PE60DA 60W four in one DALI Dimming driver

Adopt the efficient, stable,
Low loss of switch control chip, the use of high performance components, with lo
energy saving,Environmental protection, long life and other characteristics.

General description

PE45DA LED dimming driver is one of a constant current dimming driver developed by our company with high power factor, high efficiency, adopt stable, low loss of switch control chip,the use of high performance components ,environmental protection, long life and other characteristics

Using active PRC scheme,high power factor, high efficiency

integration of four kinds of dimmer function,
Dali digital addressable lighting interface
1-10Vsignal
10V PWM signal
variable resistance (potentiometer)

Features:

- the international universal AC input voltage range(reach up to305VAC)
- with the active PRC function
- protection type: Short circuit/Over current/ Over voltage
- natural air cooling
- integration of four kinds of dimmer function (Dali or 1-10Vdc or PWM signal or resistance)
- big wiring terminal, screw assembling
- suitable for LED home light,commercial Lighting and other application
- safety protective device
- simple installation
- confirm to the world lighting equipment safety standards
- protection class II
- three years warranty

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Electric standard

Model No.		PE60DA24	PE60DA30	PE60DA36	PE60DA42	PE60DA48	PE60DA54
Output	Output Rated Power	60W	60W	61.2W	60.9W	62.4W	62.1W
	Direct voltage	24V	30V	36V	42V	48V	54V
	Constant current range	15-24V	18-30V	22-36V	25-42V	38-48V	32-54V
	Current accuracy	±1%	±1%	±1%	±1%	±1%	±1%
	Constant current	2500mA	2000mA	1700mA	1450mA	1300mA	1150mA
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Load regulation	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	Ripple wave	150mVp-p	200mVp-p	200mVp-p	300mVp-p	300mVp-p	300mVp-p
	Starting time, rise time	1500ms,80ms/115VAC(full load);1000ms,80ms / 230VAC(full load)					
	Retention time	16ms/230VAC 16ms/115VAC(full load)					
Input	Voltage range	90～305VAC					
	Frequency range	47 ～ 63Hz					
	Power factor	PF>0.98/115VAC, PF>0.95/230VAC					
	efficiency(Typ.)	89.5%	90%	90%	90%	90.5%	90.5%
	Alternating current	0.64A /115VAC 0.32A/230VAC 0.3A/277VAC					
	Leak current	<0.75mA /277VAC					
Protection	Over current	95 ~ 108%					
	Short-circuit protection	Hiccup mode, an abnormal condition can be automatically restored after removed					
	Over voltage	35V	43V	49V	59V	63V	68V
	overheating	95℃±10℃ protection mode:close the output voltage,after restart recovery					
Environm	Operating temperature	-40~ +60℃					
	Operating humidity	20-85%RH					

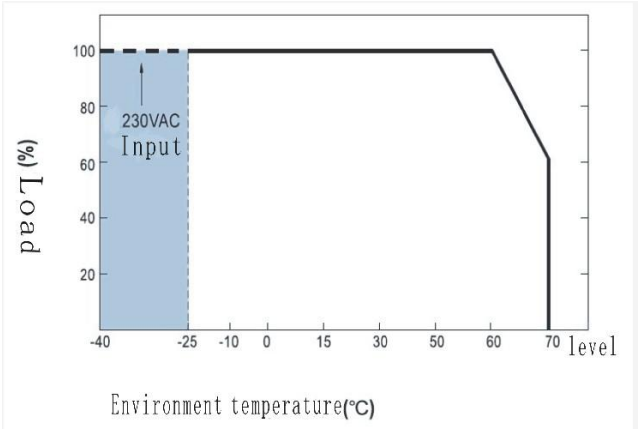
ent	Storage temperature humidity	-40~ 85℃ 10~95%RH
	Temperature coefficient	±0.03%/℃(0-60℃)
Safety and electromagnetic compatibility	Safe code	EN 61347-2-13:2006 /EN 61347-1:2008
	Withstand voltage	I/P-O/P:3.75KVAC
	Insulation Resistance	I/P-O/P:100M Ohms / 500VDC /25℃/70%RH
	Electromagnet interference	EN55015
	Harmonic current	EN6000-3-2/EN6000-3-3
	Electron-magnetic susceptibility	EN6000-4-2
Other	Dimensions	(L*W*H) = 209mm * 76mm * 49mm
	Packing	

Notice:

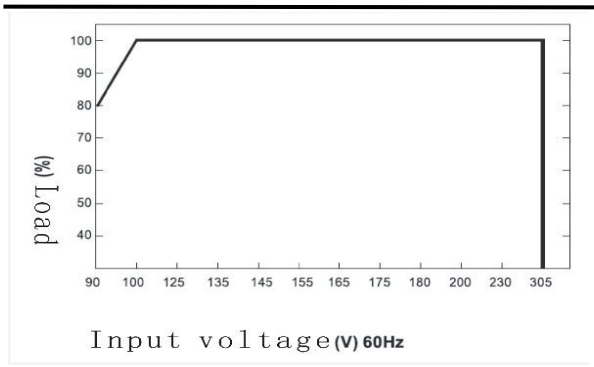
1.In the absence of special notice, all specifications and parameters in the input is 220vac,rated load, under 25℃ ambient temperature measurement.

2.Power is seen as a component and terminal equipment used in combination,for EMC is affected by a complete set of device,terminal equipment manufacturers,need to EMC package unit to confirm.

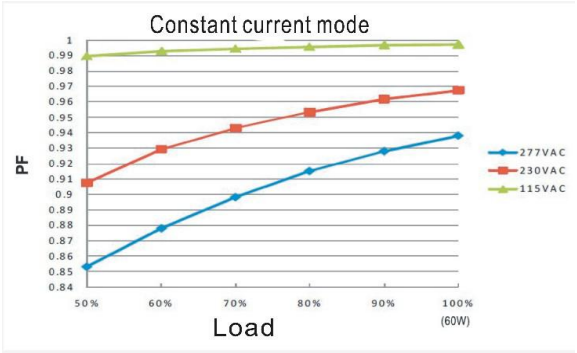
Debating curve



Static characteristics

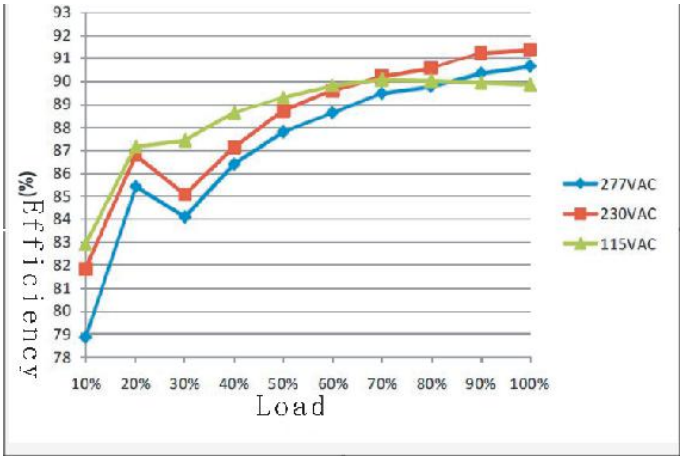


Power factor characteristics



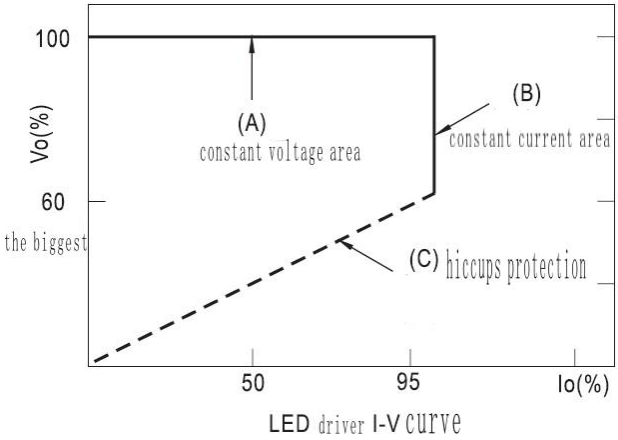
Efficiency VS Load(48Vtype)

In the practical application of PE60DA series with efficiency as high as 90.5%.



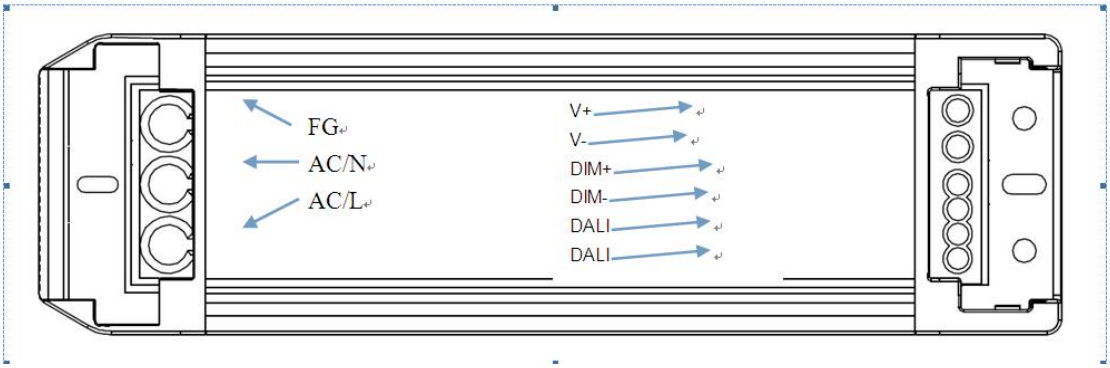
LED module drive mode

1. A typical LED power supply with constant voltage mode(cv) and constant current mode(cc)to drive the LEDs.
2. PE45DA LED drive power supply with constant vltage(cv) + constant current(cc) characteristics,can drive by way of constant pressure cv(with led drive ,below A zone,can be also driven by constant current(cc)mode. (direct drive, below B zone) .



LED driver I-V curve

Dimming operating method



※ "DALI" Dali digital addressable lighting interface,directly connect to the DALI control system, signal lines regardless of is negative,the specific method of use,please see related documents.

※In DIM+DIM connecting A resistor or connection between 1-10v or 10vv dc voltage PWM, signal can Adjust the output constant current numerical s>+constant current(CC)characteristics,can drive by way constant pressure CV (with led drive,below A zone), can also be driven by constant current(CC) .

※Need to use resistances adjusting current customers, please contact our business, we can according to customer's Requirements to make corresponding adjustment.

Adjust the output current resistance value of reference(Typical value)

Resistance tolerance	A single drive	10KΩ	20KΩ	30KΩ	40KΩ	50KΩ	60KΩ	70KΩ	80KΩ	90KΩ	100KΩ	OPEN
	N drive	10KΩ/N	20KΩ/N	30KΩ/N	40KΩ/N	50KΩ/N	60KΩ/N	70KΩ/N	80KΩ/N	90KΩ/N	100KΩ/N	OPEN
Rated current percentage ratio		10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95-105%

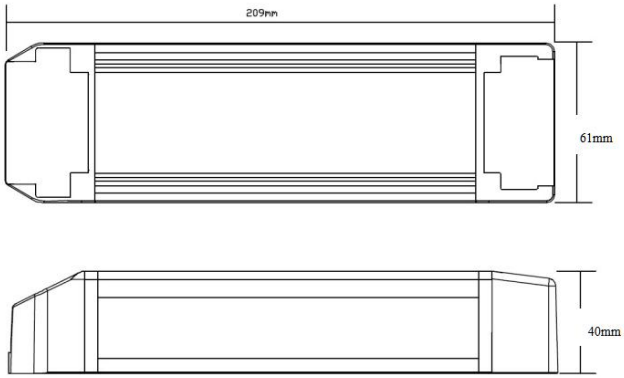
※ 10V PWM signal to adjust the output current value(typical value)

Adjust the voltage	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Rated current percentage ratio	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95-105 %

※ 10V PWM signal to adjust the output current value(typical value): frequency range: 100Hz～3KHz

Duty cycle	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Rated current percentage ratio	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	95-105 %

Boundary dimension



Wiring

The input terminal: suitable for wire gauge16AWG-6AWG (1.25mm^2 – 12.5mm^2), wire stripping requirement: 9-10mm.

The output terminal: suitable for wire gauge 22AWG-12AWG (0.315mm^2 – 3.15mm^2), wire stripping requirement: 6-7mm.

Direction

Notice:

★★1: Using this power supply, please pay attention to distinguish between the input and output side,please correct connection,check to electricity.

★★2: Please pick up a good DC output side load to correctly to electricity: confirm to electricity and power, in constant current mode, if electricity open ,please shut off the power supply,need to store electricity output such as after the release,to connect the LED,otherwise may burn out the LED.

Abnormal phenomenon and corresponding processing methods:

1. After good electrical connection in the power supply device for the first time,there is no bright,please cut off the AC input terminal and check:

a) DC: if poor contact;

b) DC: if output correct pick the cathode, if there is welding led panel;

c) AC if poor contact: Test after eliminate these failure.

2. Good electrical connection in the device, the lights up, but led flashing, please cut off the AC to lose into the side, check the DC output.

a） Presence of overload, light load.

b) Power supply design parameters and actual use.

3. Products in using process in case of any other questions,please communicate to us, feedback in Time,we will assist you to solve the problems actively

Statement

Pictures and specifications for reference,in kind prevail,specifications are subject to Change with further notice.

Appendix

Digital Addressable Lighting Interface (DALI)

DALI from the unit only request data on the host, send data, that is adopt the way of command response. In the same network of DALI, up to 64 unit, from each unit has a separate address, from a unit can be assigned to a group, can exist at the same time at most 16 groups,and from unit can be set 16 scenarios.

DALI the main features of the agreement

a) Asynchronous serial communication

b) 1200 bound rate, using the Manchester loading format.

c) Two lines differential signal.

d)Differential voltage is large than 9.5v, the high level.

e)Differential voltage is less than 6.5v,the low level.

f) Controlled by a host unit communication process.

g) To connect a DALI bus 64 from a machine.

h) Each can be individually addressed from the machine.

DALI Electrical specification,from machine unit method to control the bus:

Under the idle state,

1. High Output power at ordinary time,not to interference in the hold signal.
2. Output low electricity at ordinary time,directly to the DALI bus short-circuit to each other.
3. DALI bus maximum current of 250mA
4. Not a two-way communication at the same time.
5. Transmission cable up to 300 meters,or pressure drop is no more than 2v