



2017-V1.0-0111

# Specifications

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**NFC Programmable LED Power Supplies  
LGHU-96CV Series, 96W**

**PAIRUI ELECTRONICS**

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**2017**

# NFC Programmable LED Power Supplies

## LGHU-96CV SERIES, 96WATT, IP67 RATING

### Features

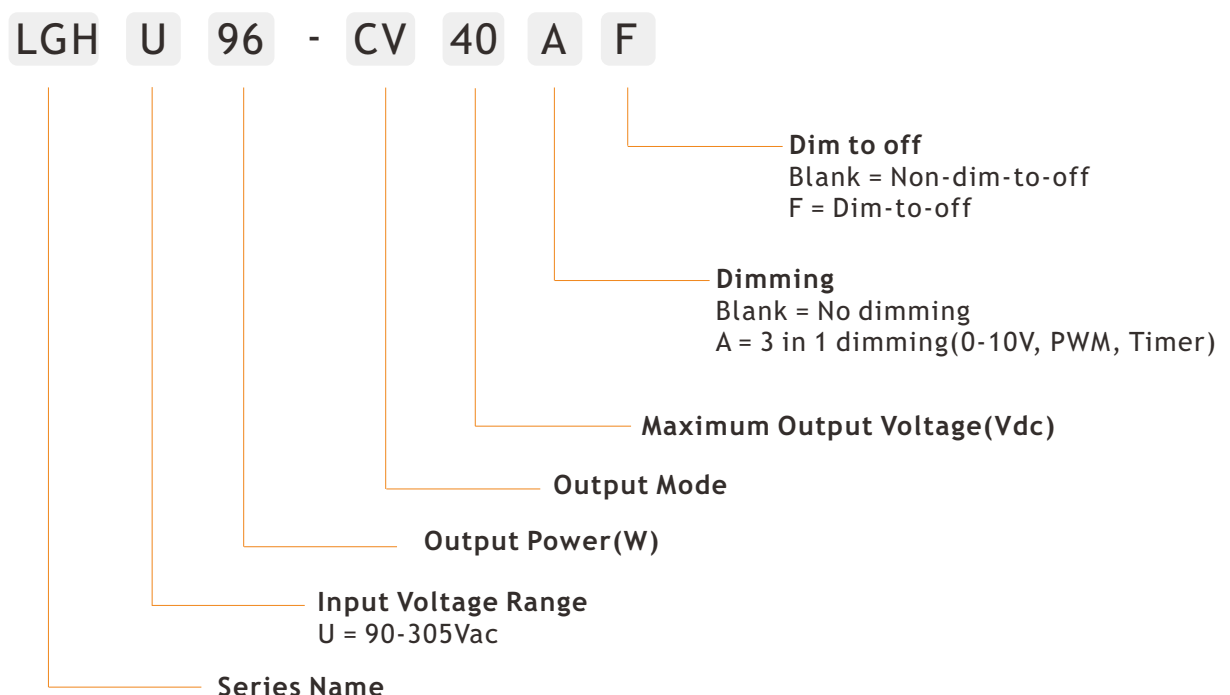
- 5 Year Warranty
- Universal Input Voltage Range: 90~305Vac
- NFC Programmable Technology without driver power-on
- Constant Power Programmable Design
- Dim to Off Option
- All Round Protections: Short Circuit, Over Voltage, Over Current, Over Temperature
- Optional Dimming(0-10V, PWM, Timer)



### Applications

- ✓ Street Light
- ✓ Tunnel Light
- ✓ Flood Light
- ✓ Other Light Fixtures for Outdoor Use

### Electrical



## Electrical

Part Number	Nominal Input Voltage	Constant Power Output Voltage Range	Programmable Constant Current Region	Working Voltage Range	Certificate
LGHU96-CV36	100-277VAC	24-36V	1600-4000mA	14.4-36V	CE, UL
LGHU96-CV48	100-277VAC	36-48V	1070-2670mA	21.6-48V	CE, UL
LGHU96-CV80	100-277VAC	48-80V	800-2000mA	28.8-80V	CE, UL
LGHU96-CV140	100-277VAC	80-140V	480-1200mA	48-140V	CE, UL
LGHU96-CV233	100-277VAC	140-233V	270-690mA	84-233V	CE, UL

NOTE: Other output models are may available on request.

**INPUT**

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Input voltage		90		305	Vac
Input frequency		47		63	Hz
Input current	Full load, Vin=115Vac Full load, Vin=230Vac		0.94 0.45		A A
Inrush current	Cold start, Vin=230Vac			65	A
Power factor(PF)	Full load, Vin=115Vac Full load, Vin=230Vac		0.99 0.97		
Efficiency	Full load, Vin=115Vac Full load, Vin=230Vac		87 90		% %
Surge voltage	L-N L, N-FG		4 6		KV KV

## OUTPUT

PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Line regulation	Vin from 100Vac to 277Vac		±0.3		%
Load regulation	Vout from min. to max.		±0.6		%
Ripple			2%Vo		mVp-p
THD	Output load ≥ 50%			20	%

## Protection

Short circuit	In hiccup mode, it will recover automatically after fault condition is removed
Over voltage	130% Vout, in hiccup mode, it will recover automatically after fault condition is removed
Over current	95~108%, constant current limiting, it will recover automatically after fault condition is removed
Over temperature	In hiccup mode, it will recover automatically after fault condition is removed

## Environment

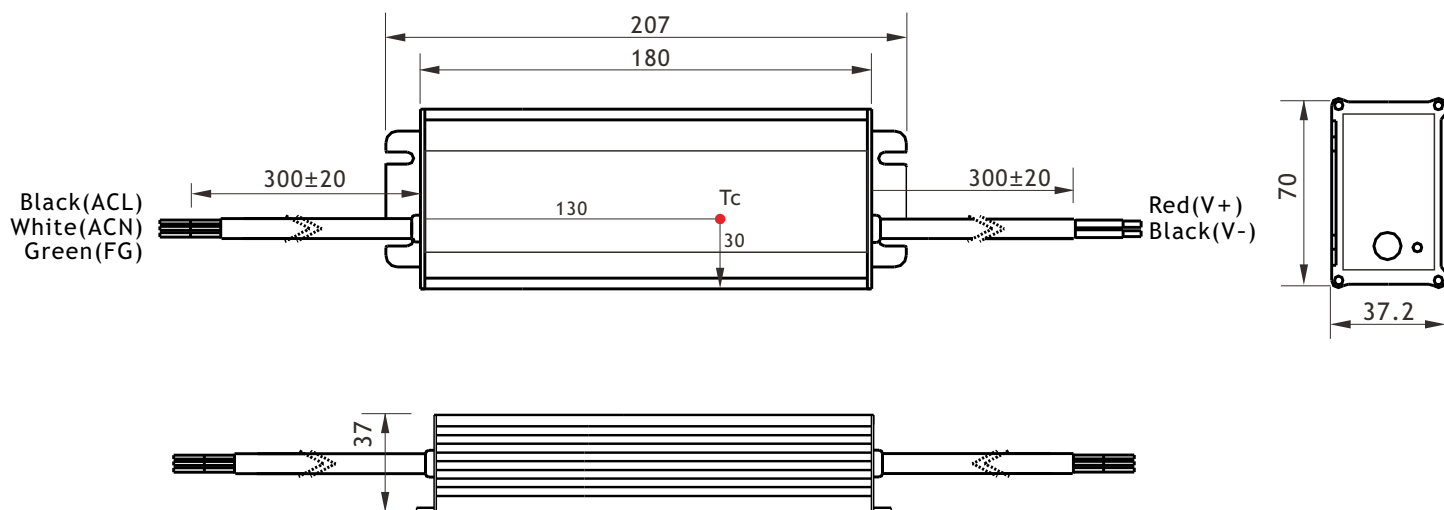
PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
Ambient operating temperature	Startup at rated voltage (Derating required)	-35		+70	°C
Operating relative humidity	Non condensing	10		100	%
Storage temperature	Humidity 5 ~ 100% RH	-40		+85	°C
MTBF	Full load, 220Vac input, 25°C ambient temperature(MIL-HDBK-217)	200			Khrs
Temperature coefficient	±0.05%/°C(0~50°C)				
Vibration	10~500Hz, 5G 12min. / 1 cycle, period for 72 min. each along X,Y,Z axes				
Waterproof rating	IP67				
Dimension(LxWxH)	207.0 x 70.0 x 37.0mm				
Weight	760g				

## Safety/EMC

Safety	Design refer to UL8750, UL935, CSA-C22.2 No.107.1, EN61347-1, EN61347-2-13
Withstand Voltage	I/P-O/P: 3.75KVAC
Isolation resistance	I/P-O/P: 100M ohms/500VDC/25°C/70%RH
EMC Emission	Compliance to EN55015, EN61000-3-2 Class C(≥60% load), EN61000-3-3
EMC Immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547, EN55024

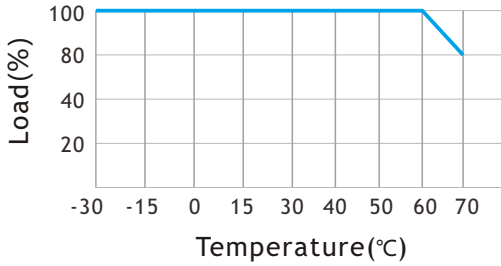
NOTE: Unless otherwise specified, all the above parameters are measured at ambient temperature of 25°C and Vin=100Vac to 277Vac.

Mechanical

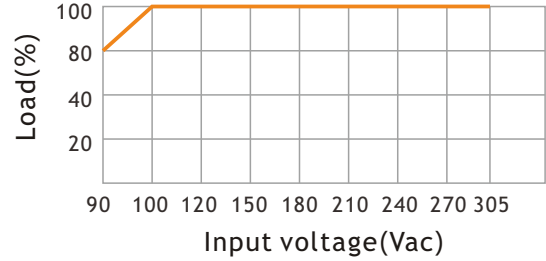


# Electrical Curve

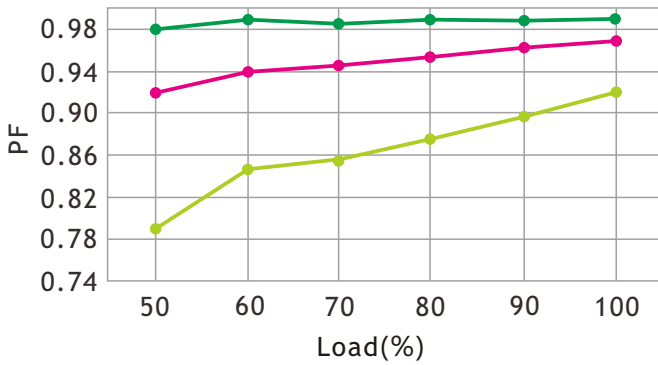
DERATING CURVE



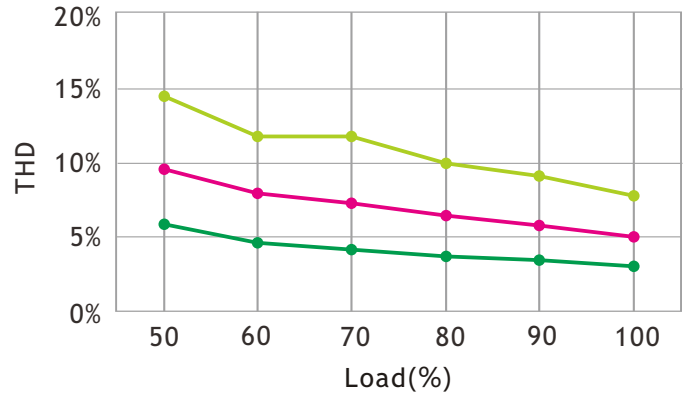
STATIC CHARACTERISTIC CURVE



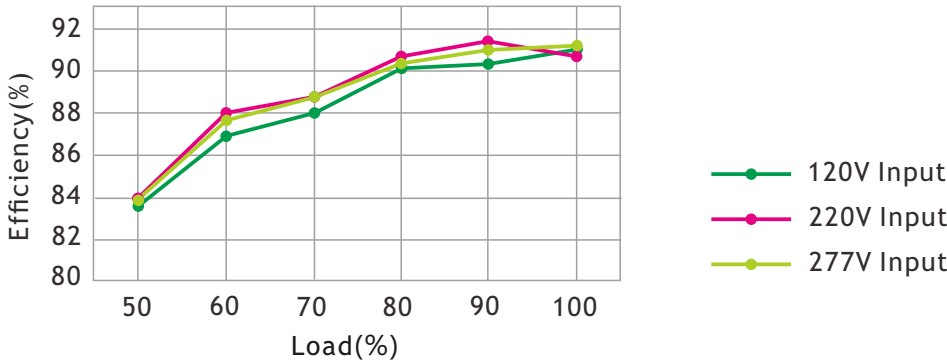
PF vs Load



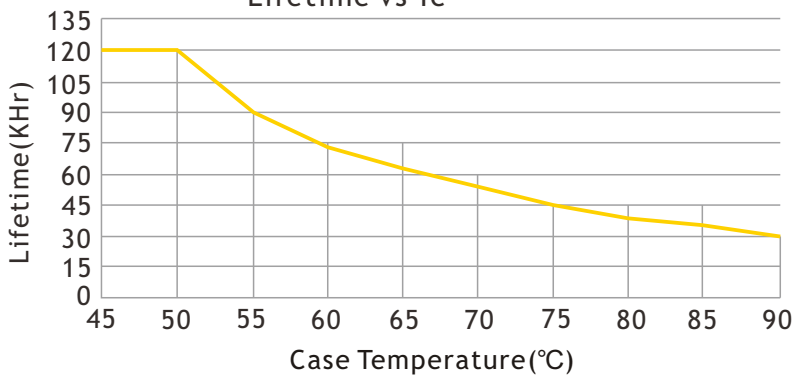
THD vs Load



Efficiency vs Load



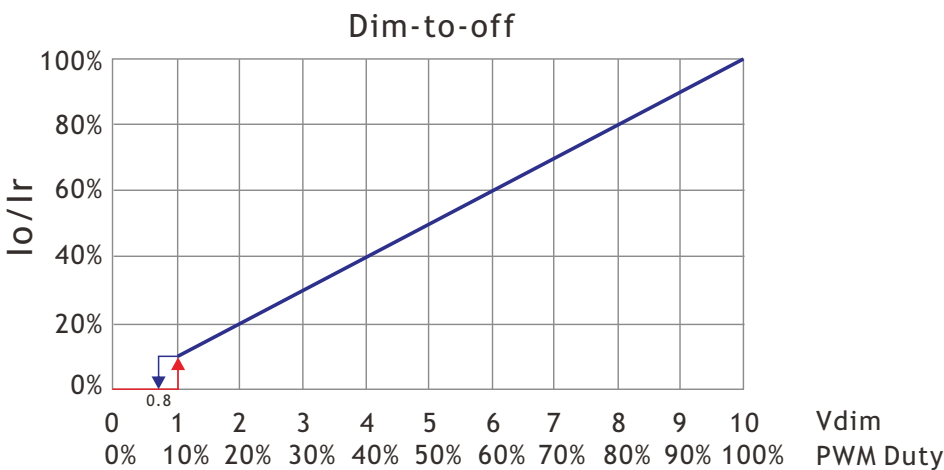
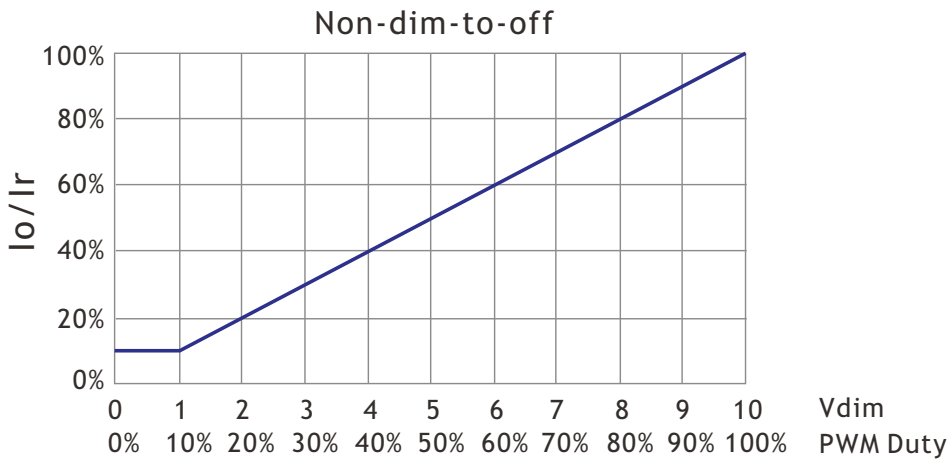
Lifetime vs Tc





# Dimming Function

## 0-10V Dimming & PWM Dimming

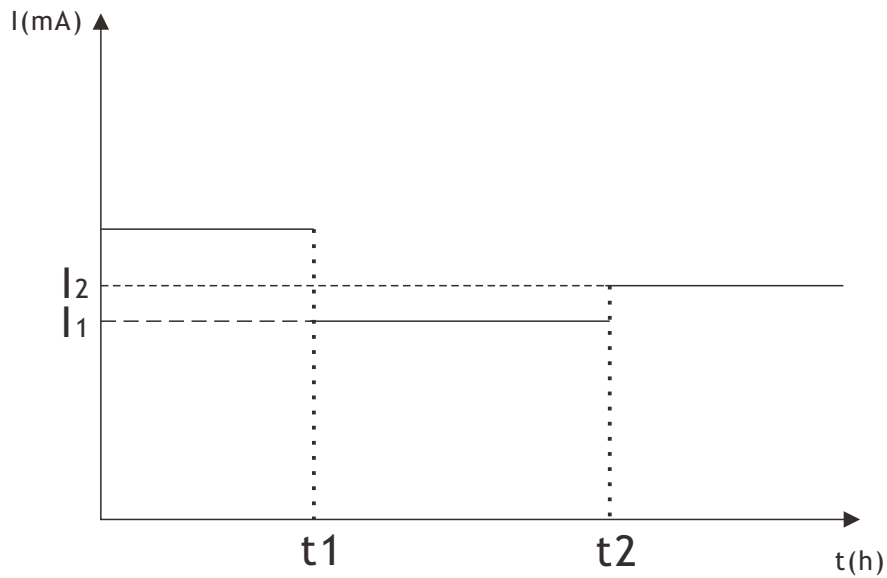


<b>GND</b>	Gery	<b>Input Source Current</b>	0-10mA
<b>Dimming wire 0-10V &amp; PWM</b>	Purple	<b>10V AUX Source Current</b>	20mA
<b>10V AUX</b>	Yellow	<b>PWM Frequency Range</b>	0.5~3KHz
<b>Input Dimming Voltage</b>	0-10V	<b>PWM High Level</b>	10V

- NOTE: 1.  $I_o$  is actual output current, and  $I_r$  is rated current without dimming control;  
 2. For the driver to operate properly, the load voltage must be in the working voltage range;  
 3. The driver has dim-to-off option that can be programmed by the NFC controller;  
 4. Maximum input voltage at dimming wire is 12V;  
 5. AUX wire is only for source, it cannot connect to other voltage source.

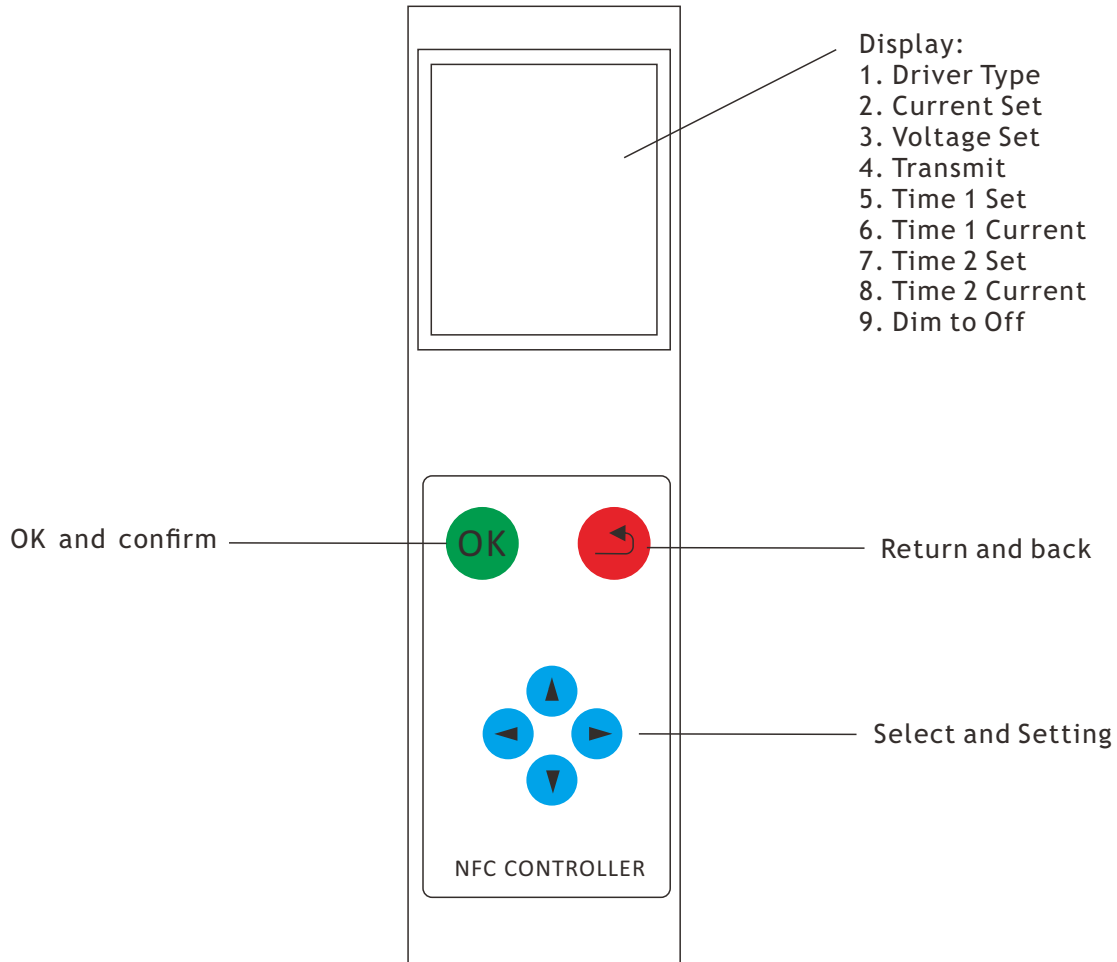
## Dimming Function

### Timer Dimming



- NOTE: 1. The dimming time can be programmed by the NFC controller;  
 2. The time of  $t_1$  and  $t_2$  can be set by the NFC controller;  
 3. The value of  $I_1$  and  $I_2$  can be set by the NFC controller;  
 4. Current changes from  $I_1$  to  $I_2$  need a few minutes.

# NFC Controller



Note: 1. The NFC controller can modulate the output current and output voltage;  
 2. The NFC dimming is a way of non-contact process, so it's much safer than the traditional ones;  
 3. Power devices can be programmed without driver power-on.



