

# 600W Outdoor Programmable LED Driver



## 600ATP

*High Reliability High Power Compact LED Driver*



### Highlights:

- Constant Voltage and Constant Current
- Isolated 0-10V/PWM Dimming
- Dim to off option
- 12V 0.2A Auxiliary Output
- IP67
- Up to 95% Efficiency
- Wide range input  
90VAC~305VAC
- -40°C to +90°C Operation, up to +50°C without derating
- Light Weight
- 5 Years Life
- Programmable through NFC

### Key Specification

Model	600ATP36	600ATP48	600ATP56	600ATP80	600ATP140	600ATP180	600ATP240	600ATP300	600ATP375
Output Voltage Range	18-36V	25-48V	28-56V	38-80V	47-140V	84-180V	115-240V	144-300V	180-375V
Output Current Range	8-20A	5.7-14.2A	5-12.5A	3.8-9.4A	2.1-5.4A	1.7-4.3A	1.3-3.1A	1.0-2.5A	0.8-2.0A
Rated Output Power	600W								
Dimming	0-10V, PWM								
Warranty	3 Years								
Dimension	250mm x 84.1mm x 47.9mm or 9.84" x 3.31" x 1.89"								
EMI	Compliance to EN55015:2013+A1:2015								
Safety Compliance	Compliance UL8750, UL935, UL1012, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13								

### Model Name

<b>600</b>	<b>ATP</b>	<b>36</b>	□ □
Rated Power	Series Name	Maximum Output Voltage: 36: 36V 48: 48V 300: 300V	Control Code for Internal Use  CV for standard version

## SPECIFICATIONS

All specifications are for rated input/output and 25°C unless otherwise specified

### INPUT CHARACTERISTICS

Function	Minimum	Typical	Maximum	Condition
Rated Input Voltage	120 VAC		277 VAC	
Input Voltage Range	90 VAC		305 VAC	Output Power Derating from 100% load at 110VAC to 80% load at 90VAC. See Fig.1
Input Frequency	47 Hz	50/60Hz	63 Hz	
Input Current			5.6 A @ 120VAC 2.4 A @ 277VAC	
Efficiency		95%		Rated Input and Output
Power Factor		0.95		Rated Input and Output
THD			20%	
Inrush Current			65 A	230VAC Input, Cold Start

### OUTPUT & CONTROL CHARACTERISTICS

Function	Minimum	Typical	Maximum	Condition
Output Voltage Initial Tolerance			±3%	
Line Regulation			±1%	
Load Regulation			±1%	
Output Voltage Ripple & Noise in CV Mode			1%	Peak to peak value
Turn on delay			3s	
Auxiliary Power			12V 0.2A	
Dimming Voltage	0V		10 V	
Dimming Source Current			1 mA	

### PROTECTION CHARACTERISTICS

Function	Minimum	Typical	Maximum	Condition
Over Current Protection (OCP)			105% Maximum Output Current	Constant Current Limiting. Return to normal operation after fault removed
Short Circuit Protection (SCP)				Auto-restart after fault condition is removed
Over Voltage Protection (OVP)			105% Rated Output Voltage	Auto-restart after fault condition is removed
Over Temperature Protection (OTP)				Auto-restart after fault condition is removed

## ENVIROMENTAL

Function	Minimum	Typical	Maximum	Condition
Operation Ambient Temperature, Ta	-40 °C		50 °C	Without extra heatsink
Operation Case Temperature, Tc	-40 °C		92 °C	
Cooling				Convection Cooled
IP Grade	IP67			
Operation Humidity	10% RH		95% RH	Non-condensing
Storage Ambient Temperature	-40 °C		85 °C	
Storage Humidity	5% RH		95% RH	Non-condensing
Operating Altitude			5000 m	Or 16,400 feet
Vibration (Operation)			5 g <sub>RMS</sub>	10-500Hz, 12 Minutes for each three axis in both direction, total 72 Minutes
Weight			2.2 kg	

## RELIABILITY

Function	Minimum	Typical	Maximum	Condition
MTBF	200 kHours			According to MIL-HDBK-217. 25°C

## EMC

Item	Description
Conducted Emissions	EN55015:2013+A1:2015
Radiated Emissions	EN55015:2013+A1:2015
Harmonic Current Emissions	IEC61000-3-2, Class C
Voltage Flicker	IEC61000-3-3
Electrostatic Discharge	IEC61000-4-2, Level 3, Criteria A. Air Discharge 8kV, Contact Discharge 6kV
Surge	IEC61000-4-5, Criteria A. Common mode 6kV, Differential Mode 4kV
Conducted Immunity	IEC61000-4-6, Level 2 Criteria A. 150kHz-80MHz, 3Vrms, 6Vrms at ISM Band sand Amateur radio bands
Radiated, radio-frequency, electromagnetic field immunity	IEC61000-4-3, Criterion A, 80MHz-2700MHz, 10V/m 80%AM 1kHz modulation
Power Frequency Magnetic Fields	IEC61000-4-8, Criteria A. 30A/m
Voltage Dips	IEC61000-4-11 Criteria A & B: 30% 10ms, Criteria B: 60% 100ms, 100% 500ms

## SAFETY & DIRECTIVES

Item	Description
Safety Standards (Compliance Only)	UL8750:2017 UL935:2001 UL1012:2016 CSA-C22.2 No.107.1 EN61347-1:2015 EN61347-2-13:2014+A1:2017
Directives	RoHS Directive 2011/65/EU Compliant
Dielectric Voltage	Primary to Secondary: 3.75 kVAC Primary to Earth: 1.5 kVAC Secondary to Earth: 1.5kVAC
Insulation Resistance	Primary to Secondary: >100 Mohms
Leakage Current @277VAC, 60Hz	< 0.75mA

## DERATING CURVE

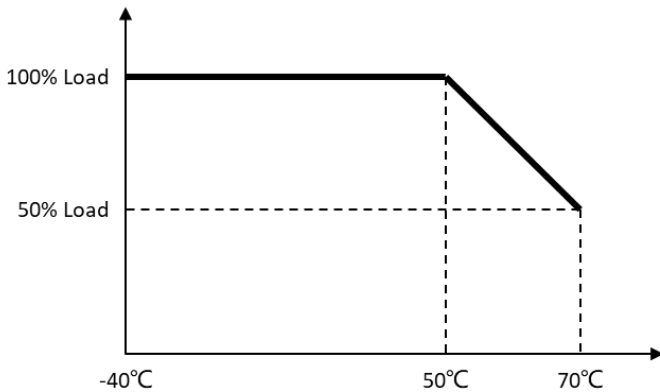


Figure 1. Derating v.s. Ambient Temperature

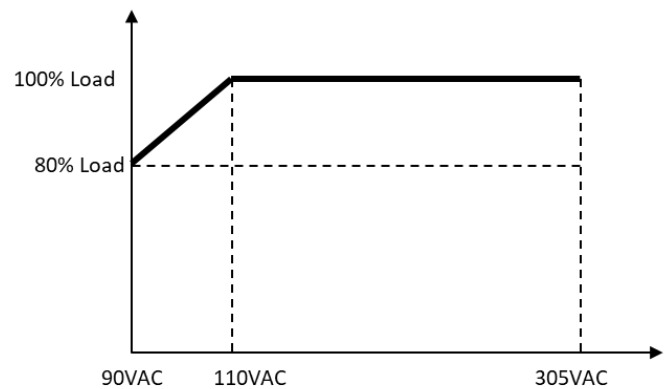


Figure 2. Derating v.s. Input Voltage

## DIMMING

### 0-10V Dimming Curve

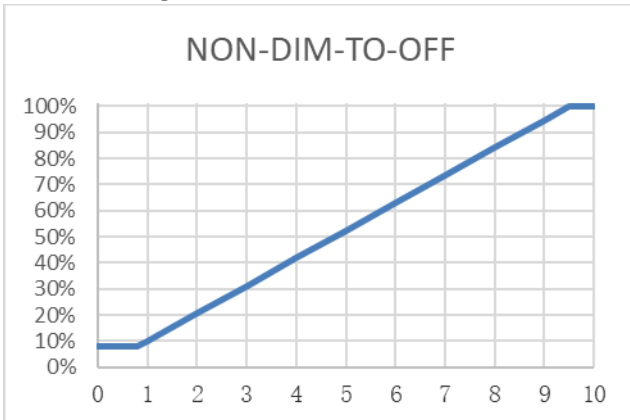


Figure 3

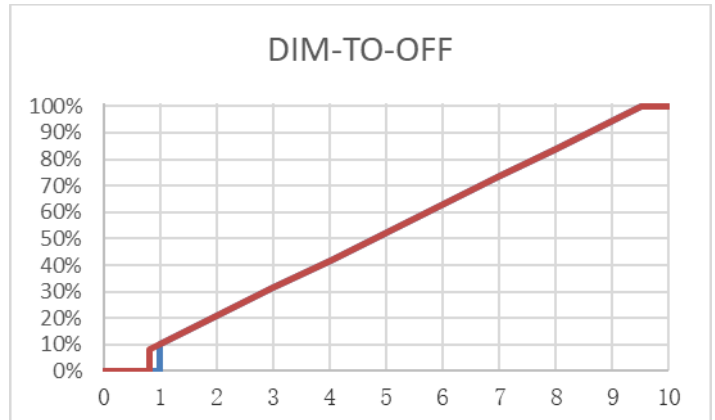


Figure 4

### PWM Dimming

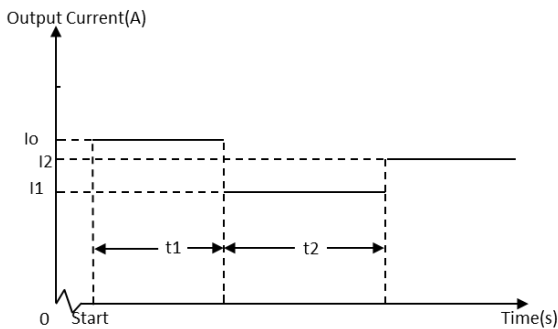


Figure 5

- All parameter can be pre-programmed according to customer requirement
- All parameter can be programmed by user using NFC interface
- Time duration adjustment step is 0.5 hour
- PWM frequency range: 0.5 ~ 3kHz

## ACCESSORY

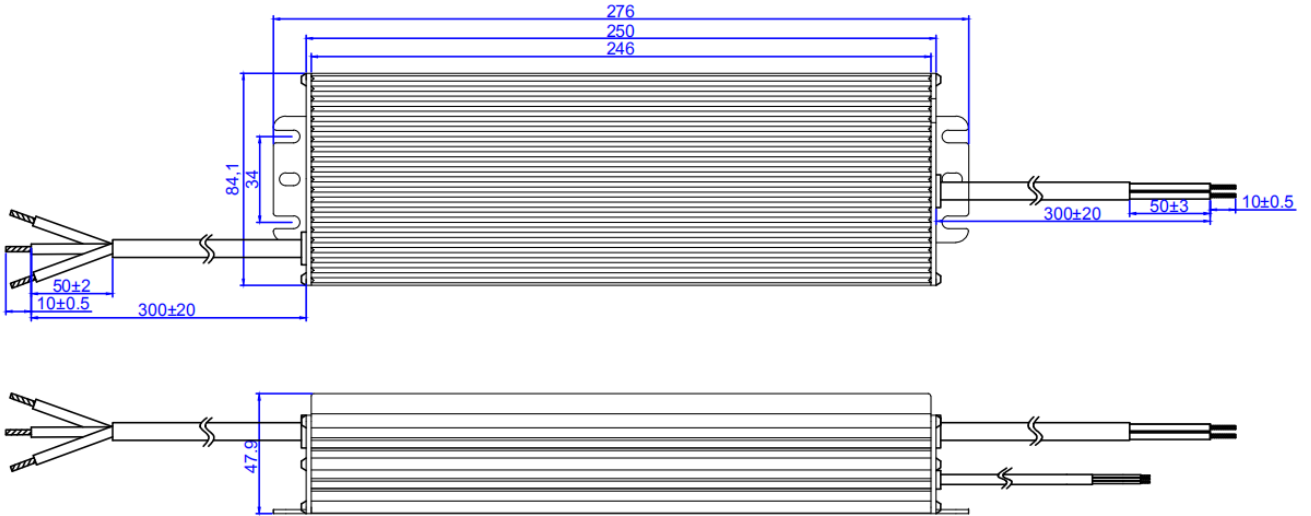
### NFC Controller



Figure 6

- NFC controller sold separately, order P/N: WAND-001
- LED Driver output voltage, current and dimming information can be programmed
- LED Driver shall be programmed at power off

## MECHANICAL DRAWING



### Input Cable

Black	Line
White	Neutral
Yellow/Green	Functional Ground

### Output Cable

Red	Output +
Black	Output -

### Dimming Cable

Yellow	12V Auxiliary Power
Grey	GND
Purple	Dimming Wire, 0-10V/PWM

## CONTACTS & OTHER INFORMATION

For more information, please visit [www.appliedpsu.com](http://www.appliedpsu.com)

For sales inquiries, please send an email to [sales@appliedpsu.com](mailto:sales@appliedpsu.com)

User manual and other document available at [www.appliedpsu.com/support](http://www.appliedpsu.com/support)