

# 150W, A2V150 Series

- power to last for life time -

LED Lighting Driver



## Features

- Wide range input voltages with **90 ~ 264VAC**
- **Constant Voltage** output, suitable for remote locations.
- Fully encapsulated with waterproof **IP67** level compliant,
- Reliability **Protections**: short circuit/over current / over voltage
- **High Efficiency**, 90% @ 115Vac and 92% @ 230Vac, Full Load
- 100% full load QC burn-in test
- High reliability, **MTBF 50,000 hrs** @ 25°C, full load, nominal input
- **3-year** manufacturer warranty



Model No.	Output Voltage (V)	Output Current (A)	OVP (V max.)	OCP Hiccup (%)	Efficiency (%)
A2V 150M 12M 1250-11	12	12.5	16	110 - 180	92
A2V 150M 24M 625-11	24	6.25	34	110 - 180	93
A2V 150M 36M 417-11	36	4.17	48	110 - 180	93
A2V 150M 40M 375-11	40	3.75	53	110 - 180	93
A2V 150M 42M 357-11	42	3.57	55	110 - 180	93
A2V 150M 48M 312-11	48	3.12	61	110 - 180	93
A2V 150M 50M 300-11	50	3.00	63	110 - 180	93
A2V 150M 52M 288-11	52	2.88	66	110 - 180	93
A2V 150M 54M 278-11	54	2.78	69	110 - 180	93
A2V 150M 56M 268-11	56	2.68	75	110 - 180	93
A2V 150M 81M 185-11	81	1.85	100	110 - 180	93
A2V 150M 105M 143-11	105	1.43	135	110 - 180	93

## Part Number Info

XXX XXX X XX X XXX - XX

① ② ③ ④ ⑤ ⑥ ⑦

- ① (Input Voltage Type)(Range)(Constant Voltage/Current)
- ② Output Wattage (w)      ③ Reserved
- ④ Output Voltage (v)      ⑤ Housing Type
- ⑥ Output Current (x10mA)
- ⑦ (Output Channel)(Isolated Class)

Parameter	Conditions/ Description	Min.	Normal	Max.	units
Input Voltage Range	Universal Input	90	100 - 240	264	Vac
Input Frequency Range		47		63	Hz
Input Current	100Vac in, 150W output			1.75	A
Power Factor	At 100 - 240Vac Input	0.95			
Inrush Current	At 264Vac Input, 25°C cold star			160	A

Parameter	Conditions/ Description	Min.	Normal	Max.	units
Line Regulation				±1	%
Load Regulation				±5	%
Voltage Accuracy	% of Vout			±5	%
Ripple and Noise	20MHz Bandwidth, refer Note-1			2	%pk-pk
Dynamic Response	Output Deviation R/ S: 1A/ uS; settign time load: 25%~75% full load			5%Vo; 10mS	
Over shoot	when power tur n on or of f			5	%
Tur n-On Delay	Measur ed at 100Vac - 240Vac Input and Full Load			5	S

Parameter	Conditions/ Description	Min.	Normal	Max.	units
Isolation Voltage	Input to output Ref er to Note-2; Input to Chassis	3000; 1500			Vac; Vac
Efficiency	Ref er to individual models		93		%
Leakage Current	Measur ed at 305Vac / 50Hz			0.75	A
MTBF	Telecor dia SR-33, 25°C		50,000		Hour s
Operating/ Storage Temperature		-35/ -40		60/ 80	°C
Relative Humidity	Non-Condensing (oper ating)	10		100	%RH
Safety Agency Approval	UL8750, EN61347-2-13:2006, IEC61347-2-13				

Parameter	Standard	Level
Emissions		
Conducted	EN55015	B
Radiated	EN55015	B
Harmonic Distortion, Current Emission	EN61000-3-2	Compliant
Voltage Flicker and Fluctuation	EN61000-3-3	Compliant
Electrostatic Discharge (ESD)	EN61000-4-2	4
Radiated RFI	EN61000-4-3	3
Fast Transients - burst	EN61000-4-4	4
Input Line Surge Immunity	EN61000-4-5	4
Conducted RFI	EN61000-4-6	Compliant
Power Freq Magnetic Field	EN61000-4-8	Compliant
Voltage Dips	EN61000-4-11	Compliant
Electromagnetic Compatibility (EMC) P6-1	EN61000-6-1	Compliant
Electromagnetic Compatibility (EMC) P6-3	EN61000-6-3	Compliant

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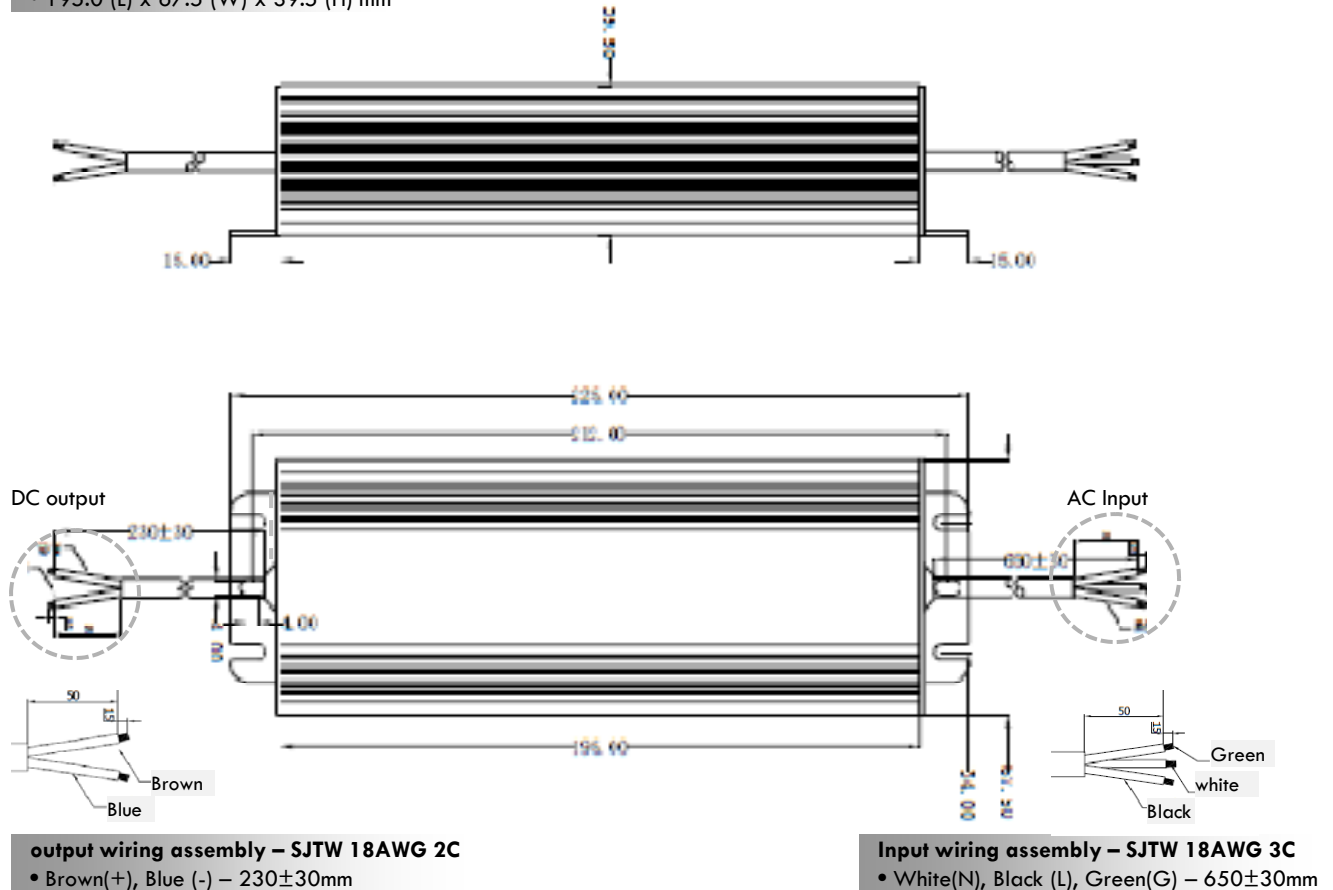
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LED Lighting Driver

## Mechanical Layout

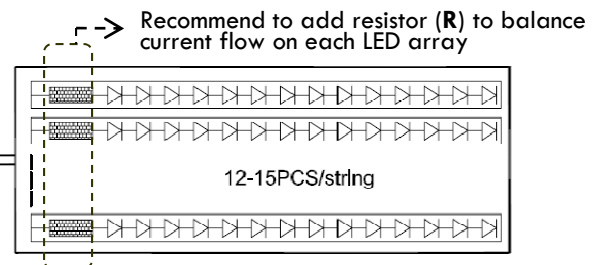
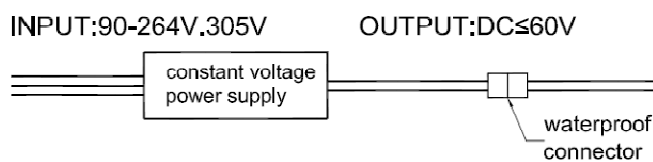
### Dimension:

- 195.0 (L) x 67.5 (W) x 39.5 (H) mm



## Design Reference

water proof constant voltage power supply :



$$R = [ V_{dc} - (V_{f1} + V_{f2} + \dots + V_{fn}) ] / I_f$$

$V_{dc}$  = Driver Rated DC output voltage  
 $V_f$  = LED's forward voltage  
 $I_f$  = LED's forward current

Case Study:  
 LED Driver : A2V150M36M4170-11 (36V/4.17A )  
 Total 12 LEDs connected in series on each array  
 Total 4 branches connected in parallel  
 $V_f = 1.5V, I_f = 1.0A$

$$R = [ 36 - (12 \times 1.5) ] / ( 4.17 / 4 ) = 17.25 \text{ Ohms}$$

## Notes

1. Output connected in parallel with 0.1uF ceramic capacitor and 10uF electrolytic capacitor.
  2. Primary to Secondary Isolation test not to be carried on power supply.
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