ADP-240WLP

240W Power with PFC and Dimming(Option)

48V Constant Voltage & 5.0A Constant Current

Features

- **Universal AC input (90~264V) or Full range (90~305Vac)**
- **Constant current operation on 36~47V range**
- **Constant voltage 48V operation under 5.0A output**
- **Vo & Io output adjustable in a little range (Option)**
  - **IP67 for non adjustable model**
  - **IP65 for voltage or current adjustable model**
- **No flicker output**
- **Protections for Short circuit, Over load and Over temp.**
- **Dimming available (Optional)**
  - **Non polar PWM, Linear(0-10V) or VR(100KΩ)**
- **Suitable for high power LED lighting**
- **Long lifetime over 40.000 Hr / 3 years warranty**

General Specifications

AC input voltage	90~264Vac for Normal, 90~305Vac for Full range, 47~63Hz
AC inrush current	30Amax at 240Vac, Cold start
DC output voltage	48V ±0.5V under the condition of constant voltage operation range
DC output current	5.0A ±0.1A under 36 ~47V of constant current operation range
Power factor	0.99 at 100Vac-Full load, 0.97 at 220Vac-Full load
Efficiency	89±1 % at 100Vac-Full load , 93±1 % at 220Vac-Full load
Working Temp.	-30 ~ +65℃
Safety Protection	Output short or Open, Over Voltage, Over Current, Over Temperature
Withstand voltage	I/P-O/P: 3.75KVac, I/P-FG: 1.5KVac, O/P-FG: 0.5KVac
Surge Immunity	L-N : 8KV, L/N-FG : 15KV
EMC standards	EN55015, EN61000-3-2 class C, EN61000-3-3, EN61000-4-2,3,4,5,6,8,11, EN61547
Input wire	UL rated, 0.75mm^2×3C(40cm): Live/Brown or Black, Neutral/Blue or White, FG/Yellow&Green
Output wire	UL rated, 1.0mm^2×2C(40cm): LED+/Red, LED−/Black
Dim. & Weight	244.0(L)×68.0(W)×38.8mm(H), 1250g

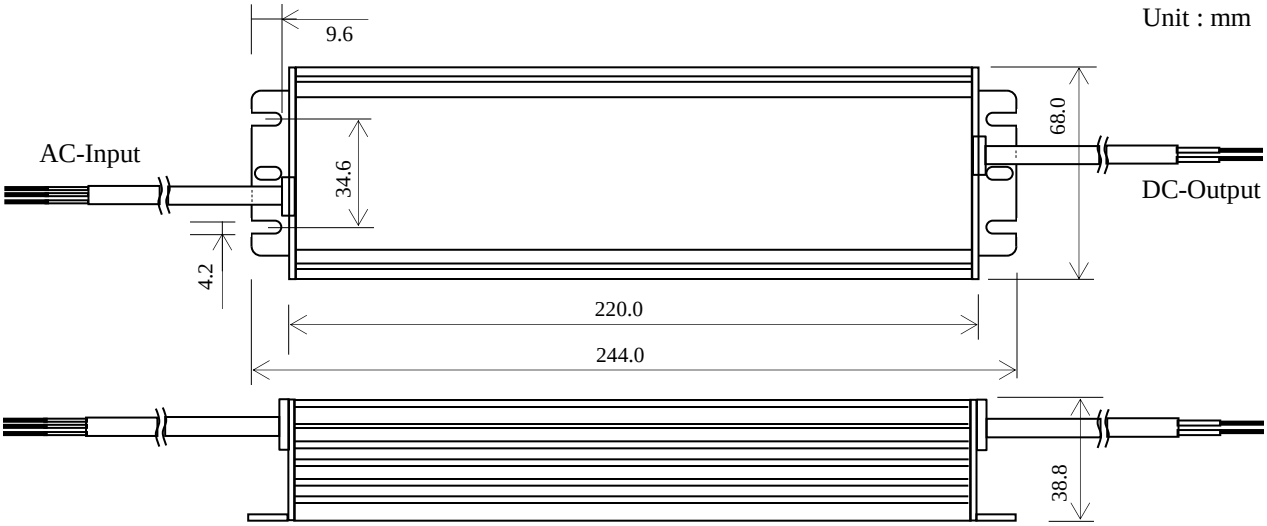
Notice : The specification is subject to change without notice

ADP-240WLP

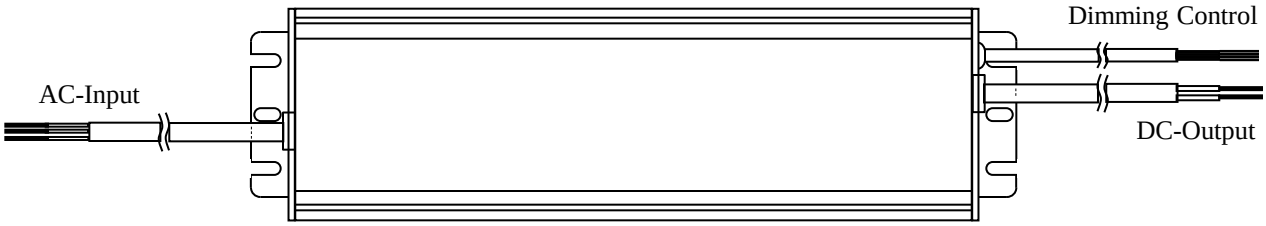
Mechanical dimensions & shape

Basic Model (w/o-dimming)

Tolerance : ± 0.5
Unit : mm



Dimming Model

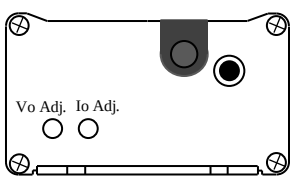


Voltage & Current output adjustable Model

Vo Adj : Voltage output adjust Range 46~52V

Io Adj : Current output adjust Range 3.0~5.2A

Caution : Do not exceed Maximum Power Consumption 250W of AC input



Input & Output Cable

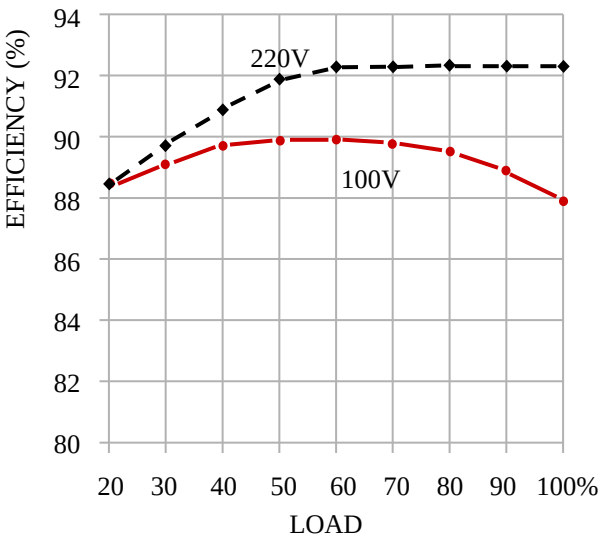
AC Input : UL Rated 0.75mm^2×3C – 400±20mm
Brown or Black ; AC/Live
Blue or White ; AC/Neutral
Green/Yellow ; FG

DC Output : UL Rated 1.0mm^2×2C – 400±20mm
Red ; DC+
Black ; DC-

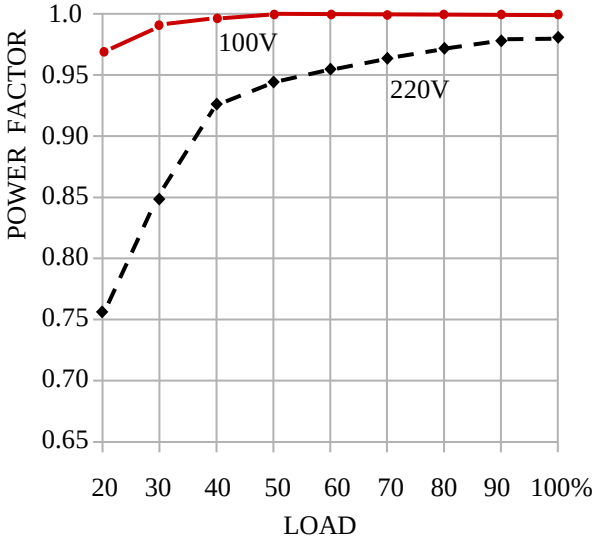
Dimming Control (Option) : UL Rated ≒0.4mm^2×2C – 400±20mm
White / Black (Non-Polar for PWM) ; Dim control
In case of ≒0.3mm^2×4C– 400±20mm
White / Black (Non-Polar for PWM) ; Dim control
Red ; Auxiliary 15V+ / Green ; Auxiliary 15V-(Gnd)

Electrical Characteristics

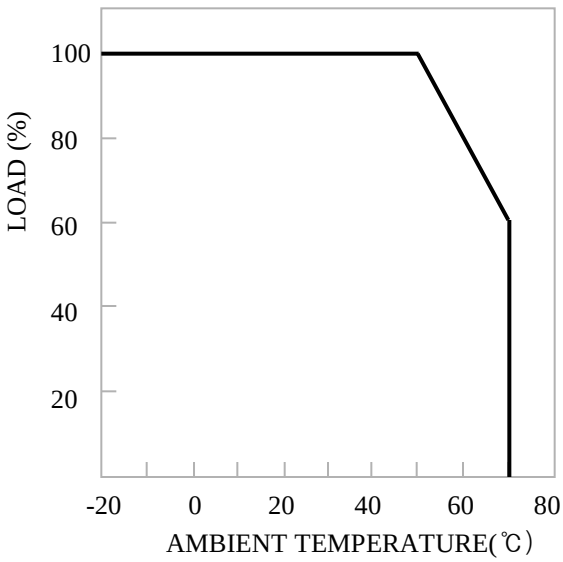
Efficiency vs Load



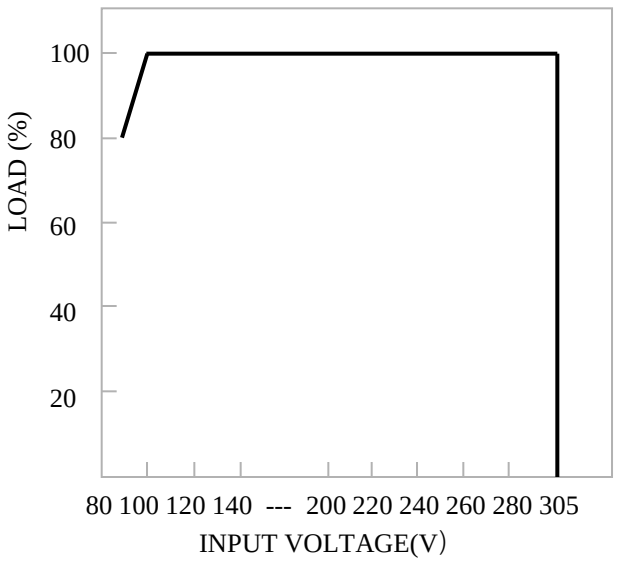
Power Factor vs Load



Derating Curve



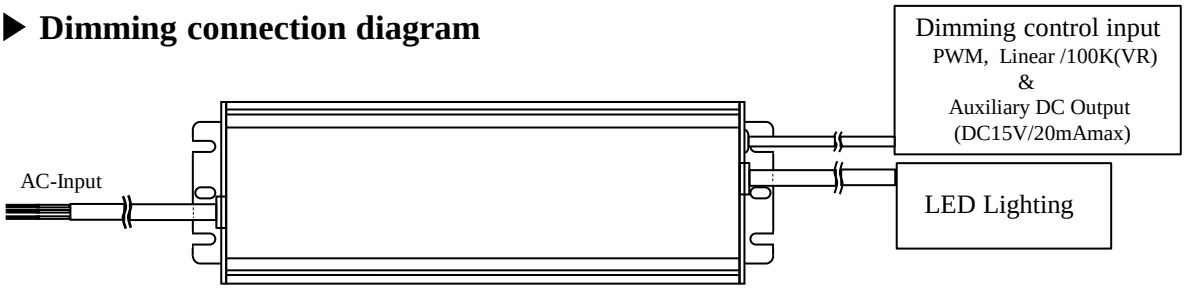
Static Characteristics



Dimming Control Options for Constant Current Operation

PWM Dimming or Linear(0-10V)/VR(100KΩ) dimming available

▶ Dimming connection diagram



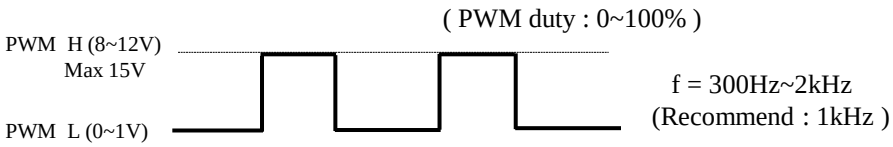
▶ Dimming characteristics

1. PWM dimming without Off function (Option 1)

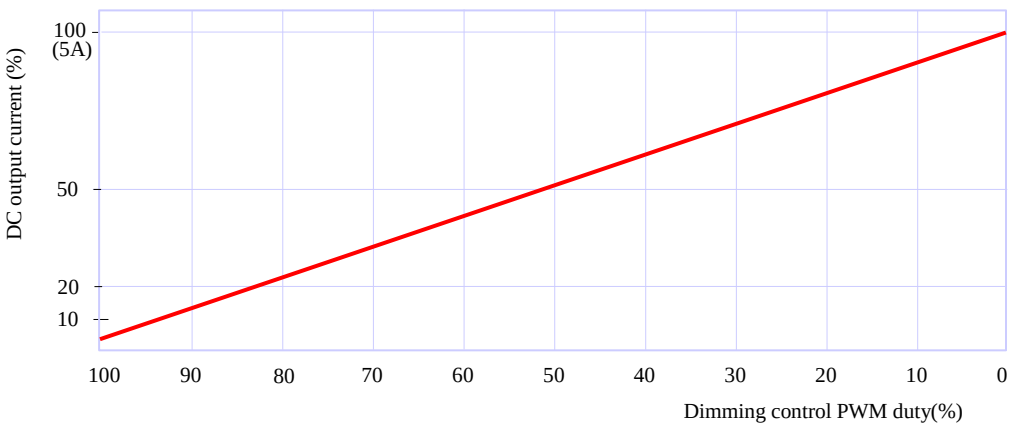
1) Very Wide Dimming range (3~100%)
2) No any flickering depend on PWM dimming control signal input
3) LED lighting is Maximum brightness
   when dimming signal input is open (not connected) or 0% duty
4) Dimming input impedance & Current : around 6 kΩ & 2mA typical
5) Non polarity or polarity dimming control signal available

Dimming control PWM duty	LED lamp (DC Output current)
Duty 100%	Minimum Brightness (3%)
Duty 0%	Maximum Brightness (100%)
No use of dim control	Maximum Brightness (100%)

- PWM control input signal



- Dimming curve characteristics

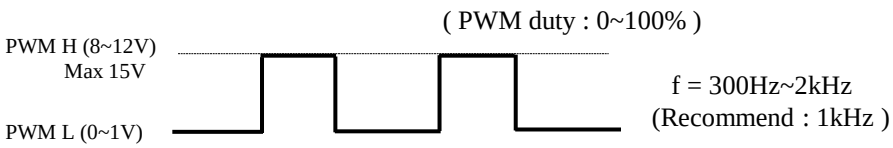


2. PWM dimming with Off function (Option 2)

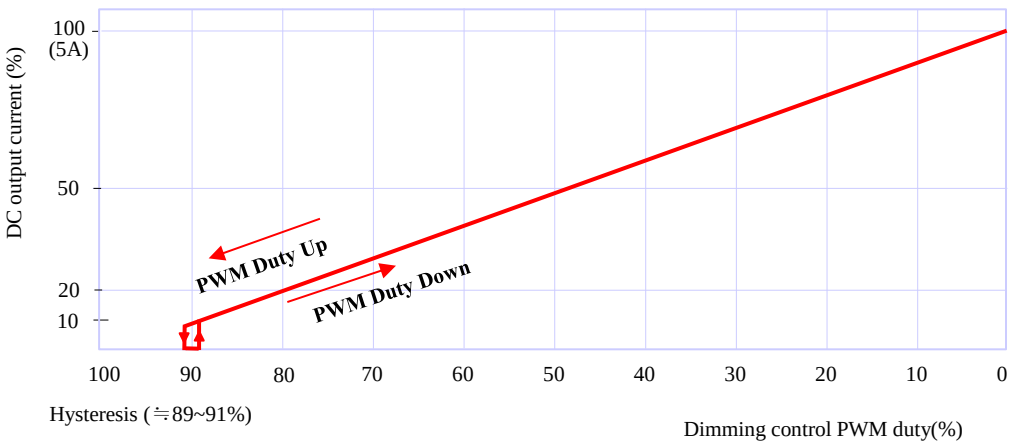
1) Dimming and Lamp Off function available by only dimming controller
2) Very low standby power consumption on the lamp off condition (Under 1.0W)
3) No any flickering depend on PWM dimming control signal input
4) LED lighting is Maximum brightness
   when dimming signal input is open (not connected) or 100% duty
5) Dimming input impedance & Current : around 6 kΩ & 2mA typical
6) Non polarity or polarity dimming control signal available

Dimming control PWM duty	LED lamp (DC Output current)
Over 91±1.0%	Lamp Off
From 91% to 89%	On/Off Hysteresis
Under 89±1.0%	Minimum Brightness (8%)
Duty 0%	Maximum Brightness (100%)
No use of dim control	Maximum Brightness (100%)

- PWM control input signal



- Dimming curve characteristics

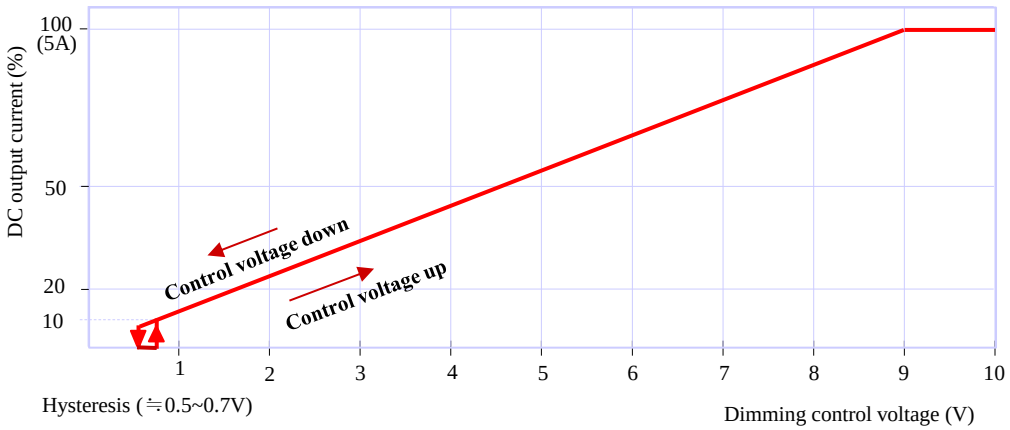


3. 0-10V Linear or VR(100KΩ) dimming (Option 3)

1) LED lighting is Maximum bright when dimming signal input is open (not connected)
2) Off function is available(option)
3) Wide dimming range
   2-100% for without off function dimming
   8-100% for with off function dimming
4) Very low standby power consumption on the lamp off condition (Under 1.0W)
5) Dimming input impedance & Current : around 6 kΩ & 1mA typical for 0-10V dim
6) Dimming input impedance : around 220kΩ for VR(100KΩ) dim.
7) Dimming control voltage range : 0~10V
8) Dimming control connection (Dimming signal/White, Gnd/Black)

Dimming control	LED lamp (DC Output current)
No use of dim. control	Bright max
0~0.5±0.1V for 0-10V Linear or Minimum resistance of 100KΩ VR	Lamp off (in case of with Off function Low(2~7%) Brightness (in case of w/o-Off function)
0.5~0.7V	On/Off Hysteresis (in case of with Off function)
Up 0.7V to 9.0V	Brightness Increasing (8-100%)
Down 9.0V to 0.5V	Brightness decreasing (100-7%)
9.0V over (max 12V) or Maximum resistance of 100KΩ VR	Bright max

- Dimming curve characteristics (In case of with Lamp off function)



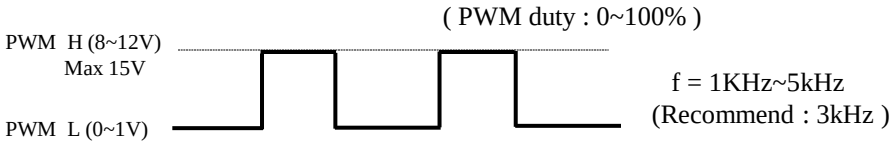
Dimming Control Options for Constant Voltage/ Current Operation

4. CV/CC-Mode Output PWM dimming (Option 4)

1) Dimming and Lamp Off function available by only dimming controller
2) Very low standby power consumption on the lamp off condition
3) Some visible flicker or audible noise depending on PWM dimming control signal input
   Recommend more higher frequency PWM dimmer than 3Khz for cancellation of visible flicker
4) Efficiency is a little lower(1~2%) compare to other dimming control models
5) LED lighting is Maximum brightness
   when dimming signal input is open (not connected) or 0% duty
6) Dimming input impedance & Current : around 6 kΩ & 2mA typical
7) Non polarity or polarity dimming control signal available

Dimming control PWM duty	LED lamp (DC Output current)
Duty 100%	Minimum Brightness (Lamp Off)
Duty 0%	Maximum Brightness (100%)
No use of dim control	Maximum Brightness (100%)

- PWM control input signal



- Dimming curve characteristics