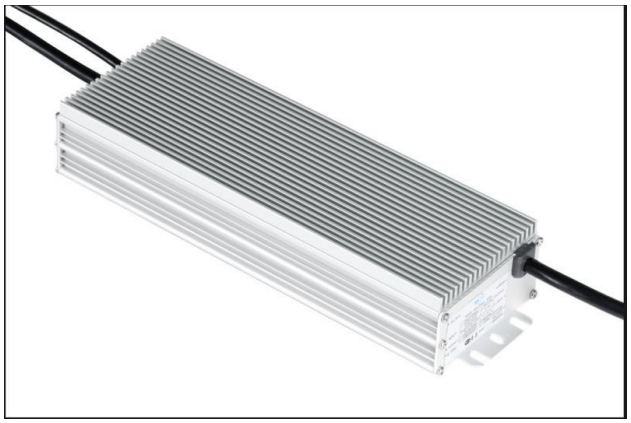
680W Outdoor Programmable LED Driver

APS680 series

High reliability super high power LED driver



Highlights:

- **Constant Voltage and Constant Current**
- **Dimming Options**
- **IP67**
- **Up to 95% Efficiency**
- **Wide range input 120VAC~277VAC**
- **-35°C to +90°C Operation, up to +50°C without derating**
- **Light Weight**
- **5 Years Life**
- **Programmable through NFC**

Key Specification

Model	600ATP36CV	600ATP48CV	600ATP56CV	600ATP80CV	600ATP140CV	600ATP180CV	600ATP240CV	600ATP300CV	600ATP375CV
Output Voltage	18-36V	25-48V	28-56V	38-80V	67-140V	84-180V	115-240V	144-300V	180-375V
Output Current	8-20A	5.7-14.2A	5-12.5A	3.75-9.37A	2.14-5.36A	1.71-4.28A	1.25-3.13A	1.0-2.5A	0.8A-2A
Output Power	680W								
Auxiliary Output	12V@200mA								
Output Regulation	±1%								
Ripple & Noise	1%								
Dimming	0-10V/PWM								
Input Voltage	120VAC~277VAC (L-N)								
Input Current	<7.0A								
PF	>0.95 @ Rated Load								
THD	<20% @ 120Vac & 80~100% full load, <20% @ 277Vac & 80~100% full load								
Efficiency	Up to 95%								
Inrush	<65A								
Case Temperature	Tcase from -35to +90°C								
MTBF	>200K Hrs to Mil-HDBK-217@25 °C								
Dimension	280mmx90.1mmx47.2mm								
Weight	2.4KG								

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Model Name

APS	**-**	**680**	**-**	**ATP**	**36**	**CV**
Internal Use		Rated Power		Series	Output Voltage	Output mode

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Specifications

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

Output Characteristics	
Output Voltage Total Regulation	±1%
Turn on delay	<1 second
Rise Time	<100ms
Holdup Time	>8ms
Protections	
Over Current Protection (OCP)	Yes
Short Circuit Protection (SCP)	Yes
Over Voltage Protection (OVP)	Yes
Over Temperature Protection (OTP)	Yes
Control	
0~10V Dimming	0(0.05)~10V, PWM, External Resistor, Clock, DMX
NFC	Through NFC controller
Environmental	
No Load Power Consumption	<0.5W
Operation Ambient Temperature	-35°C to 70°C，see derating curves
Operation Case Temperature	-35°C to 90°C
Operation Humidity	20%~95% RH non-condensing
Storage Ambient Temperature	-40°C to 85°C
Storage Humidity	10%~95% RH non-condensing
Shock (Non-Operation)	50G, 11ms, 3 shocks for each direction
Vibration (Operation)	5-500Hz, $2G_{RMS}$, 15 Minutes for each three axis

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Reliability	
MTBF	>200Khrs. MIL-HDBK-217F. 25°C
Life	>5 Years @ Tc = 75°C
Safety & Directives	
Safety Standards, compliance only	UL8750, CAN/CSA-C22.2 No. 250.13-12 EN 61347-1, EN61347-2-13
Directives, Compliance only	RoHS Directive 2011/65/EU Compliant
Dielectric Voltage	Primary to Secondary: 3750VAC/ 1 minute Primary to Earth: 1875VAC/ 1 minute Secondary to Earth: 500kVAC/ 1 minute @10mAMax
EMC	
Emissions	Per Title 47 CFR Part 15 Class A
Harmonic Current Emissions	IEC61000-3-2, Class D
Voltage Flicker	IEC61000-3-3
Electrostatic Discharge	IEC61000-4-2, Level 3, Criteria A. Air Discharge 8kV, Contact Discharge 4kV
Electrical Fast Transient / Burst	IEC61000-4-4, Level 3 Criteria A. 2kV
Surge	IEC61000-4-5, Criteria A. Common mode 11kV, Differential Mode5.5kV
Conducted Immunity	IEC61000-4-6, Level 2 Criteria A. 150kHz-80MHz, 3Vrms, 6Vrms at ISM Band sand Amateur radio bands
Power Frequency Magnetic Fields	IEC61000-4-8, Criteria A. 30A/m
Voltage Dips	IEC61000-4-11 Criteria A: 30% 10ms Criteria B: 60% 100ms, 100% 5000ms
Electromagnetic Immunity	EN61547 applies to Lighting Equipment

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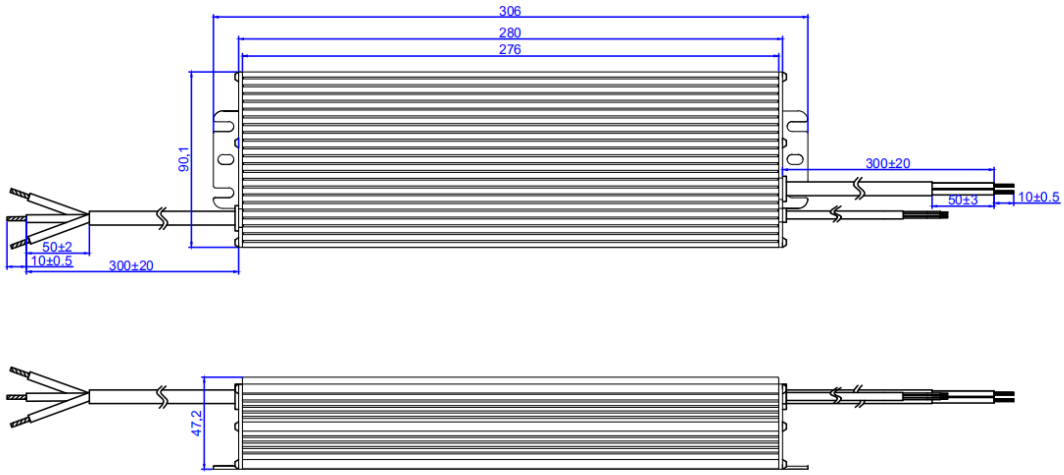
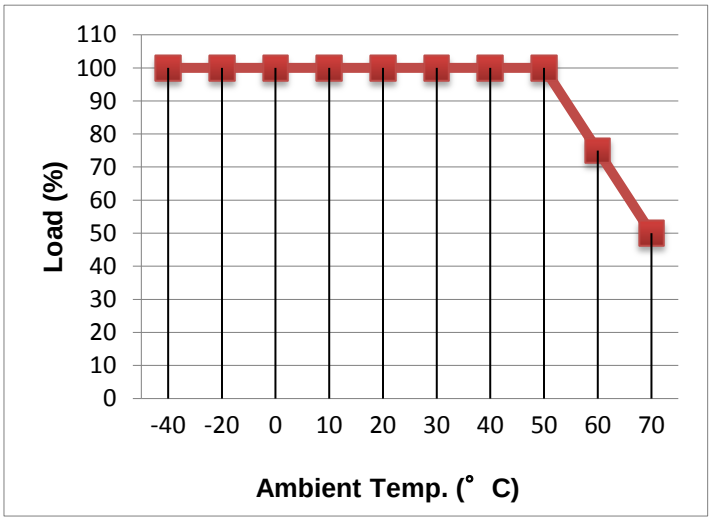
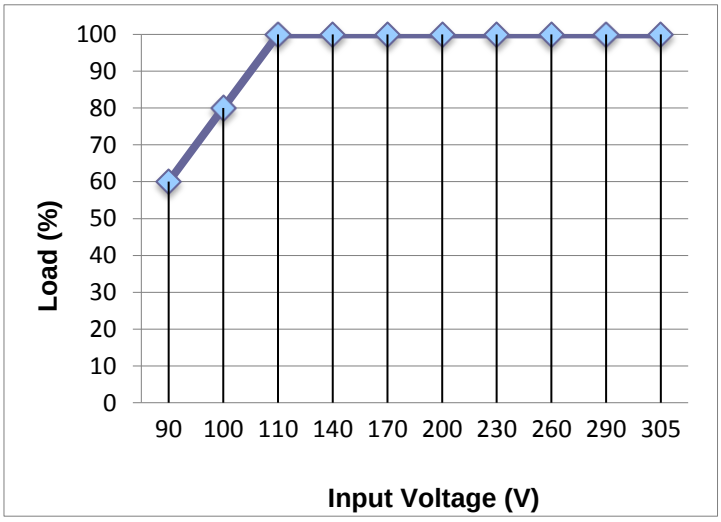
Mechanical Drawing



Output Vs Operating Temp

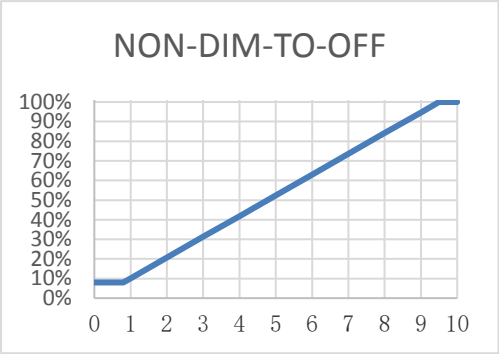


Output Vs Input voltage

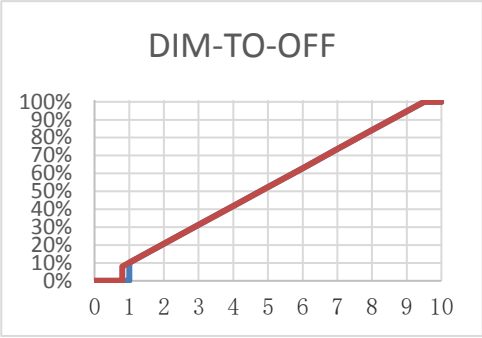


0-10V Dimming/PWM Dimming

Io/Ir vs Vdim

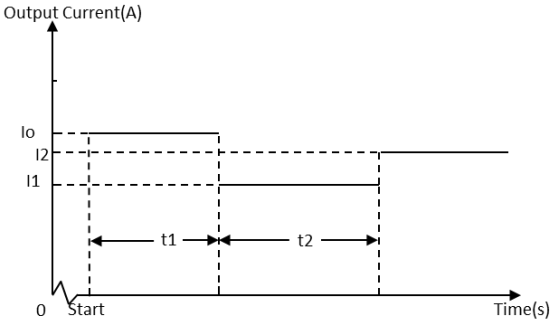


Io/Ir vs Vdim



GND	Grey
Dimming wire 0-10V&PWM	Purple
12V AUX	Yellow
Input Dimming Voltage	0-10V
DIM+ Source Current	0-1mA
12V AUX Source Current	200mA
PWM Frequency Range	0.5 ~ 3 KHZ
PWM high level	10V

Timer Dimming



1. The dimming time can be programmed by the NFC controller.
2. The time of t1 and t2 can be set by the NFC programmer.(0.5h step)
3. The value of I1 and I2 can be set by the NFC programmer.
4. Current change from I1 to I2 need a few minutes.

NFC Controller

1.The NFC controller can program the output current, voltage and timer delays.

2. The NFC programming is a non-contact process, therefore much safer compared to traditional programming methods.

3. Power devices can be programmed without AC power applied to the driver.