

ADP-33WJP

350mA Constant Current Source for LED drive



Features

- AC 100-240V wide input voltage range
- 350mA constant current output (Japan standard)
- 45~75V constant current operational range
- Flicker less dimming available (Option)
- Active PFC correction, PF>0.90
- Low input current THD (Meet IEC61000-3-2 Class C)
- Compact size, Water resist (IP65 correspond)
- Long life time over 40.000 Hr
- RoHS compatible
- Certified PSE-Japan

Applications

- LED Lighting
- Advertising Light panel

Electrical characteristics

Parameter	Symbol	Conditions*	Specification*			Unit
			Min	Typ	Max	
Input supply voltage	V_{IN}		90	100	242	V_{AC}
Input current	I_{IN}	$V_{IN}=100V, V_O=75V$	0.27	0.31	0.35	A
Power consumption	P_{IN}	$V_{IN}=100V, V_O=75V$		30	32	W
Power factor	λ	$V_{IN}=100\sim 240V$	0.90	0.95		
Output current	I_O	$V_{IN}=100\sim 240V$	330	350	370	mA
Reference output voltage	V_{O-REF}	$V_{IN}=100\sim 240V$		75		V
No load output voltage	V_{O-OPEN}	$V_{IN}=100\sim 240V$		95		V
Efficiency		$V_{IN}=100V, V_O=75V$	82	85		%

* at reference of 350mA output current and 75V output voltages

Absolute maximum ratings

Lower Input supply voltage (V_{IN})	-----	90V
Higher Input supply voltage (V_{IN})	-----	265V
Maximum output voltage with load	-----	75V
Minimum output voltage with load	-----	45V
Output current (I_O)	-----	350mA
Input power	-----	33W
Ambient operating temperature	-----	- 10 °C to 50 °C
Storage temperature range	-----	- 20 °C to 80 °C
Operating & storage humidity	-----	10 % to 85 %

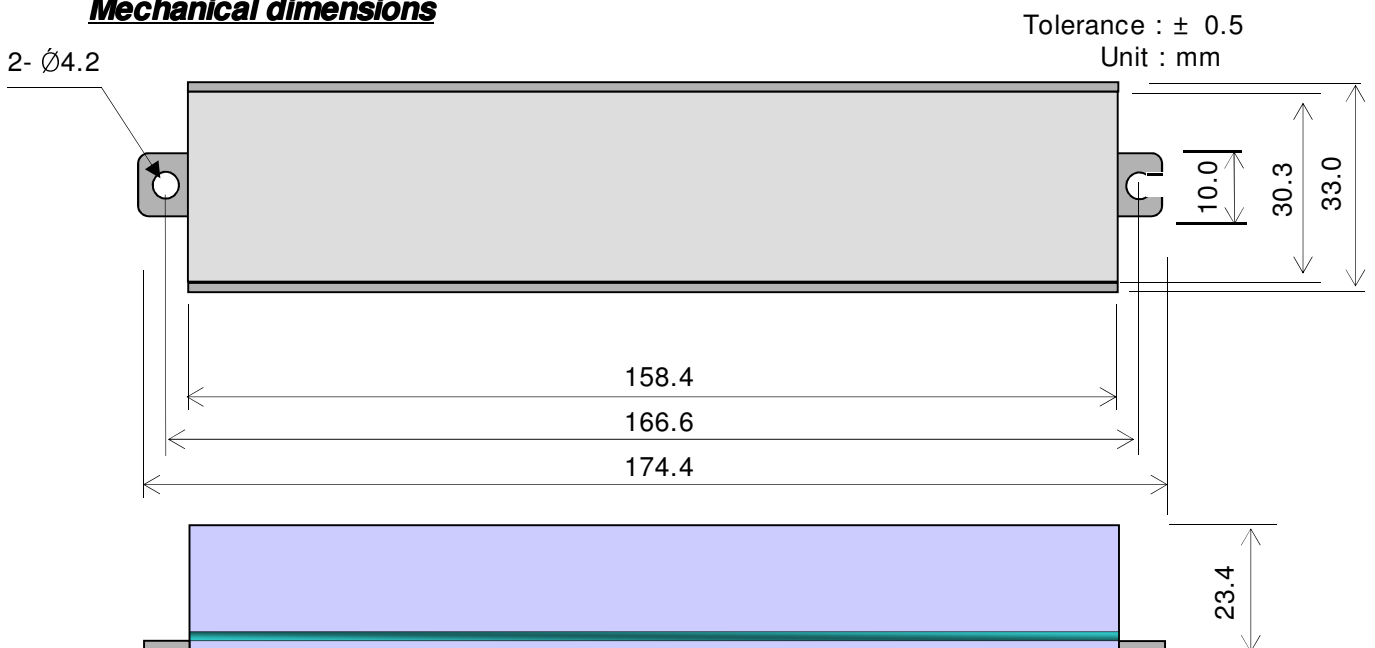
Recommended operating conditions (R.C.)

Parameter	Symbol	Recommendation			Units
		Min	R.C.	Max	
Input supply voltage	V_{IN}	100	200	240	V
Input current (at $I_O=350mA$, $V_O=75V$)	I_{IN}	0.3	0.15	0.13	A
Reference output voltage (for LED)	V_O	45	70	75	V_{DC}
Operating ambient temperature range	T_A	- 10		50	°C

Input & Output Wire or terminals

- AC Input : White & Black, AWG- 18 (KSC3304) 220mm Length
- DC Output : DC+ : Red, AWG- 18, 250mm Length
DC- : Black, AWG- 18, 250mm Length
- Dimming Control (Option) : Yellow/Yellow (Non- Polar), AWG- 24, 200mm Length

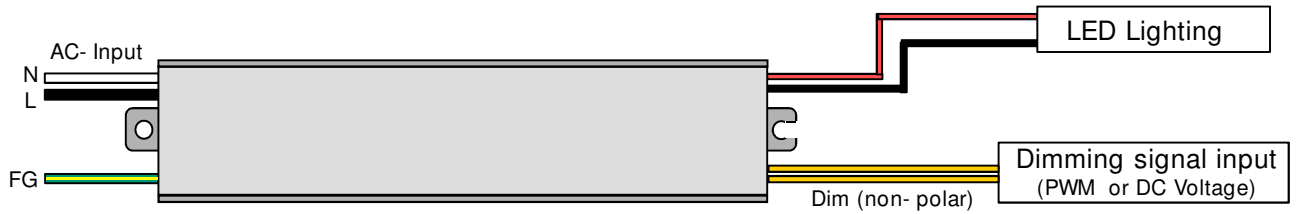
Mechanical dimensions



Notice : The specification is subject to change without notice

Dimming Control Option

► Dimming connection diagram



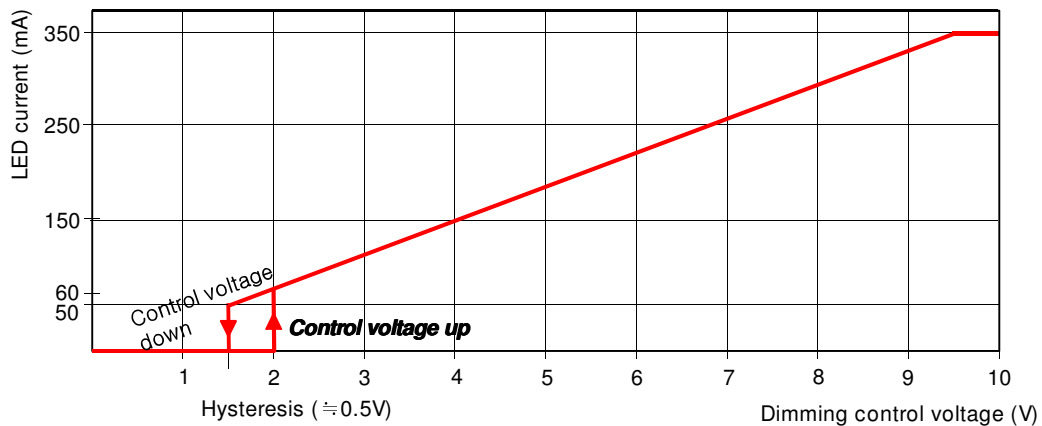
► Dimming characteristics

1. Linear dimming (Option 1)

- 1) LED lighting is maximum bright when dimming signal input is open (not use)
- 2) Input impedance : around 15kΩ
- 3) Dimming control voltage range : 1~ 10V

Dimming control voltage	LED lamp
Under 1.0V	Lamp off
1.5~ 2.0V	ON/OFF Hysteresis
Up 1.0V to over 2.0V	Lamp on at around 2.0V
Down over 2.0V to under 1.0V	Lamp off at around 1.5V
9.5V over (max 12V)	Maximum bright (350mA)

- Dimming curve characteristics



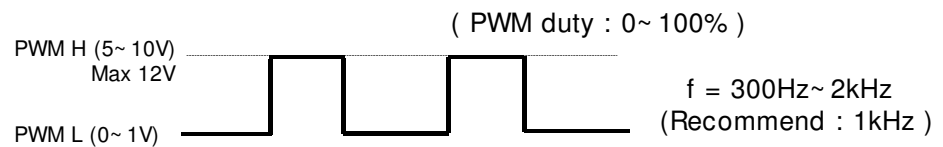
2. PWM dimming (Option 2)

- 1) No flickering due to the PWM control input
- 2) LED lighting is maximum bright when dimming signal input is open (not use).
- 3) Input impedance : around 15kΩ
- 4) Dimming ratio : around 15%~ 100%

Dimming control PWM duty	LED lamp
Over 90%	Lamp off
90~ 85%	ON/OFF Hysteresis
Duty down 100% to 85%	Lamp on at duty 85% (Lamp current 60mA)
Duty up 10% to 90%	Bright change 100%(350mA) to 14%(50mA)
Under 10%	Maximum bright(350mA)

- PWM signal VS Lamp current

- PWM control input signal



- Dimming curve characteristics

