



# LTECH PE-N14ACA42 Color Temperature Dimming LED Driver Instruction Manual

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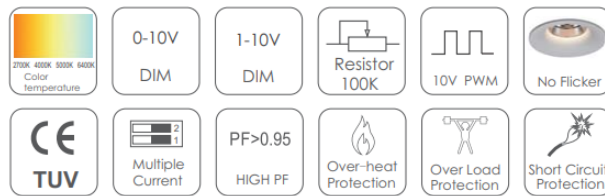


## PE-N14ACA42 Color Temperature Dimming LED Driver Instruction Manual



PE-N14ACA 14.7W  
PE-N20ACA 21W

      
RoHS SELV CE Class 2



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## Features:

1. Integrate multiple dimming and color matching interfaces
2. 0-10v/1-10v adaptive
3. Digital control output is adopted, and there is no stroboscopic
4. International general AC input 100-250V range
5. Natural air cooling, moisture-proof, heat conduction and silica gel heat dissipation process
6. Deep dimming design
7. Multiple protection functions
8. Output fast voltage terminal, safe and convenient
9. Crimping design, convenient and fast
10. 8 gear current selection

## Application:

1. Led two-color light source
2. Villa intelligent lighting
3. Wireless intelligent lighting system can be accessed
4. Museum lighting

## General description:

1. It adopts two-way signal control, one way to control brightness and the other way to control color temperature. The raw materials used are first-line brands and imported chip ultra deep dimming design, which matches a variety of intelligent dimming systems on the market. PWM dimming output controls LED brightness and

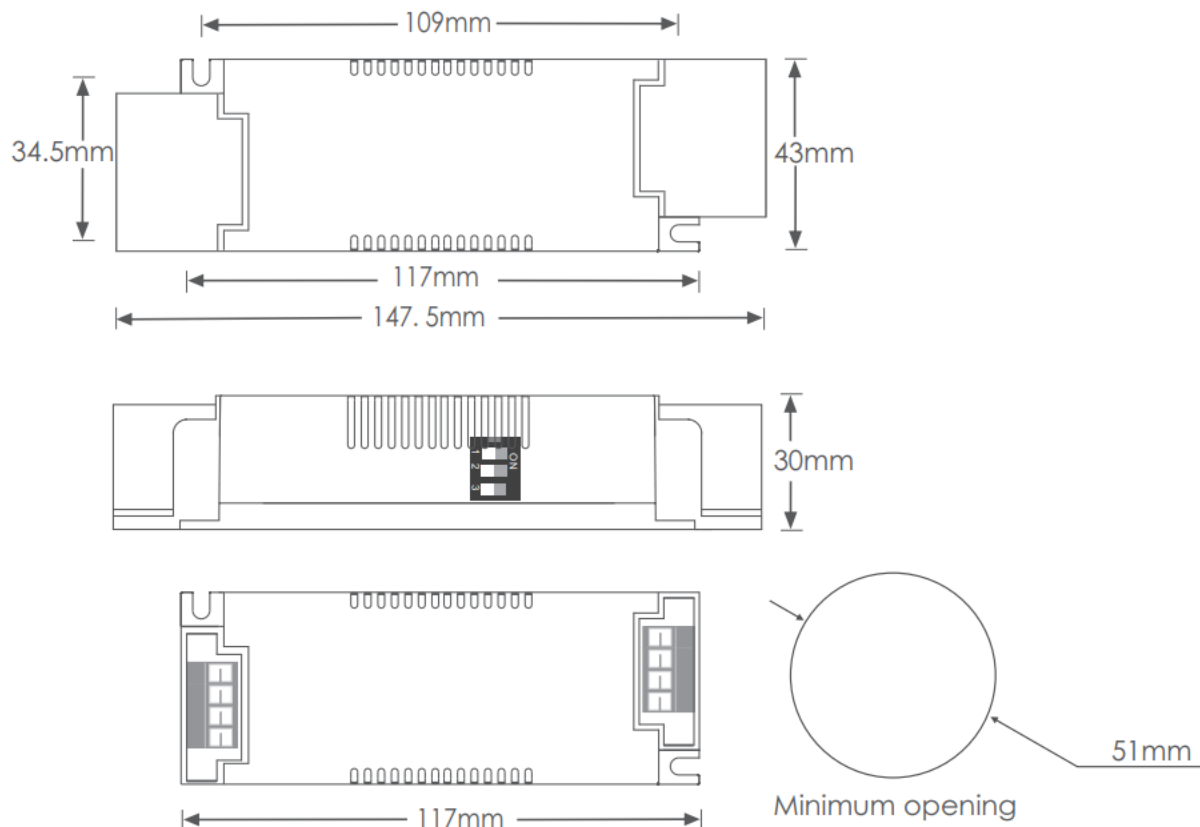
accurately controls color temperature. Silicone heat conduction process is adopted internally, and the heat balance of electronic components is more stable

## Specification:

Model		PE-NI 4ACA42	PE-N2OACA42
OUTPUT	Output Voltage	25-42Vdc	25-42Vdc
	Max Output Voltage	42Vdc	42Vdc
	Non-load Output Voltage	53Vdc	53Vdc
	Output Current	150/180/200/250/280/300/320/350mA	200/250/2130/300/350/403/450/500mA
	Output Power	3.75W~14.7W	5W~21W
	Strobe Level	Flicker free	
	Dimming Range	0 ~ 100%, LED dimming from 0.03%	
	PWM Dimming Frequency	>3600Hz	
	Current Accuracy	±3%	
	Power down mode	Active signal, no signal access, output the maximum set current	
INPUT	Dimming Interface	0-10V I-10V 10vpwm 100k potentiometer signal interface current <0.1 mA	
	Input Voltage Range	100-250Vac	
	Frequency	50/60Hz	
	Input Current	<0.16A ac110v	<0.25A ac110v
	Power Factor	PF>0.99/100V	PF>0.99/100V
	THD	230Vac@THD <10% (at full load)	
	Efficiency(typ.)	82%	86.0%
	Inrush Current (typ.)	cold start20A@230Vac	cold start120A@230Vac
	Anti Surge	L-N: 2kV	
	Leakage Current	<0.25mA/230Vac	
Environment	Working Temperature	ta: 45°C tc: 80 °C	
	Working Humidity	20 ~ 95%RH, non-condensing	
	Storage Temp., Humidity	-40~ 80°C°, 10-95%RH	
	Temp. Coefficient	±0.03%/°C(0-50)°C	

	Vibration	10-500Hz, 2G 12min./lcycle, period for 72min. each along X, Y, Z axes.
PROTECTION	Over-heat Protection	Inteigently adjusting or turning off the output current if the PCB temperature ..?-.1 10°C,, auto recovers.
	Over Load Protection	Shut down the output when rated powe? 102%, auto recovers.
	Short Circuit Protection	Shut down automatically if shod circuit occurs, auto recovers.
	Non-load Protection	output Constant Voltage.
SAFETY & EMC	Withstand Voltage	I/P-O/P: 3750Vac
	Isolation Resistance	I/P-O/P: 100M 0 /500VDC/25°C/70%RH
	Safety Standards	IEC/EN61347-1, IEC/EN61347-2-13
	EMC Emission	EN55015, EN61000-3-2 Class C, IEC61000-3-3
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547
	Strobe Test Standard	IEEE 1789
OTHERS	Dimension	147.5(117) x43x30mm(LxWx1-1)
	Packing	PE bag
	Weight (G.W.)	1879±10g
Remarks	<p>1. Conventional products are controlled by one way of brightness adjustment and one way of color temperature adjustment. Some intelligent systems in the market are controlled by two ways of brightness adjustment to mix color. Special instructions are needed, and our company has corresponding procedures.</p> <p>2. The measured parameters are carried out under the input 230V AC environment of 25 degrees.</p> <p>3. Constant current power supply, in the non dimming state, the output current is the maximum set value.</p> <p>4. The voltage connected to the lamp shall be within the marked voltage range of the power supply.</p> <p>6. This product adopts heat conduction silica gel heat dissipation process to balance the internal temperature and ensure the safety and reliability of the product.</p> <p>7. Test distance of signal line: 1.5 square shielded wire, 200m with 20 power supplies. Due to the distance factor, the distance is lengthened, and the number of controls will be reduced.</p>	

## Dimensions:



## Product Label:

**0/1-10V Dimming LED Driver** LED控制装置

输入 PRI  
ACL  
AC N

Model: PE-N14ACA42 • tc  
PRI: 100-250V~ 50/60Hz 0.17A  
SEC: 25-42VDC 350mA(max)  
PF: 0.93 Ta=-20...+45°C Tc=80°C  
Max.output: 55Vdc  
MAX.: 14.7W  
Used for LED module only  
wire prep. 0.75-2.5 □  
7-8mm

1	2	3	Output
OFF	OFF	OFF	150mA
OFF	OFF	ON	180mA
OFF	ON	OFF	200mA
OFF	ON	ON	250mA
ON	OFF	OFF	280mA
ON	OFF	ON	300mA
ON	ON	OFF	320mA
ON	ON	ON	350mA

Dimming interface:  
1 DIM: 0/1-10V  
2 DIM: PWM 10V  
3 DIM: Resistor 100K  
4 DIM: Color Temperature

输出 SEC  
LED+  
LED-C  
LED+  
LED-W  
OFF ↔ ON  
1  
2  
3

CCC CBCE SELV RoHS

33.7mm

82mm

**0/1-10V Dimming LED Driver** LED控制装置

输入 PRI  
ACL  
AC N

Model: PE-N20ACA42 • tc  
PRI: 100-250V~ 50/60Hz 0.24A  
SEC: 25-42VDC 500mA(max)  
PF: 0.93 Ta=-20...+45°C Tc=80°C  
Max.output: 53Vdc  
MAX.: 21W  
Used for LED module only  
wire prep. 0.75-2.5 □  
7-8mm

1	2	3	Output
OFF	OFF	OFF	200mA
OFF	OFF	ON	250mA
OFF	ON	OFF	280mA
OFF	ON	ON	300mA
ON	OFF	OFF	350mA
ON	OFF	ON	400mA
ON	ON	OFF	450mA
ON	ON	ON	500mA

Dimming interface:  
1 DIM: 0/1-10V  
2 DIM: PWM 10V  
3 DIM: Resistor 100K  
4 DIM: Color Temperature

输出 SEC  
LED+  
LED-C  
LED+  
LED-W  
OFF ↔ ON  
1  
2  
3










CCC CBCE SELV RoHS

33.7mm

82mm

## LED Current Selection:

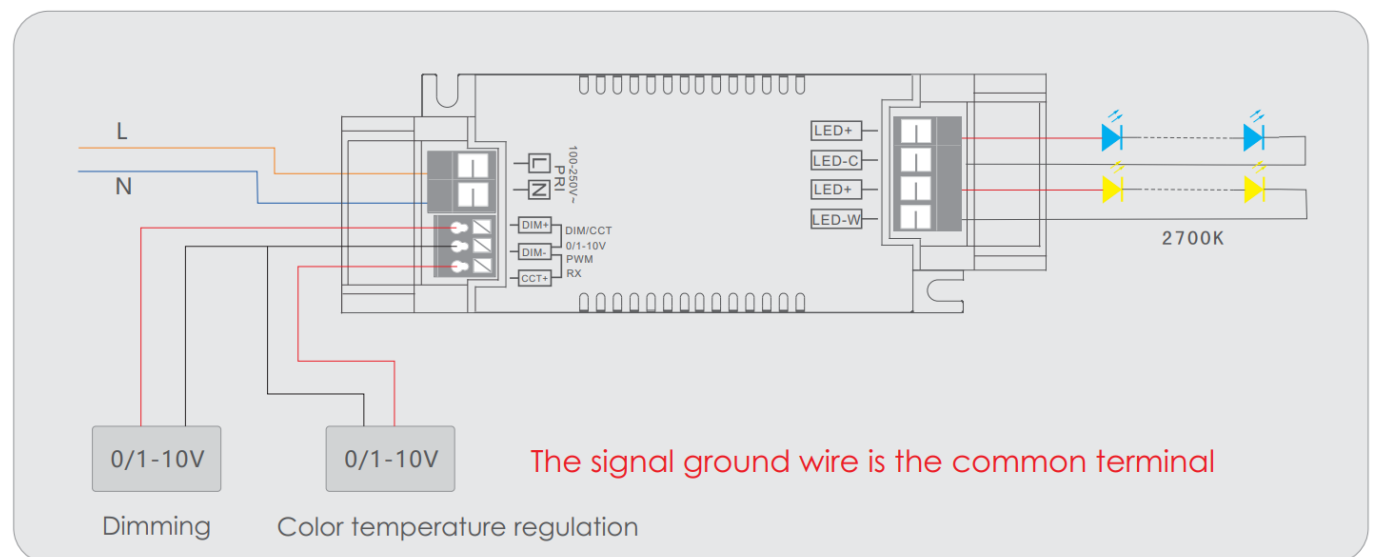
DIP switch for 8 optional currents' quick selection( see the table below ).

Model	DIP Switch									
PE-N14A CA42	Output current	150nnA	180mA	200mA	250mA	280mA	300mA	320mA	350mA	
	Output voltage	25-42V	25-42V	25-42V	25-42V	25-42V	25-42V	25-42V	25-42V	
	Output power	3.7W-6.3W	4.5W-7.6W	5W-8.4W	6.2w-10.5w	7W-11.7W	7.5W-12.6W	8W-13.4W	8.7W-14.7W	
PE-N20A CA42	Output current	200mA	250mA	280mA	300mA	350mA	400mA	450mA	500mA	
	Output voltage	25-42V	25-42V	25-42V	25-42V	25-42V	25-42V	25-42V	25-42V	
	Output power	5W-8.4W	6.2W-10.5W	7W-11.7W	7.5W-12.6w	8.7W-14.7W	10W-16.8W	11.2W-18.9W	12.5W-21W	

After current setting by DIP switch, power off and then power on to make the new current effective.

E.g. LED 3.2V/pcs: 9-24V can power 3-7pcs LEDs in series, 25-42V can power 7-12pcs LEDs, the max quantity of LEDs in series will be subject to the actual voltage of LED.

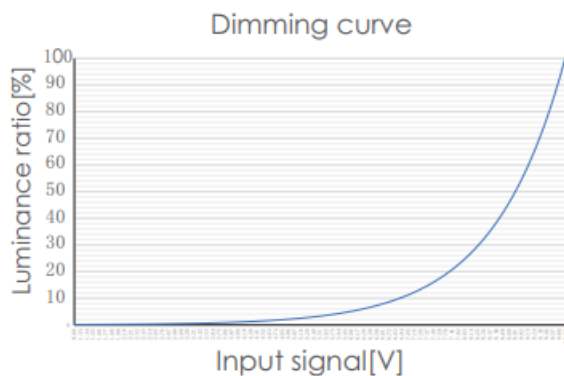
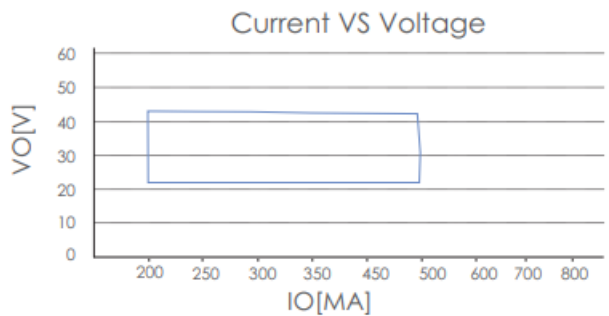
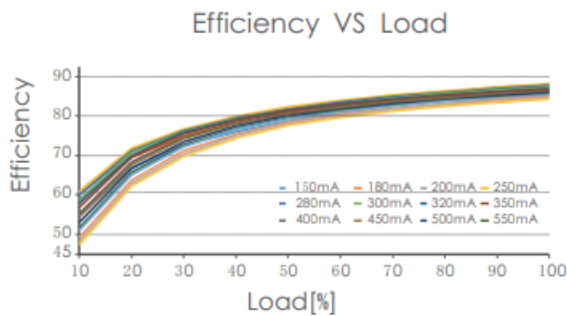
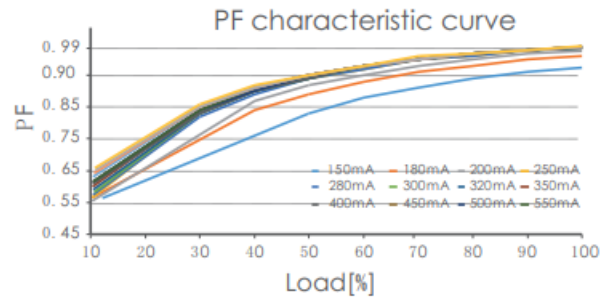
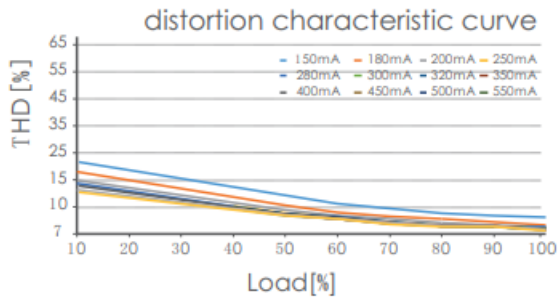
## Connection:



## Wiring:

1. Signal interface: 0-10V is connected. The PWM signal line needs to be divided into positive and negative poles. The variable resistance does not need to be divided in direction.
2. Input terminal wiring: suitable for wire gauge 22awg-14awg (0.5mm<sup>2</sup> – 1.5mm<sup>2</sup>), stripping requires 9-10mm tin
3. Output terminal wiring: suitable for wire gauge 22awg-12awg (0.5mm<sup>2</sup> – 1.5mm<sup>2</sup>), stripping requires 6-7mm tin
4. Output terminal wiring: the positive pole of the output LED is the common terminal, and the three wire led can be connected to one of the positive poles.

## Relationship Diagrams:



## The use of guidance:

The input end of the product is provided with an input line pressing cover with self-locking clamp. Use a slotted screwdriver to evenly force upward and slowly tilt it open to expose the input terminal, connect AC live line L and zero line n, and connect the output terminal according to the product identification. Pay attention to the positive and negative poles Note

1. When using this power supply, please pay attention to distinguish the input end and output end. Please wire correctly and power on only after checking Note
2. Please connect the load at the DC output first, confirm it is correct, and then turn on the power supply; In the constant current mode, if the open circuit is powered on, please turn off the power supply and connect the LED after the electric energy stored at the output end is released, otherwise the LED may be burned out Note
3. This power driver is only used for LED lamps. The input voltage range of the product is AC 100-265V. When it is used within the specified output voltage and current range, the ambient temperature is  $-20$  to  $+45$ , and the surface cannot be covered with thermal insulation cotton and other items that block the heat dissipation of the product.

Under the environment that meets the service conditions of the product, this product enjoys a five-year free

warranty Solutions to common problems during use:

1. The product does not work when powered on:
  1. Check whether the pressure wire is connected properly, press the pressure wire terminal again,
  2. Whether the positive and negative poles of the LED lamp are correct,
  3. Whether the input and output are connected incorrectly.
  4. Check whether the signal wire is short circuited (whether the signal lamp can be turned on when disconnected)
2. Power on flash lamp: 1. If the lamp flashes, please check whether the voltage of LED lamp is within the power supply voltage range
3. No color mixing temperature or brightness adjustment:
  1. Please check whether the signal line is connected or short circuited.
  2. Only brightness can be adjusted, not color mixing temperature. Please check whether the system is a two-way system that adjusts brightness, temperature and color at the same time
4. Since the power supply is controlled by low-voltage line number, shielded signal lines shall be used as much as possible in the actual use to ensure the control quantity and distance


### **Difference between 0-10V and 1-10V:**

1. When the 0 / WV dimmer is adjusted to the maximum WV, the output current will reach 100% of the power output, and the brightness will reach 100%. When the 0-10V dimmer is adjusted to 0V, the current will be the minimum, and the light will be turned off; When the 1-10V dimming is adjusted to 1V, the current is the minimum and the light is off.
2. Difference between 0-10V and 1-10V dimming: different starting and closing voltage, 0-10V is on at 0.7V, (the min brightness) 1-10V is on at 1.2V (the min brightness).
3. Digital dimming driver 0-10V and 1-10V dimming automatic identification two dimming modes.
4. The same signal circuit controls light and dark at the same time.
5. Dimmer (dimming system) is divided into 0-10V and 1-10V dimming signals.
6. Dimming compatibility is related to the control distance of signal line and the number of control power supply. If the number is too large or the signal line is too long, problems such as can not adjusted lower and can not adjusted off will occur.

# LTECH

The pictures and specifications are for reference, subject to the real object.  
If there is any change in the specifications, it will be notified separately.

### **Documents / Resources**

	<p><a href="#">LTECH PE-N14ACA42 Color Temperature Dimming LED Driver</a> [pdf] Instruction Manual PE-N14ACA42, PE-N20ACA42, PE-N14ACA42 Color Temperature Dimming LED Driver, Color Temperature Dimming LED Driver, Temperature Dimming LED Driver, Dimming LED Driver, LED Driver, Driver</p>
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