



■ **Model Name**

— PSDV151104A

■ **Features :**

- Suitable for LED lighting application
- UL8750/UL1012(Non Class 2)
- Suitable for dry and damp locations
- Full-protection provided : OCP/OLP/OTP/SCP
- Programmable and Dimming(0-10V Source & Sink Dimming)
- Potting product



SAMSUNG ELECTRO-MECHANICS CO., LTD

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TEL: +82-31-210-5114, www.samsungsem.co.kr

■ 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			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			500	μA	
10	Output Voltage	50		100	Vdc	
11	Adjustable Output Current Range	750		1500	mA	
12	Output Current	1425	1500	1575	mA	±5%
13	Output Current Ripple			10	%	1)
14	Output Peak Current			1700	mA	Cold start, 1)
15	Output Aging Current Differential			1650	mA	2hr Aging
16	Turn-on Delay Time			750	ms	2)
17	Dimming Control	10		100	%	
18	Electrical Efficiency	92			%	3)
19	Output Open LED Protection	-	-	-	Vdc	Auto-recovery
20	Output Short Circuit Protection	-	-	-	-	Auto-recovery
21	Over-temperature Protection	105			°C	Auto-recovery
22	Case Temperature (Tc)			85	°C	@Amb.50°C, Input 120Vac, Load(Typ.)
23	Storage Temperature	-40		90	°C	
24	Operating Temperature	-40		50	°C	
25	Insulation Resistance	100			MΩ	500Vdc between Input & Output
26	Differential Mode (Line to Line)	-4		4	kV	4)
27	Common Mode (Line to Ground)	-6		6	kV	4) 5)
28	Contact Discharge Test Voltage	-4		4	kV	6)
29	Air Discharge Test Voltage	-8		8	kV	6) 7)
30	Dielectric Withstand Voltage	Input to Output	3854		Vac	Apply for 1 minute 9)
31		Input to Case	1554		Vac	
32		Output to Case	500		Vdc	

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150W Single Output Switching Power Supply

PSDV151104A

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

Application Notes

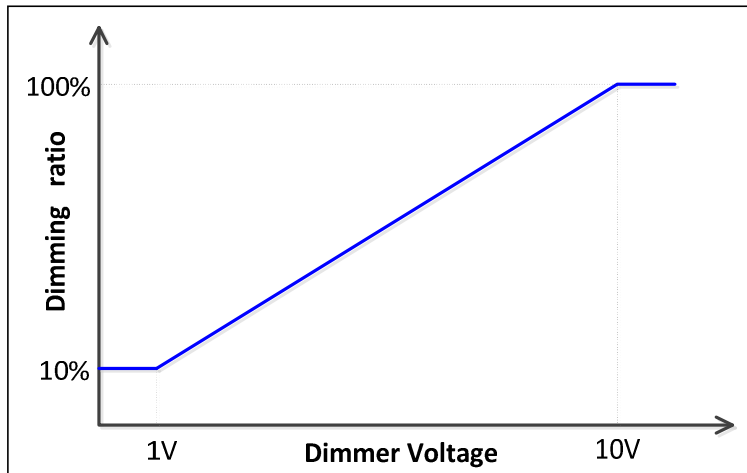
- 1) Test Condition: 120/277Vac 50/60Hz Input, LED Full Load, Ambient Temperature 25°C, at cold start
- 2) Test Condition: Input voltage 277Vac 60Hz, Room Temperature, at cold start
- 3) Test Condition: @240~277Vac Input, 1hr Aging, LED Full Load and I_{max}, Ambient Temperature 25°C
- 4) Surge Specification above is higher than IEC/EN 61000-4-5 (Line to Line 1kV, Line to GND 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_{peak}, < 0.7ms, < 41A_{2sec}
- 9) Determined by Paragraph 8.4.2, UL8750, IEC/EN61347-1, IEC/EN61347-2-13

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■ Dimming Curve



🔒 Safety Standards

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

No.	Item	Description
1	UL8750, UL1012	UL Safety Standards, Non Class 2(Dry and Damp locations)
3	FCC Part 15	Conducted and Radiated Emission Test
4	IEC/EN 61000-3-2	Harmonic current emissions: Class C
5	IEC/EN 61000-3-3	Voltage Fluctuations and Flicker
6	IEC/EN 61000-4-2	Electrostatic Discharge (ESD): Contact 4kV, Air 8kV
7	IEC/EN 61000-4-3	Radio-frequency Electromagnetic Fields
8	IEC/EN 61000-4-4	Electrical Fast Transients (EFT)
9	IEC/EN 61000-4-5	Surges: Differential 1kV, Common 2kV
10	IEC/EN 61000-4-6	Injected Currents
11	IEC/EN 61000-4-8	Power Frequency Magnetic Fields
12	IEC/EN 61000-4-11	Voltage Dips and Short Interruptions

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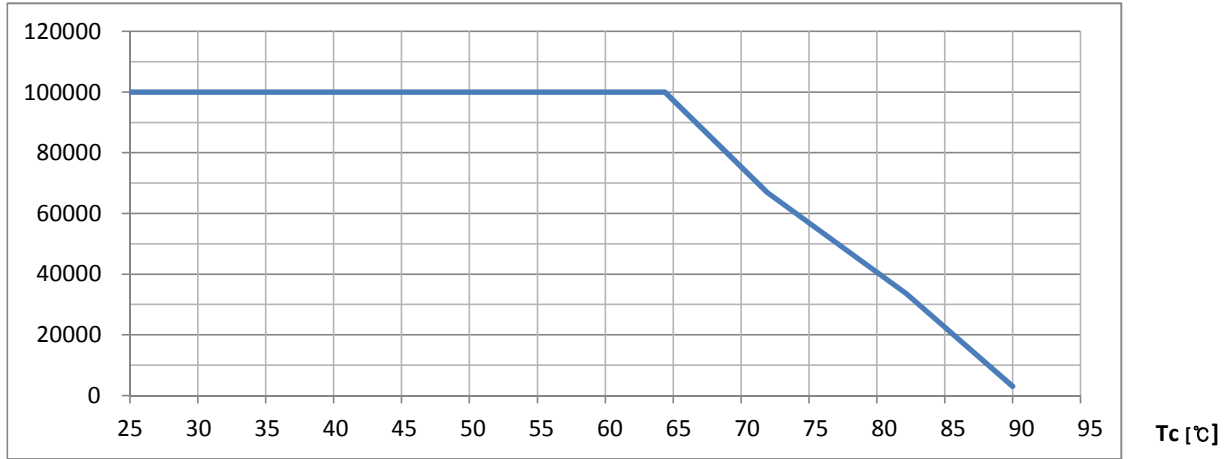
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150W Single Output Power Driver for LED Lighting

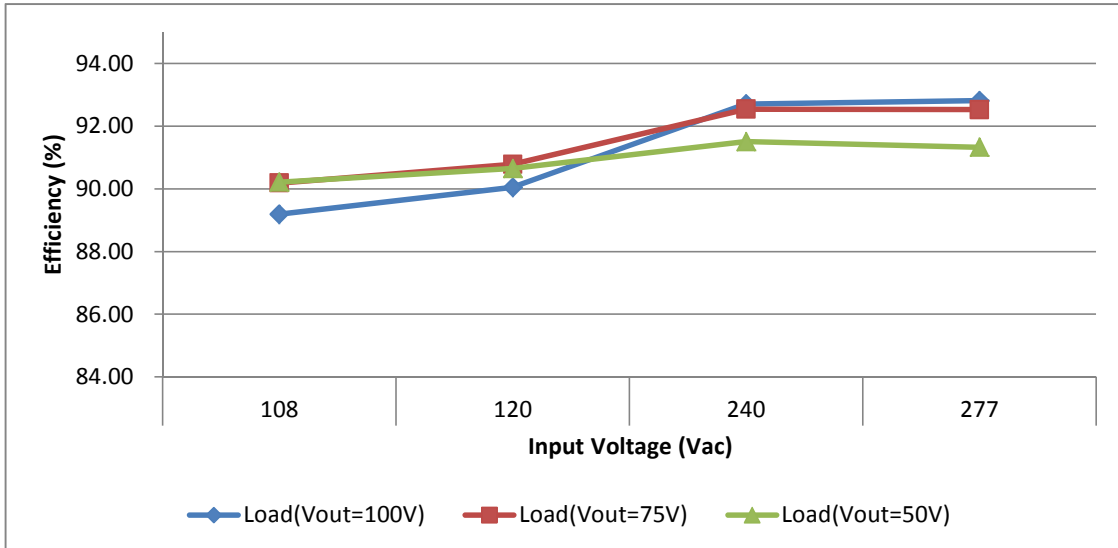
PSDV151104A

Life Time vs Tcase



Remark) LED Driver has a rated lifetime of 50,000 hours @ $T_c \leq 75^\circ\text{C}$

Efficiency(%) (LED Current = 1500mA)



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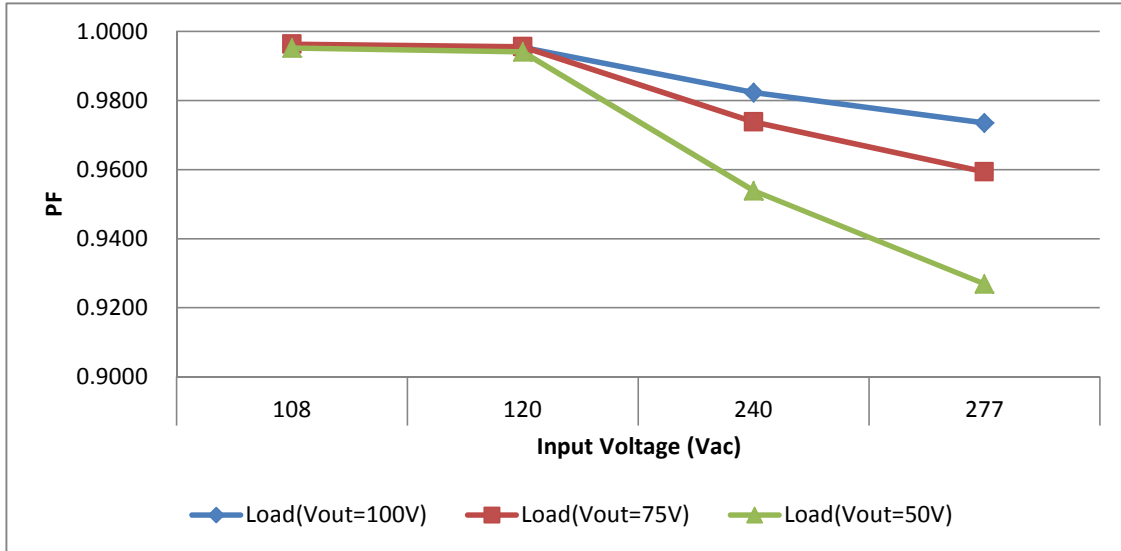
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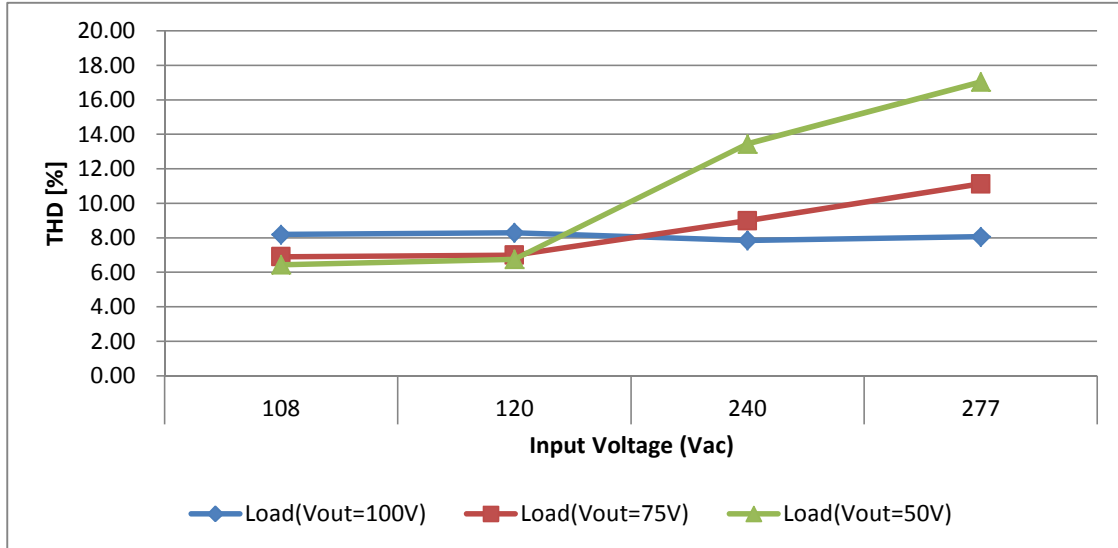
150W Single Output Power Driver for LED Lighting

PSDV151104A

Power Factor (LED Current = 1500mA)



THD(%) (LED Current = 1500mA)



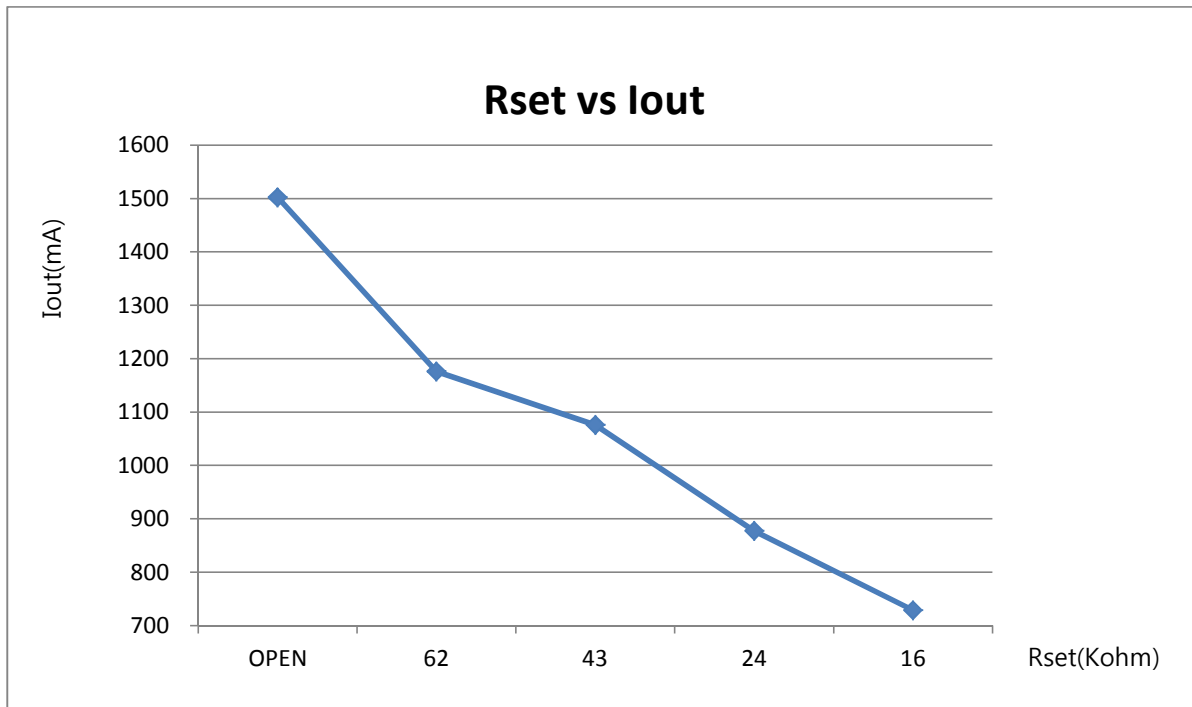
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■ Rset vs. Electrical Characteristics(at 240Vac)

Rset [kΩ]	Input					Output			
	Vltg [V]	Crnt [A]	PF	THD [%]	Power[W]	Vltg [V]	Crnt [A]	Power[W]	Efficiency [%]
(Open)	120	1.400	0.9949	8.60	166.94	99.80	1.500	149.70	89.67
120	120	1.100	0.9951	7.39	128.30	98.00	1.180	115.64	90.13
51	120	0.980	0.9949	7.85	117.30	97.40	1.080	105.19	89.68
27	120	0.797	0.9939	6.72	95.35	96.02	0.880	84.50	88.62
18	120	0.664	0.9922	7.16	79.07	94.66	0.730	69.10	87.39

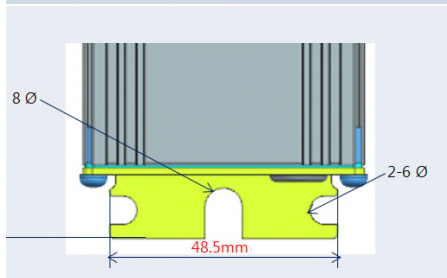
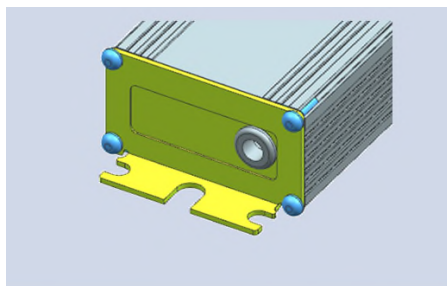
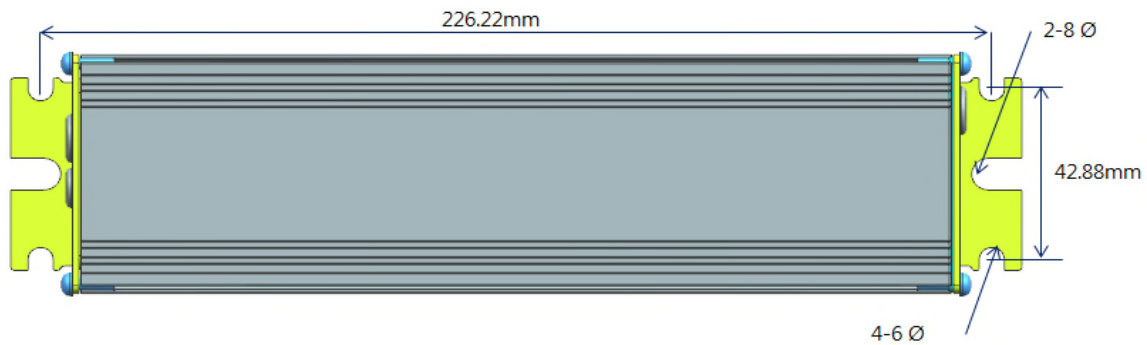


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■ Mechanical Specification



■ 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

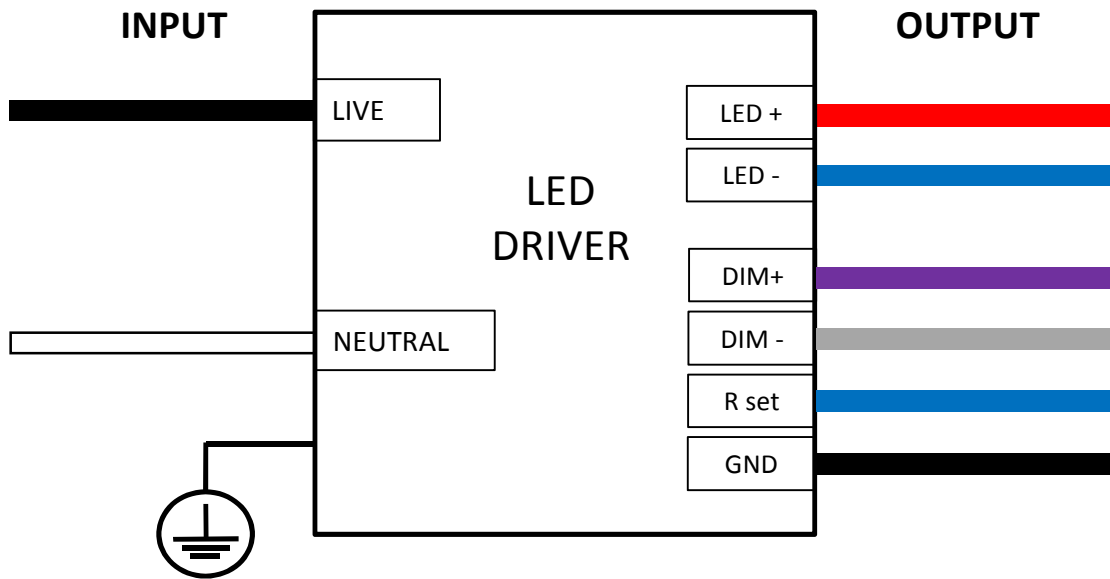
■ Case Material : Aluminium

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■ Wiring Diagram



Remark) Output wiring specifications can be changed.

■ Rating Label Drawing

SAMSUNG

LED Electronic Driver Model : PSDV151104A

INPUT : 120-277V~, 50/60 Hz, 170W, Max 2 A, λ (PF)=0.9
 OUTPUT : 50-100V~ / 1500 mA(constant current type)
 DIMMING CONTROL : 0-10V~ Source & Sink Dimming
 tc = 85°C

Made in China Dongguan SAMSUNG ELECTRO-MECHANICS

CAUTION :

Suitable for dry and non-hazardous locations.
 Refer to the case name for the voltage code.
 Please check the national and local electrical code.
 This product is used for LED module only.

UNDER DEVELOPMENT

UL C US
E321686

DIAGRAM OF INPUT/OUTPUT CONNECTION:

Input: LIVE (WHITE), NEUTRAL (BLUE), GND (BLACK)
 Output: LED + (RED), LED - (BLUE), DIM+ (VIOLET), DIM- (GRAY), R set (BLUE), GND (BLACK)

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