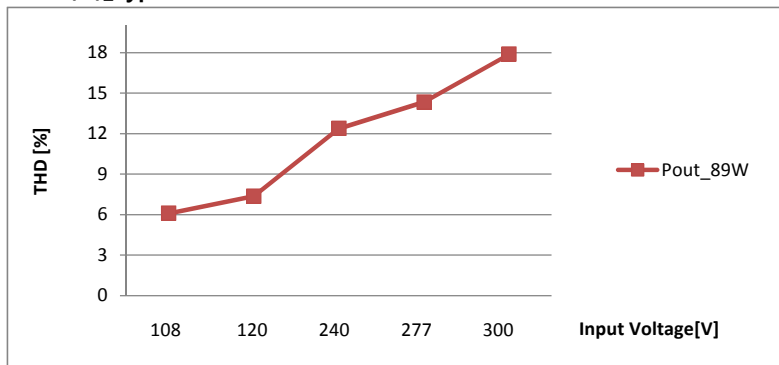
## Efficiency(%)\_Typical Load



## Power Factor\_Typical Load



## THD(%)\_Typical Load



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## Mechanical Specification

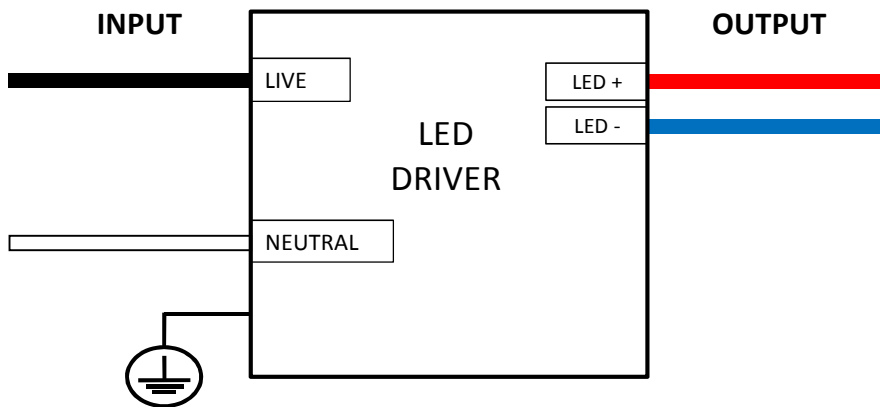


## Enclosure Size

Unit	Case Width	Case Length	Case Height	Mounting Width	Mounting Length	Overall Length
mm	60	211	32	42.9	226	240
inch	2.362	8.307	1.26	1.689	8.898	9.449

## Case Material : Aluminium

## Wiring Diagram



Remark) Output wiring specifications can be changed.

## Rating Label Drawing

**LED Electronic Driver Model : PSDV900102U**

**DIAGRAM OF INPUT/OUTPUT CONNECTION:**

**INPUT :** 120-277 V~, 50/60 Hz, 120 W, Max. 1.2 A,  $\lambda$ (PF)=0.9 **CAUTION :**  
**OUTPUT :** 30-42 V  $\pm$  / 2300 mA(constant current type) Suitable for dry and damp locations.  
 $t_c=85^\circ\text{C}$  Do not open the case, hazardous voltage inside.  
 Install in accordance with national and local electrical code.  
 This product is used for LED module only.

Made in China Dongguan SAMSUNG ELECTRO-MECHANICS Technical Support : [www.sem.samsung.com](http://www.sem.samsung.com)

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Suitable for Class 2 Wiring  
E321686

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