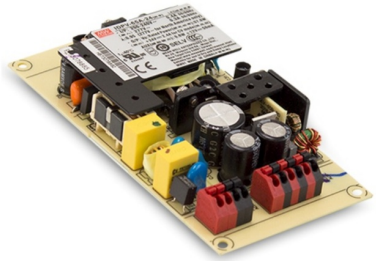
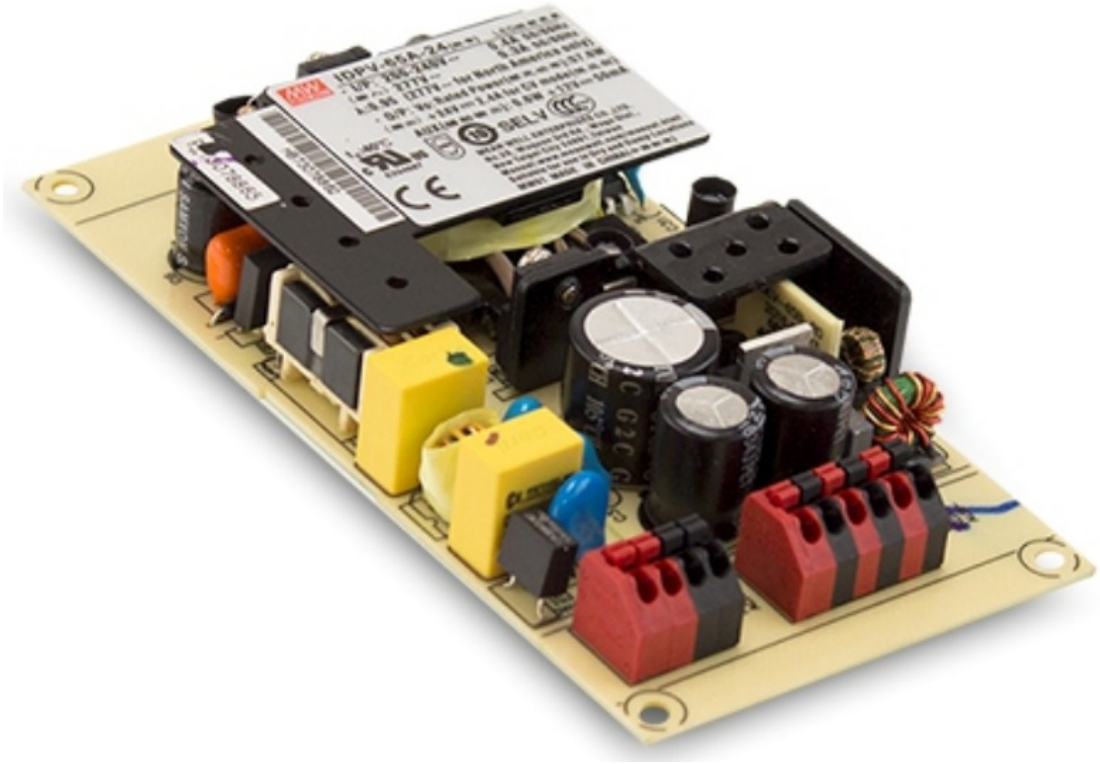


Mean Well IDPV-65 65W PWM Output LED Driver User Manual

65W PWM Output LED Driver
I D P V- 6 5 series

User's Manual

http://www.meanwell.com.cn/Upload/PDF/LED_EN.pdf



Contents

Features

- Constant Voltage PWM style output with frequency 1 KHz
- PCB type design
- Built-in active PFC function
- No load power consumption<0.5W
- Function options: 2 in 1 dimming (dim-to-off); Auxiliary DC output
- 3 years warranty

Applications

- LED strip lighting

- Indoor LED lighting
- LED decorative lighting
- LED architecture lighting

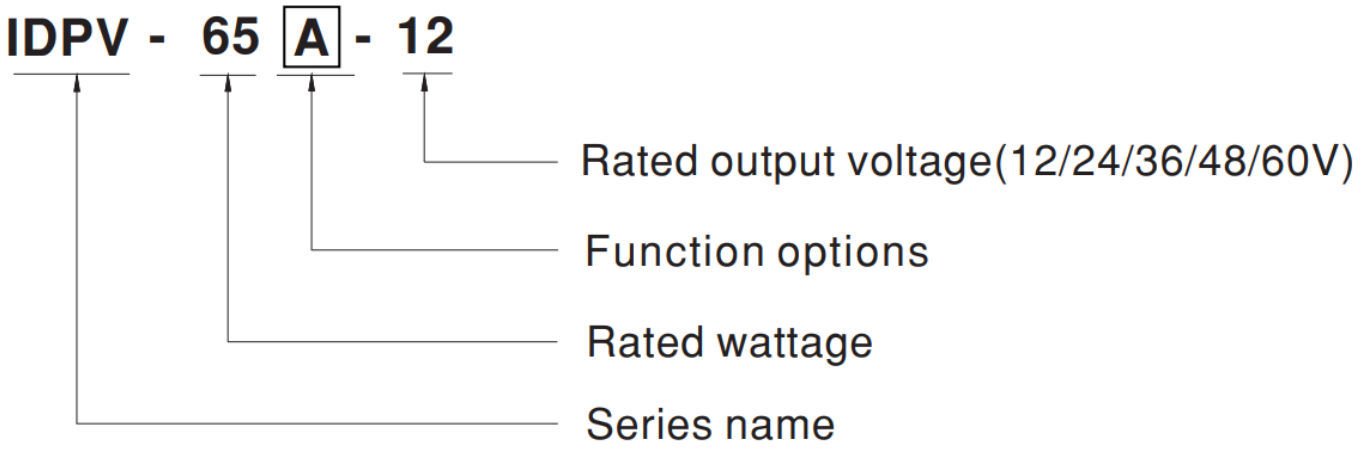
GTIN CODE

MW Search. haps://www.meanwell.corniserviceGTIN.aspx

Description

IDPV-65 series is a 65W PCB type AC/DC LED driver featuring the constant voltage mode PWM style output design. IDPV-65 operates from 180-295VAC and offers models with different rated voltages ranging between 12V and 60V. Thanks to the high efficiency of up to 90%, with the fanless design, the entire series is able to operate for -20 C-+40 C ambient temperature under free air convection. IDPV-65 is equipped with various function options, such as dimming methodologies, so as to provide design flexibility for the LED lighting systems.

Model Encoding



Type	Function
Blank	2 in 1 dimming (0-10VDC and 10V PWM)
A	2 in 1 dimming and Auxiliary DC output

SPECIFICATION

MODEL		IDPV-650-12	ippv.650-24	DPV-6036	IDPV-6C-48	IDPV-61:1-60
	DC VOLTAGE	12V	24V	36V	48V	60V

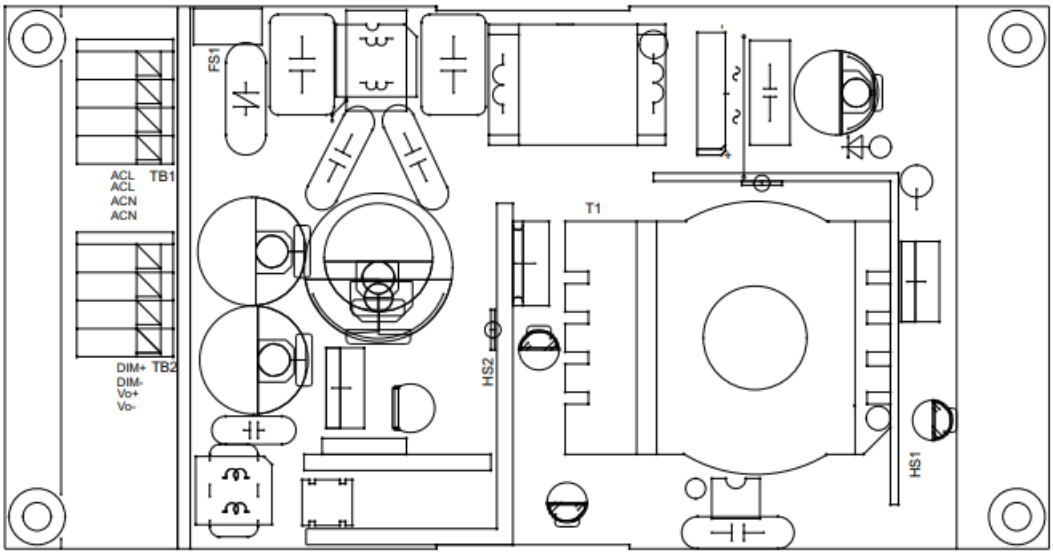
OUTPUT	RATED CURRENT	4.2A	2.4A	1.8A	1.35A	1.08A
	RATED POWER	50.4W	57.6W	64.8W	64.8W	64.8W
	DIMMING RANGE	0-100%				
	VOLTAGE TOLERANCE	± 10%				
	PWM FREQUENCY (Typ.)	1KFtz(± 20%)				
	SETUP TIME Note.3	500ms /**230VAC**				
	AUXILIARY DC OUTPUT **Nob**/	Nominal 12V(deviation 11.4-12.6)@50mA forA-Type only				
	VOLTAGE RANGE Note.2	180 – 295VAC 254 – 417VDC (Please refer to 'STATIC CHARACTERISTIC' section)				
	FREQUENCY RANGE	47 – 63Hz				
	POWER FACTOR crypt.)	PF>0.95/230VAC, PF>0.9/277VAC@ifull load (Please refer to the 'POWER FACTOR (PF) CHARACTERISTIC' section)				

INPUT	TOTAL HARMONIC DISTORTION	THD< 20%(@loadM0%/230VAC; @load.475%/277VAC) (Please refer to “TOTAL HARMONIC DISTORTION’ section)				
	EFFICIENCY (Typ.)	85%	I87%	I**88%**	I89%	I90%
	AC CURRENT (Typ.)	0.4A/230VAC 0.3A/277VAC				
	INRUSH CURRENT(Typ.)	COLD START 30A(twidth=270ps measured at 50% (peak) at 230VAC: Per NEMA 410				
	MAX. No. of PSUs on 16A CIRCUIT **BREAKER**	**32** units (circuit breaker of type B)/ 32 units (circuit breaker of type C) at 230VAC				
	LEAKAGE CURRENT	<0.75mA/ 277VAC				
	NO LOAD POWER CONSUMPTION	<0.5W				
PROTECTION	SHORT CIRCUIT	Shutdown **0**/**P** voltage, re-power on to recovery				
	OVER CURRENT	105 -115%				
		Protection type : Hiccup mode, recovers automatically after fault condition is removed				

ENVIRONMENT	WORKING TEMP.	Ta=-20 – +40 **C** (Please refer to" OUTPUT LOAD vs TEMPERATURE' section)
	WORKING HUMIDITY	20 – 90% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 – +80˚C, 10 – 95% RH
	TEMP. COEFFICIENT	±0.03%/C (0 – 40˚C)
	VIBRATION	10 – 500Hz, 2G 10min./Tricycle, period for 60min . each along X. Y. Z axes
SAFETY & EMC	SAFETY STANDARDS	UL8750.CSA C22.2 NO.250.13-12;ENEC EIS EN/ EN61347-1 & BS EN!EN61347-2-13 independent, BS EN!EN62384approved
	WITHSTAND VOLTAGE	I/P-0/P:3.75KVAC
	ISOLATION RESISTANCE	I/P-0/P:100M Ohms / 500VDC / 25˚Ci 70% RH
	EMC EMISSION	Compliance to BS E N/E N55015, BS E N/EN61000-3-2 Class C (tRbad:=60%); BS EN/EN61000-3-3
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547.1ight industry level(surge immunity: Lthe-Line:1KV)
	MTBF	3720.1K hrs min. Telcordia SR-332 (Bellcore); 398.8K hrs min. MIL-HDBK-217F (25˚C)

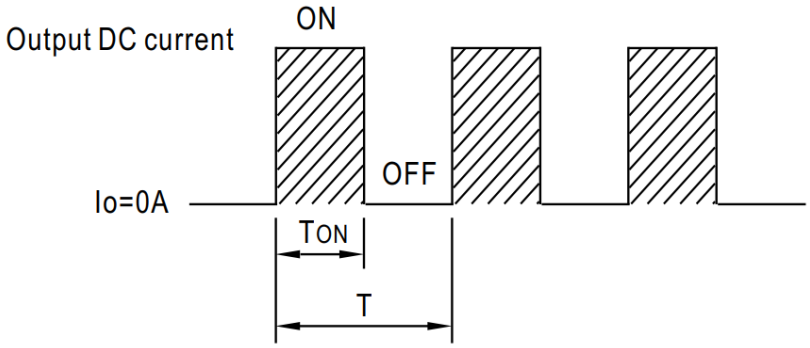
OTHERS	DIMENSION	130’67.5’22mm (L’IN*F1)
	PACKING	0.15Kg;81pcs/13Kg/ 1.46CUFT
NOTE	1. All parameters NOT specially mentioned we measured at 230VAC input, rated current, and 25’C of ambient temperature. 2. Deleting may be needed under low input voltages. Please refer to b ‘STATIC CHARACTERISTIC’ sections tar details. 3. Length of setup time is measured at cold first start. Turning OWOFF the driver may lead to an increase in the setup time. 4. Aux. 12V will be damaged with a short circuit It will not be available with dimming off or output no load condition. 5. The (liver is considered a component that a be operated in combination with final equipment Since EMC performance will be affected **by** the complete installation. the final equipment manufacturers must requalify EMC Directive on the complete installation again. ※ Product Liability Disclaimer: For detailed information, please refer to **https://www.meanwell.con/servicedisclaimer.aspx**	

DIMMING OPERATION



※ Dimming principle for PWM style output

- Dimming is achieved by varying the duty cycle of the output current.

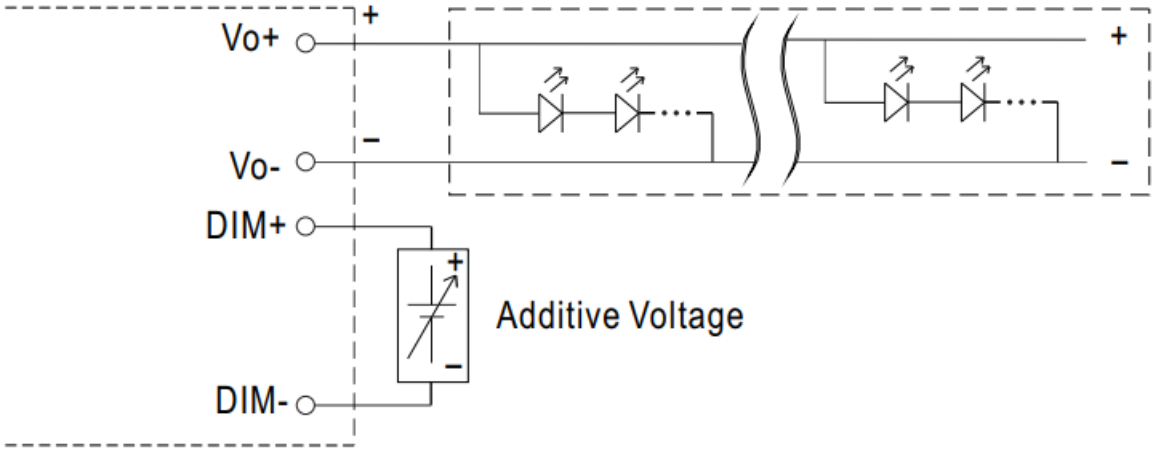


$$\text{Duty cycle}(\%) = \frac{T_{ON}}{T} \times 100\%$$

Output PWM frequency : 1KHz (±20%)

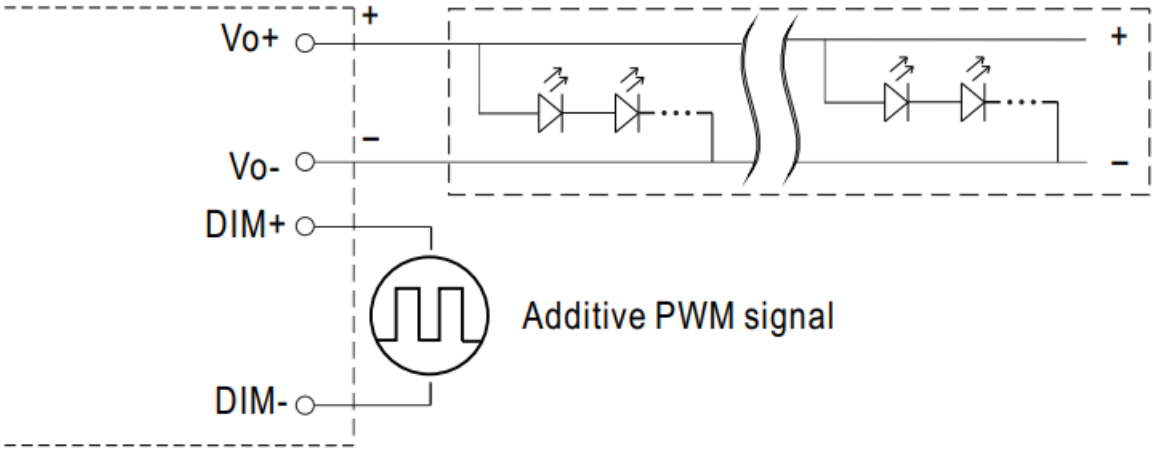
※ 2 in 1 dimming function

◎ Applying additive 0 ~ 10VDC

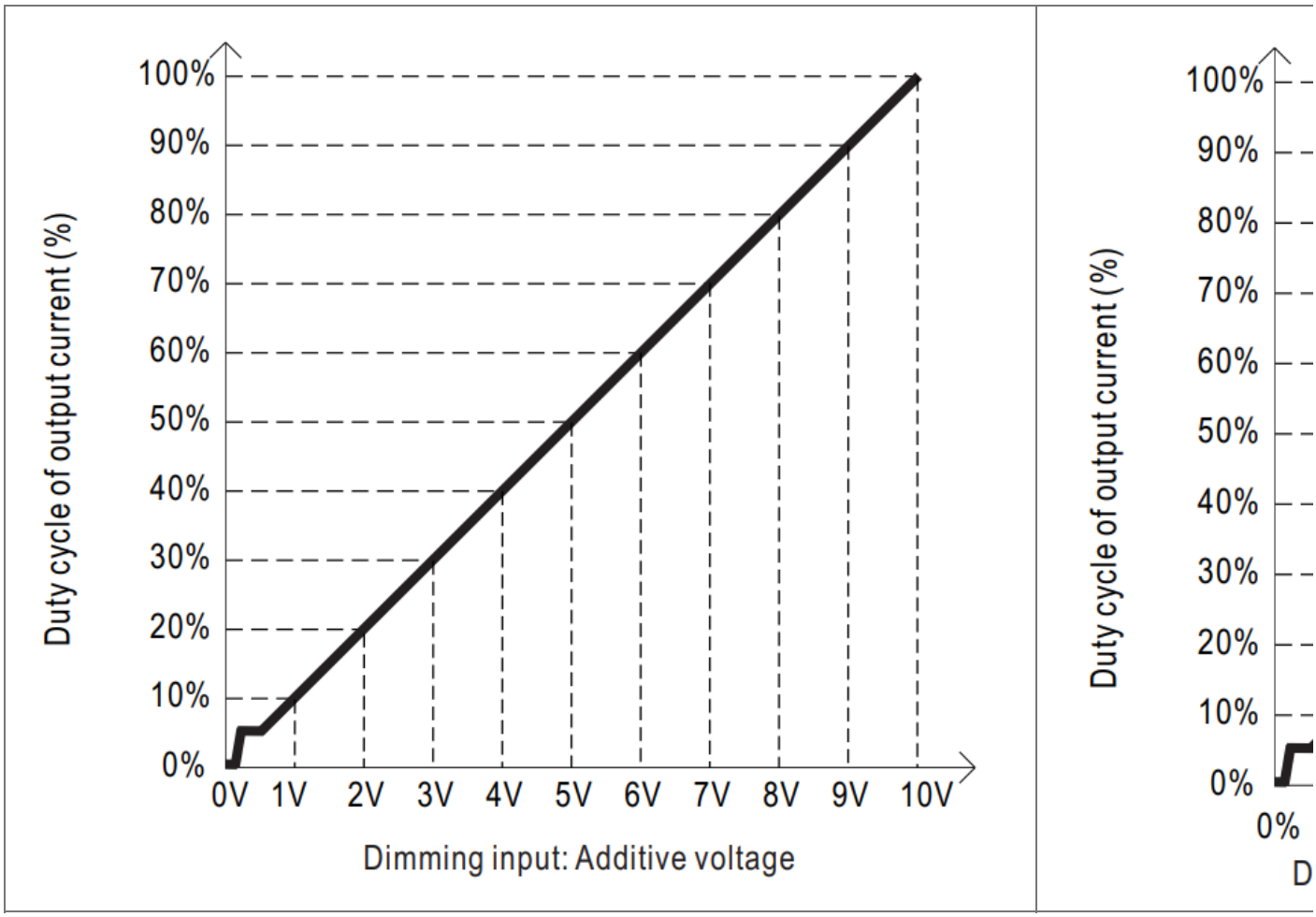


"DO NOT connect "DIM- to Vo-"

◎ Applying additive 10V PWM signal (frequency range 300Hz~3KHz):



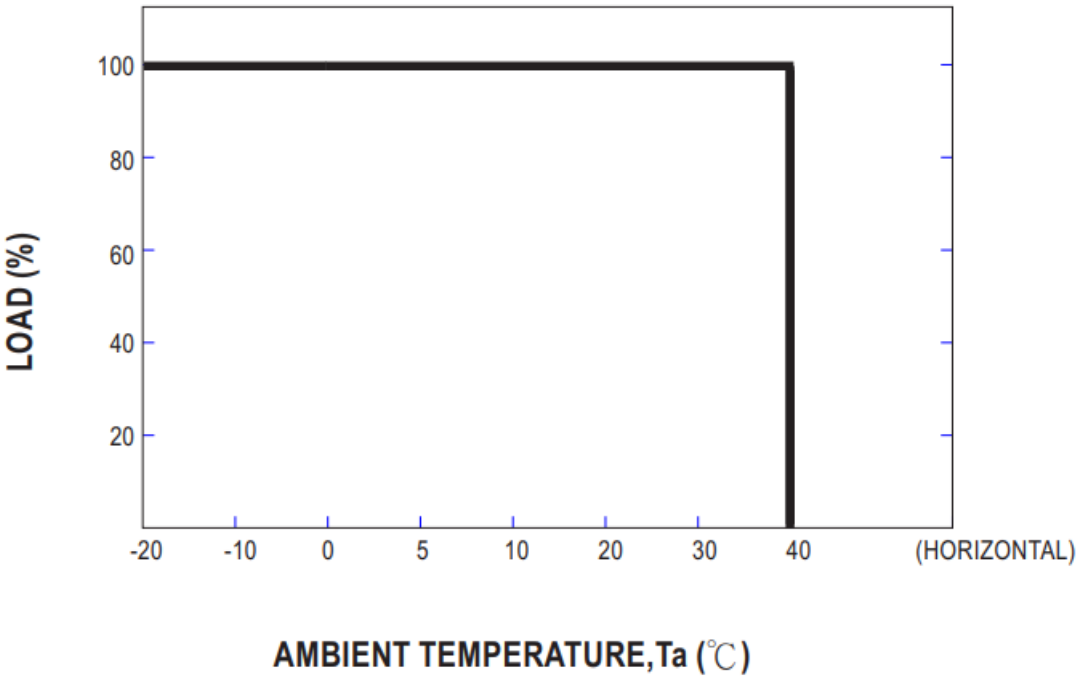
"DO NOT connect "DIM- to Vo-"



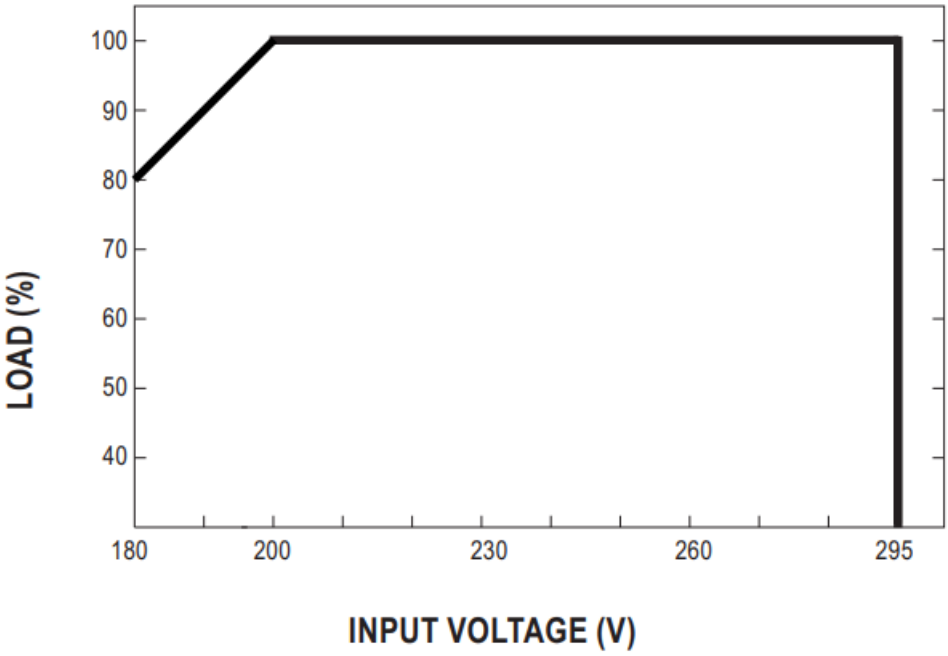
Note

1. Min. duty cycle of output current is about 8% and the output current is not defined when 0%< Iout<8%.
2. The duty cycle of output current could drop down to 0% when dimming input is about 0Vdc or 10V PWM signal with 0% duty cycle.
3. To ensure the dimming effect, total power must be over 45W at 100% duty cycle.

OUTPUT LOAD vs TEMPERATURE

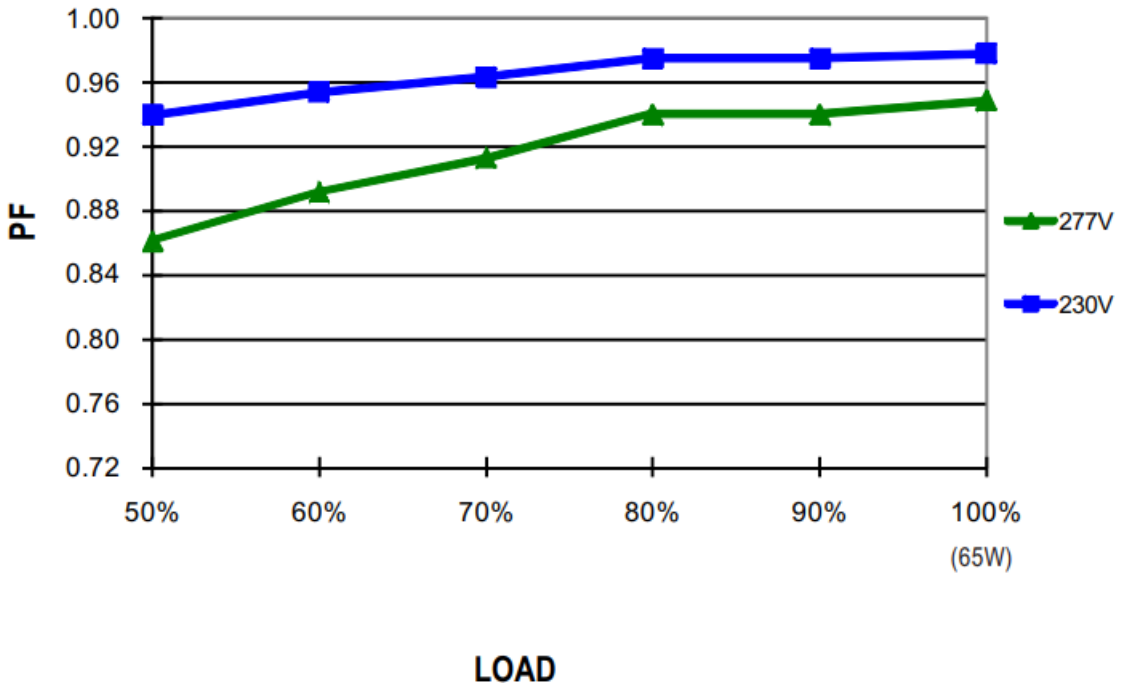


STATIC CHARACTERISTIC



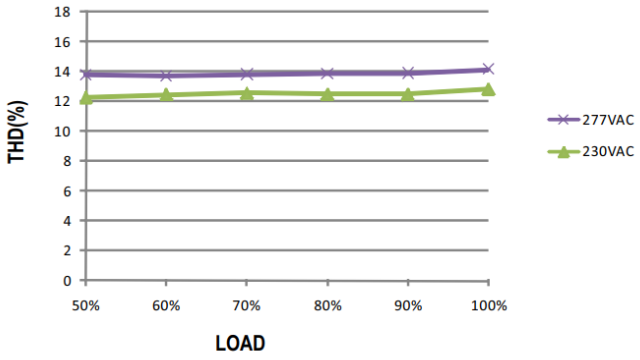
※ De-rating is needed under low input voltage.

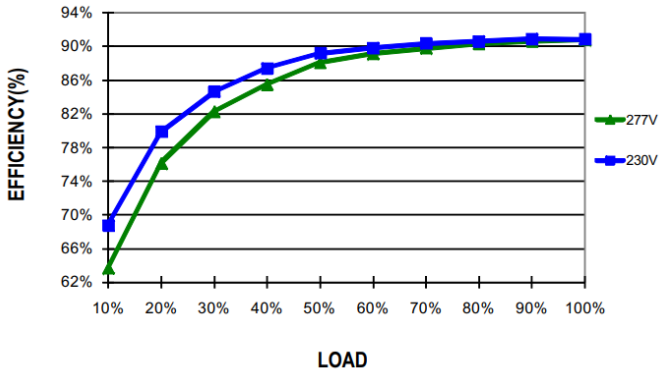
POWER FACTOR (PF) CHARACTERISTIC



TOTAL HARMONIC DISTORTION (THD)

※ 60V Model





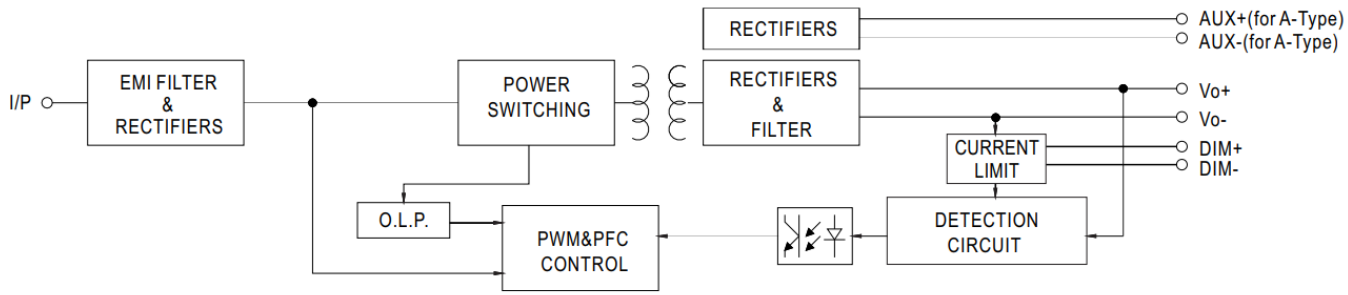
EFFICIENCY vs LOAD

IDPV-65 series possess superior working efficiency that up to 90% can be reached in field applications.

※ 60V Model

BLOCK DIAGRAM

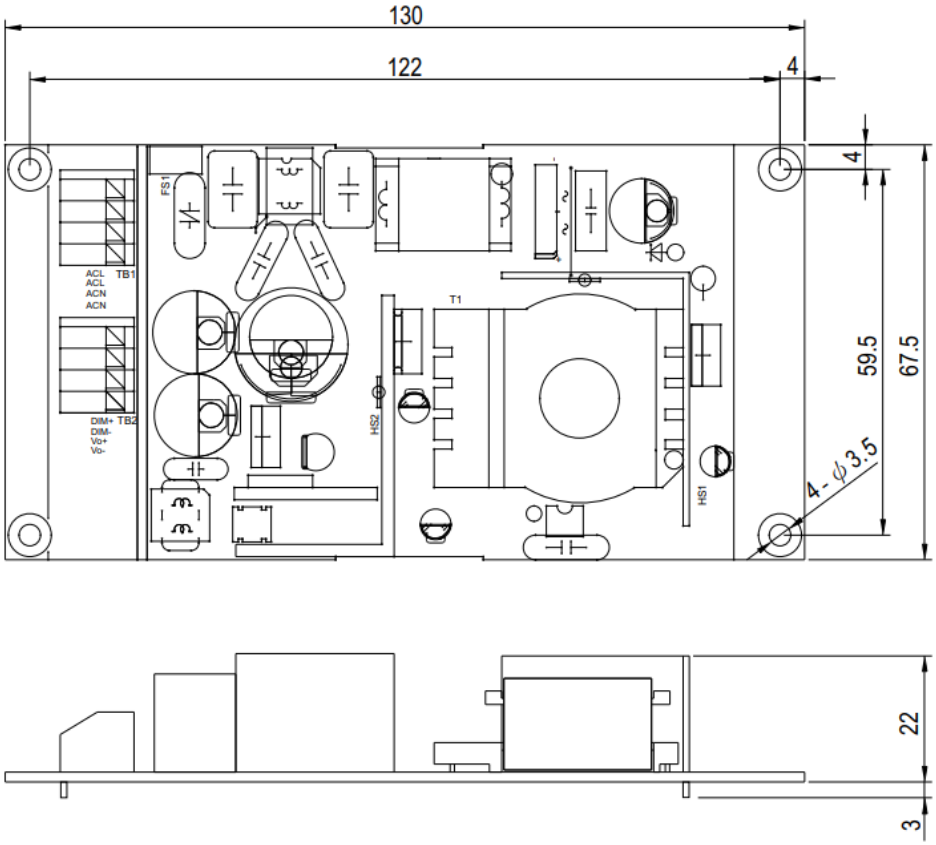
fosc : 70-150KHz



MECHANICAL SPECIFICATION

※ Blank-Type

Unit:mm



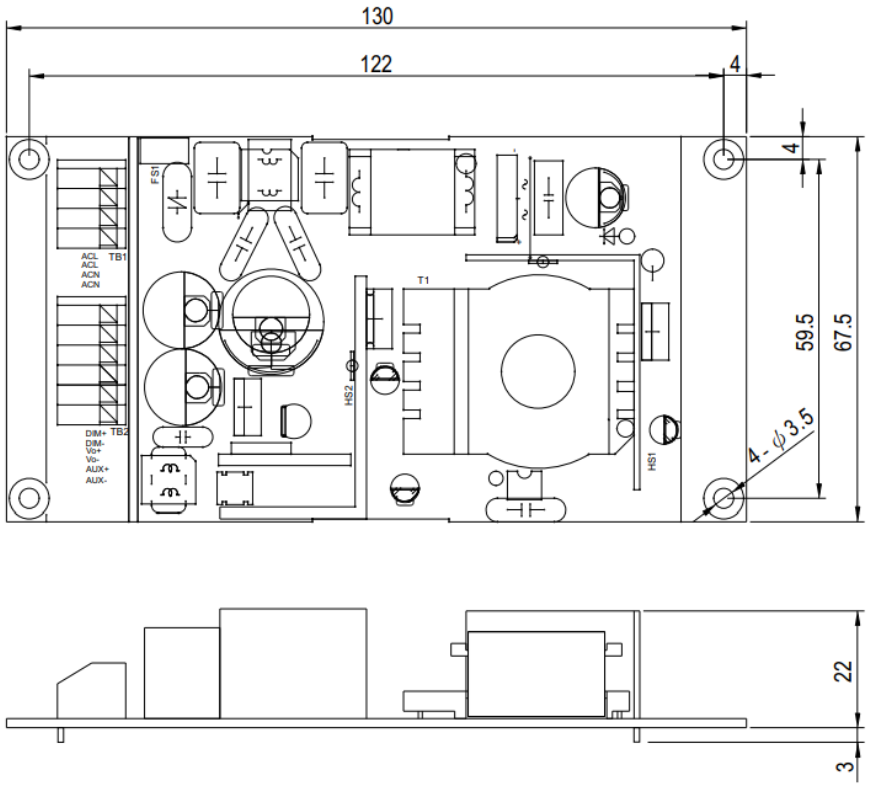
Terminal Pin No. Assignment(TB1)

Pin No.	Assignment
1	A
2	A
3	A
4	A

Terminal Pin No. Assignment(TB2)

Pin No.	Assignment
1	
2	
3	
4	

❊ A-Type



Terminal Pin No. Assignment(TB1)

Pin No.	Assignment
1	ACL
2	ACL
3	ACN
4	ACN

Terminal Pin No. Assignment(TB2)

Pin No.	Assignment	Pin No.	
1	DIM+	4	
2	DIM-	5	
3	Vo+	6	

INSTALLATION MANUAL

Please refer to: http://www.meanwell.com/manual.html

File Name:IDPV-65-SPEC 2022-02-18

SELV (optional)

Documents / Resources

	Mean Well IDPV-65 65W PWM Output LED Driver [pdf] User Manual Output PWM, LED, Driver, IDPV-65

References

- Installation Manual-MEAN WELL Switching Power Supply Manufacturer
- Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer