

PSDV151102A (for UL / cUL / CE)



PSDV151102B (for KC / CE)

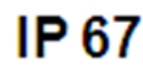


■ Model Name

- PSDV151102A, for UL / cUL / CE
- PSDV151102B, for KC / CE

■ Features :

- Suitable for LED lighting application
- KC, CE Class II, UL8750/UL1012 Class 1
- For use in Dry and Damp Location
- Full-protection provided : OCP/OLP/OTP/SCP
- 0-10V Dimming Control
- Wide Vout
- Adjustable Output Current
- 5-years warranty



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			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				10)
9	Earth Leakage Current			500	μA	
10	Output Voltage	200		425	Vdc	3)
11	Adjustable Output Current Range	250		350	mA	
12	Output Current	333	350	367	mA	
13	Output Current Ripple			10	%	1)
14	Output Peak Current			700	mA	1)
15	Output Aging Current Differential			17	mA	2hr Aging
16	Turn-on Delay Time			750	ms	4)
17	Electrical Efficiency	92			%	5)
18	12V Output Voltage	10.8	12	13.2	Vdc	
19	12V Output Current			50	mA	
20	Dimming Control	10		100	%	
21	Output Open LED Protection	-	-	-	-	Auto-recovery
22	Output Short Circuit Protection	-	-	-	-	Auto-recovery
23	12V Output Short Circuit Protection	-	-	-	-	Auto-recovery
24	Over-temperature Protection	105			°C	Auto-recovery
25	Case Temperature (Tc)			85	°C	Input 120Vac
26	Storage Temperature	-40		85	°C	
27	Operating Temperature	-40		50	°C	
28	Insulation Resistance	100			MΩ	500Vdc between Input & Output
29	Differential Mode (Line to Line)	-4		4	kV	6)
30	Common Mode (Line to Ground)	-6		6	kV	6) 7)
31	Contact Discharge Test Voltage	-4		4	kV	8)
32	Air Discharge Test Voltage	-8		8	kV	8) 9)
33	Dielectric Withstand Voltage	Input to Output	3854		Vac	Apply for 1 minute 11)
34		Input to Case	1554		Vac	
35		Output to Case	500		Vdc	

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No.	Item	Min	Typ	Max	Unit	Remark
36	Vibration			3	G	
37	Humidity			90	%	

 Application Notes

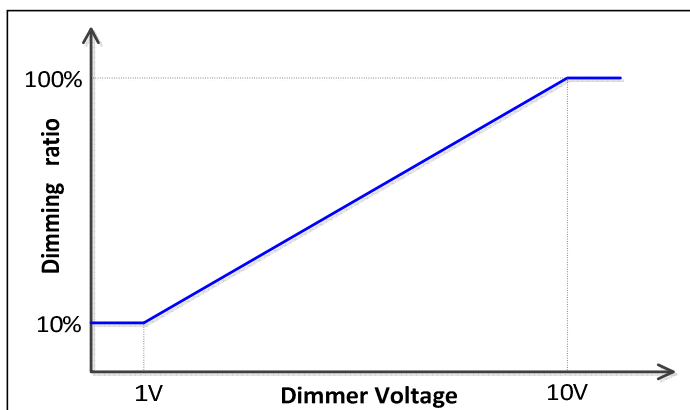
- 1) Test Condition: 120/277Vac 50/60Hz Input, LED Load_410V, Ambient Temperature 25°C
- 2) Output Voltage of 200Vdc~410Vdc can be applied at Non Dimming and Output Current 350mA
- 3) LED load having Vf of this range can be driven until Vf drop to below 410V by self-heating.
- 4) Test Condition: Input voltage 277Vac 60Hz, Room Temperature, Cold start
- 5) Test Condition: 240Vac Input, 1hr Aging, LED Load_410V, Ambient Temperature 25°C
- 6) Surge Specification above is higher than IEC/EN 61000-4-5 (Line to Line 1kV, Line to GND 2kV)
- 7) The metal case of the LED driver must be connected with F.G
- 8) ESD Specification above meets IEC/EN 61000-4-2 Requirements (Contact 4KV, Air 8KV)
- 9) The metal case of the driver should be grounded.
- 10) Input 120Vac, < 192Apeak, < 1.2ms, < 74A2sec
- 11) 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:

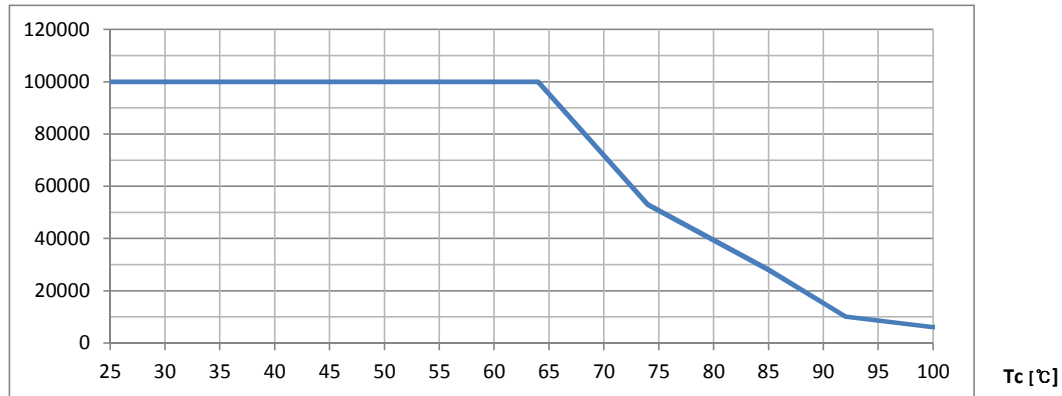
No.	Item	Description
1	UL8750	UL Safety Standards
2	KC	K61347-1, K61347-2-13, K62384
3	FCC Part 15, CISPR15	Conducted and Radiated Emission Test, Class B
4	IEC/EN 61347-1, IEC/EN 61347-2-13	IEC Safety Standards
5	EN 55015	Conducted and Radiated Emission Test
6	IEC/EN 61000-3-2	Harmonic current emissions: Class C
7	IEC/EN 61000-3-3	Voltage Fluctuations and Flicker
8	IEC/EN 61000-4-2	Electrostatic Discharge (ESD): Contact 4kV, Air 8kV
9	IEC/EN 61000-4-3	Radio-frequency Electromagnetic Fields
10	IEC/EN 61000-4-4	Electrical Fast Transients (EFT)
11	IEC/EN 61000-4-5	Surges: Line to Line 1kV, Line to GND 2kV
12	IEC/EN 61000-4-6	Injected Currents
13	IEC/EN 61000-4-8	Power Frequency Magnetic Fields
14	IEC/EN 61000-4-11	Voltage Dips and Short Interruptions
15	IP Grade	IP67

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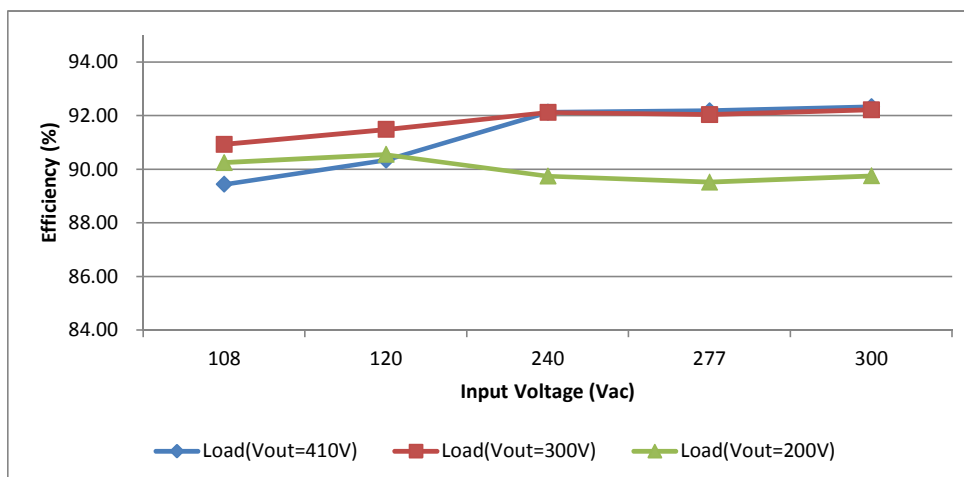
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■ Life Time vs Tcase



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

■ Efficiency(%) (LED Current = 350mA)

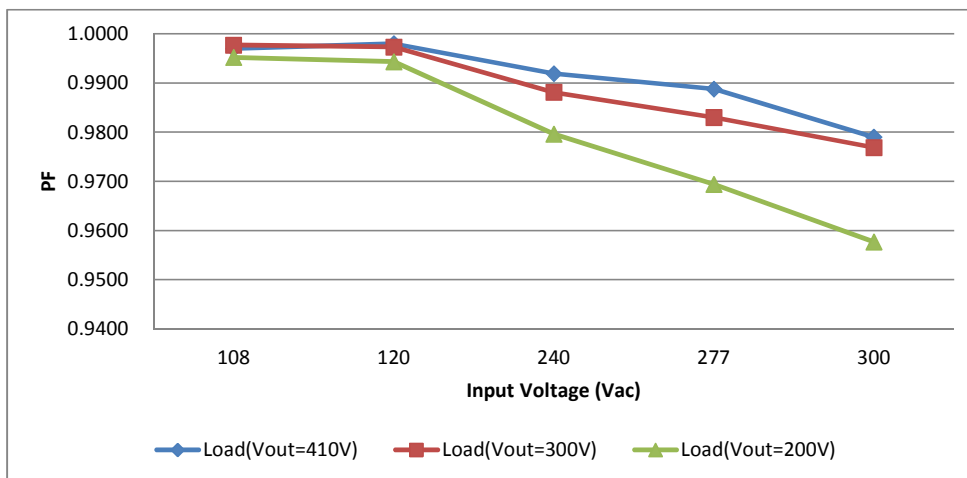


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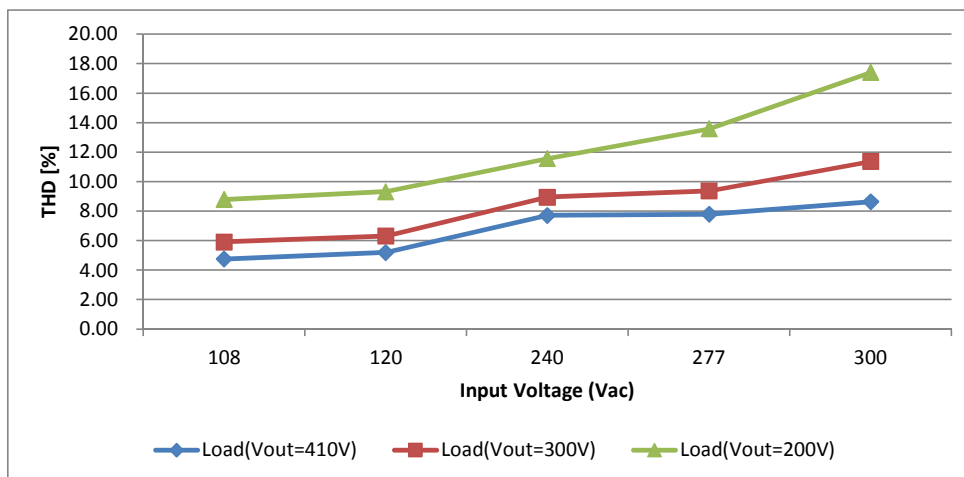
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■ **Power Factor** (LED Current = 350mA)



■ **THD(%)** (LED Current = 350mA)



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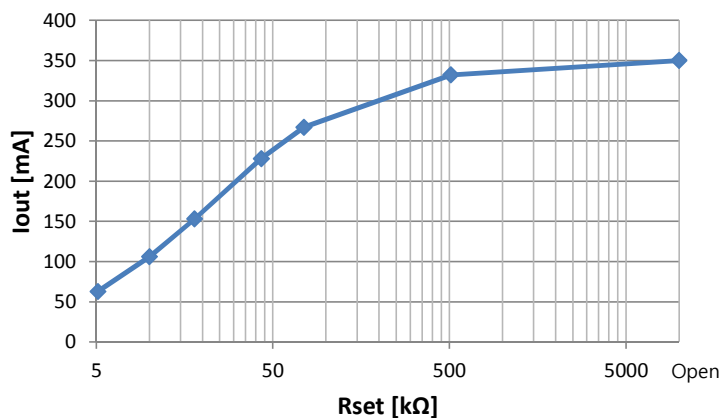
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■ Rset vs. Electrical Characteristics

Rset [kΩ]	Input					Output			
	Vltg [V]	Crnt [A]	PF	THD [%]	Power[W]	Vltg [V]	Crnt [A]	Power[W]	Efficiency [%]
(Open)	108	1.460	0.9970	4.75	157.9	406.9	0.347	141.2	89.44%
	120	1.299	0.9980	5.19	156.3	406.9	0.347	141.2	90.34%
	240	0.640	0.9919	7.71	153.2	406.8	0.347	141.2	92.12%
	277	0.556	0.9888	7.78	153.1	406.8	0.347	141.2	92.18%
75	108	1.103	0.9978	5.68	119.4	402.9	0.267	107.6	90.10%
	120	0.987	0.9974	6.08	118.7	402.9	0.267	107.6	90.66%
	240	0.494	0.9888	8.74	117.8	402.9	0.267	107.6	91.36%
	277	0.430	0.9839	9.09	117.8	402.9	0.267	107.6	91.33%
18	108	0.627	0.9939	9.74	67.7	385.8	0.153	59.0	87.25%
	120	0.563	0.9927	10.24	67.4	385.8	0.153	59.0	87.53%
	240	0.292	0.9711	12.36	68.4	385.8	0.153	59.0	86.27%
	277	0.258	0.9551	15.11	68.7	385.8	0.153	59.0	85.95%

Rset vs Iout



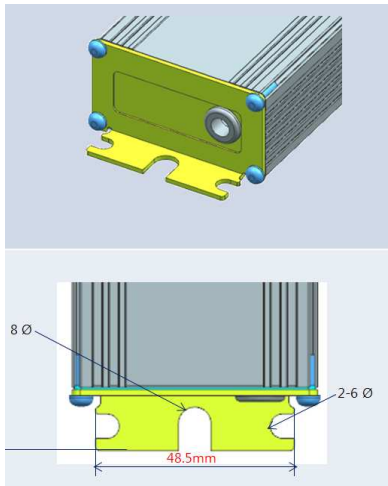
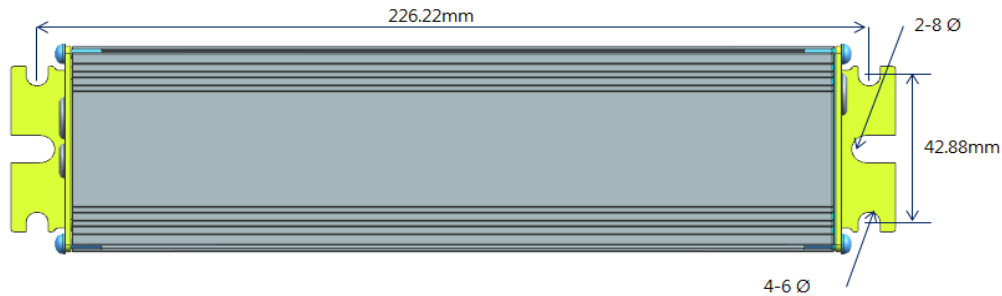
Rset [kΩ]	Io [mA]
5.1	63
10	106
18	153
24	179
43	228
68	261
75	267
510	332

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■ Mechanical Specification



■ Enclosure Size

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

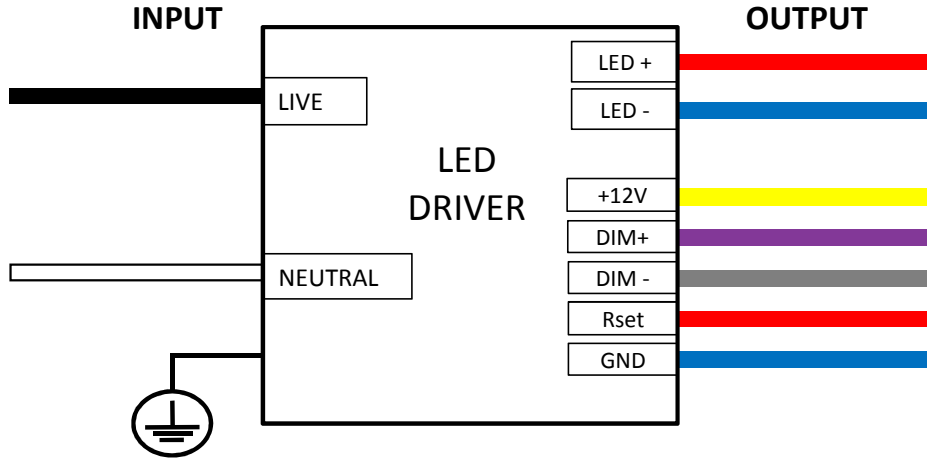
■ Case Material : Aluminium

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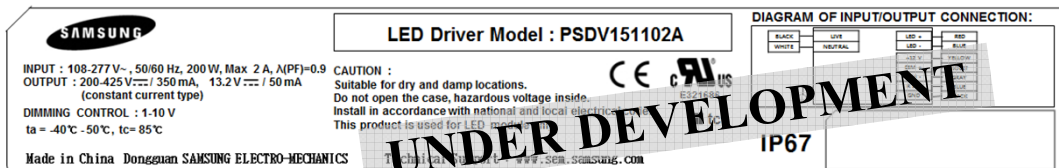
■ Wiring Diagram



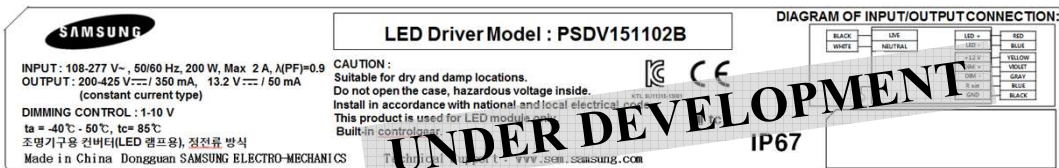
Remark) Output wiring specifications can be changed.

■ Rating Label Drawing

- PSDV151102A



- PSDV151102B



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