



65W PWM Output LED Driver

IDLV-65 series



## ■ Features

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

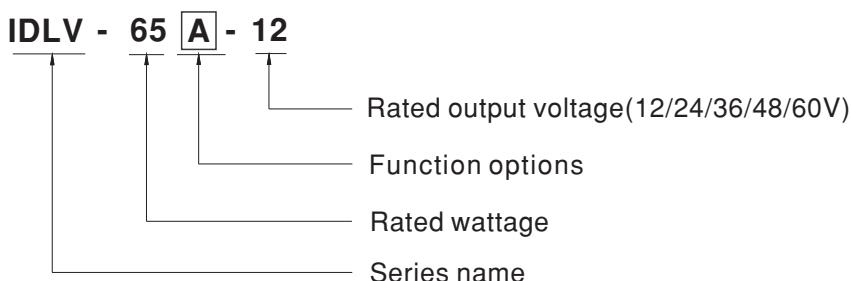
## ■ Applications

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

## ■ Description

IDLV-65 series is a 65W AC/DC LED driver featuring the constant voltage mode PWM style output design. IDLV-65 operates from 180~295VAC and offers models with different rated voltage ranging between 12V and 60V. Thanks to the high efficiency up to 90%, with the fanless design, the entire series is able to operate for -20°C~+85°C case temperature under free air convection. IDLV-65 is equipped with various function options, such as dimming methodologies, so as to provide the design flexibility for LED lighting system.

## ■ Model Encoding



Type	Function	Note
Blank	2 in 1 dimming (0~10VDC and 10V PWM)	In Stock
A	2 in 1 dimming and Auxiliary DC output	In Stock



## SPECIFICATION

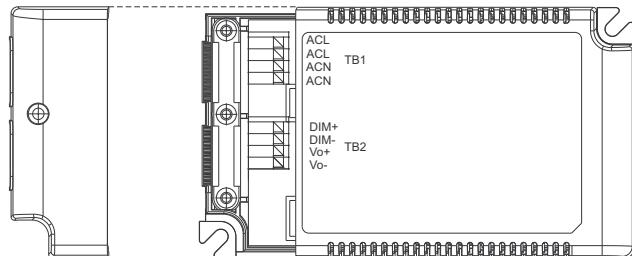
MODEL	IDLV-65□-12	IDLV-65□-24	IDLV-65□-36	IDLV-65□-48	IDLV-65□-60
OUTPUT	DC VOLTAGE	12V	24V	36V	48V
	RATED CURRENT	4.2A	2.4A	1.8A	1.35A
	RATED POWER	50.4W	57.6W	64.8W	64.8W
	DIMMING RANGE	0~100%			
	VOLTAGE TOLERANCE	±10%			
	PWM FREQUENCY (Typ.)	1KHz(±20%)			
	SETUP TIME Note.3	500ms / 230VAC			
INPUT	AUXILIARY DC OUTPUT Note.4	Nominal 12V(deviation 11.4~12.6)@50mA for A-Type only			
	VOLTAGE RANGE Note.2	180 ~ 295VAC (Please refer to "STATIC CHARACTERISTIC" section)			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	PF>0.95/230VAC, PF>0.9/277VAC@full load (Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)			
	TOTAL HARMONIC DISTORTION	THD< 20%(@load≥60%/230VAC; @load≥75%/277VAC) (Please refer to "TOTAL HARMONIC DISTORTION" section)			
	EFFICIENCY (Typ.)	85%	87%	88%	89%
	AC CURRENT (Typ.)	0.4A/230VAC	0.3A/277VAC		
	INRUSH CURRENT(Typ.)	COLD START 30A(twidth=270μs measured at 50% Ipeak) 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			
PROTECTION	LEAKAGE CURRENT	<0.75mA / 277VAC			
	NO LOAD POWER CONSUMPTION	<0.5W for Blank-Type, <0.5W for A-Type			
	SHORT CIRCUIT	Shut down O/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.	Tcase=-20 ~ +85°C (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)			
	MAX. CASE TEMP.	Tcase=+85°C			
	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./1cycle, period for 60min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS	UL8750,CSA C22.2 NO.250.13-12; BS EN/EN/AS/NZS 61347-1 & BS EN/EN/AS/NZS 61347-2-13 independent, BS EN/EN62384,GB19510.1,GB19510.14, BIS IS15885(for IDLV-65-12,24,48 only), EAC TP TC 004 approved			
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC			
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH			
	EMC EMISSION	Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C (@load≥60%) ; BS EN/EN61000-3-3, GB17743, GB17625.1, EAC TP TC 020			
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11; BS EN/EN61547, light industry level(surge immunity:Line-Line:1KV), EAC TP TC 020			
OTHERS	MTBF	398.7K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	130*75*25mm (L*W*H)			
	PACKING	0.23Kg;54pcs/13.5Kg/ 0.96CUFT			
NOTE	1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature. 2. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details. 3. Length of set up time is measured at cold first start. Turning ON/OFF the driver may lead to increase of the set up time. 4. Aux. 12V will be damaged with short circuit; It will not be available with dimming off or output no load condition. 5. The driver is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 6. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>				



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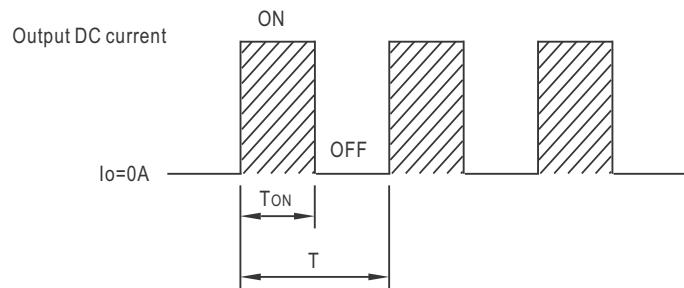
IDLV-65 series

### DIMMING OPERATION



#### ※ Dimming principle for PWM style output

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

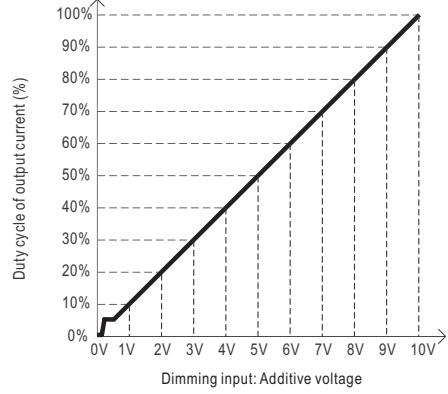
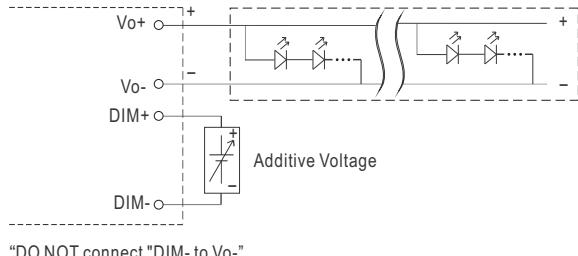


$$\text{Duty cycle}(\%) = \frac{T_{ON}}{T} \times 100\%$$

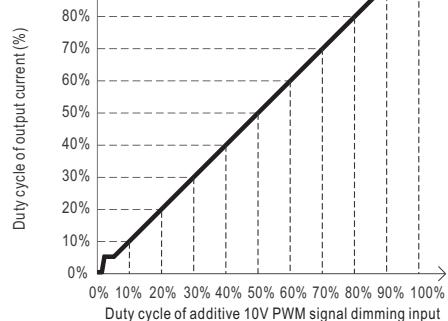
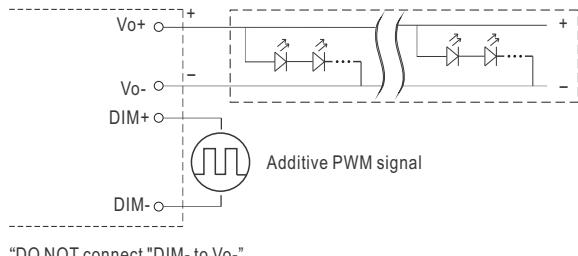
Output PWM frequency : 1KHz(±20%)

#### ※ 2 in 1 dimming function

- Applying additive 0 ~ 10VDC



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

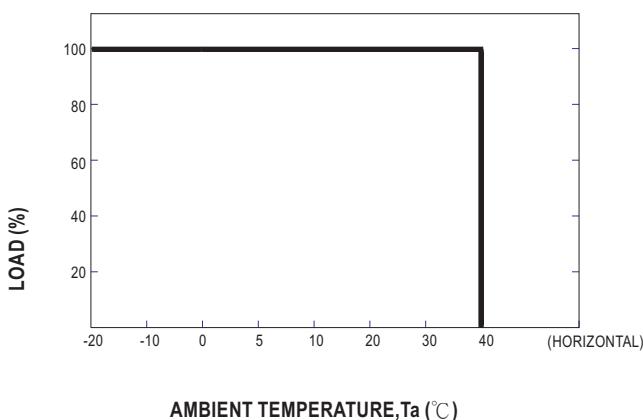


Note : 1. Min. duty cycle of output current is about 8% and the output current is not defined when  $0\% < I_{out} < 8\%$ .

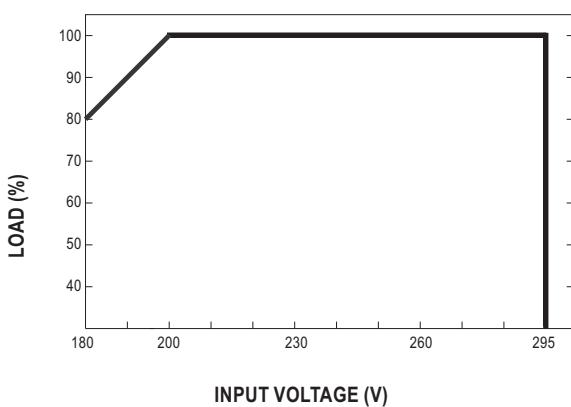
2. The duty cycle of output current could drop down to 0% when dimming input is about 0Vdc or 10V PWM signal with 0% duty cycle.

3. To ensure the dimming effect, total power must be over 45W at 100% duty cycle.

## ■ OUTPUT LOAD vs TEMPERATURE

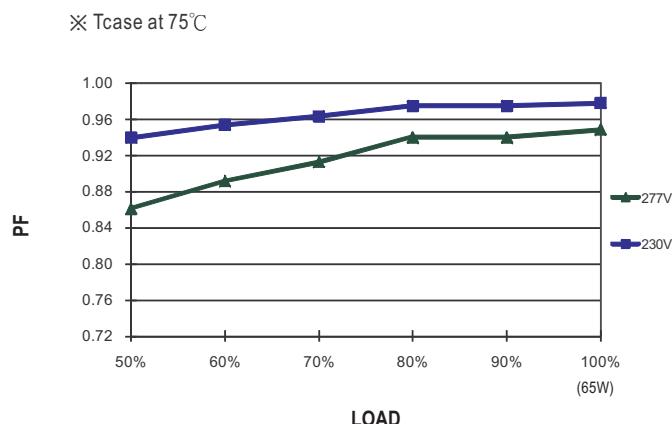


## ■ STATIC CHARACTERISTIC



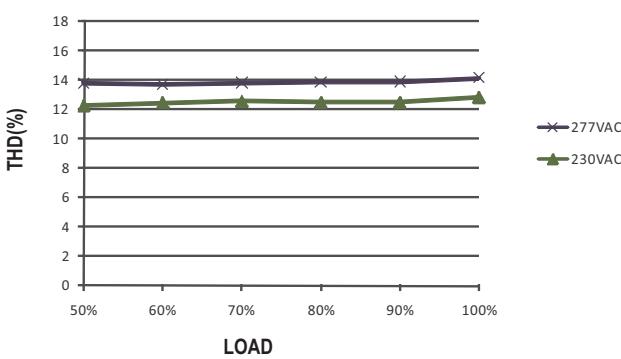
※ De-rating is needed under low input voltage.

## ■ POWER FACTOR (PF) CHARACTERISTIC



## ■ TOTAL HARMONIC DISTORTION (THD)

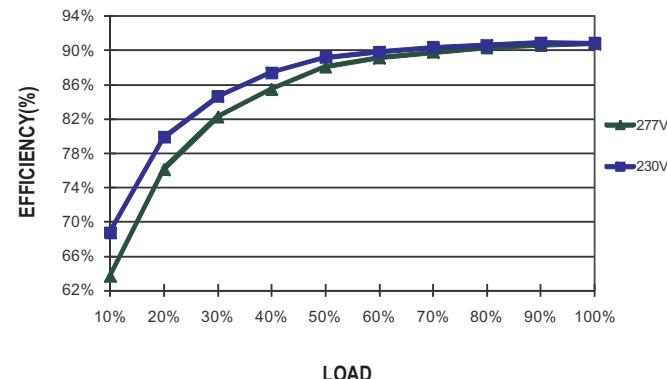
※ 60V Model,  $T_{case}$  at 75°C



## ■ EFFICIENCY vs LOAD

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

※ 60V Model,  $T_{case}$  at 75°C



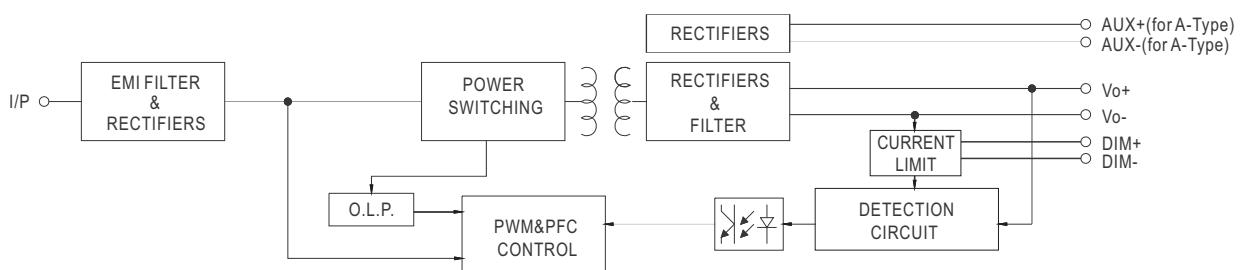


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## ■ BLOCK DIAGRAM

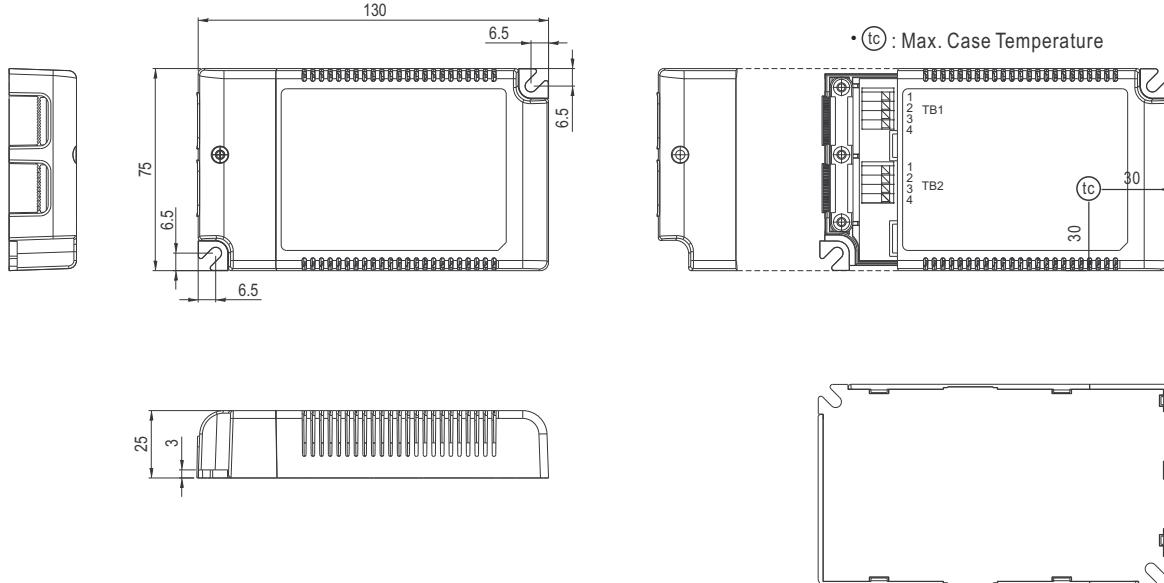
fosc : 70-150KHz



## ■ MECHANICAL SPECIFICATION

※ Blank-Type

Case No.IDLC-65A Unit:mm



NOTE: Please use wires with a cross section of 0.75~1.5mm<sup>2</sup> for TB1  
and wires with a cross section of 0.5~1.5mm<sup>2</sup> for TB2.

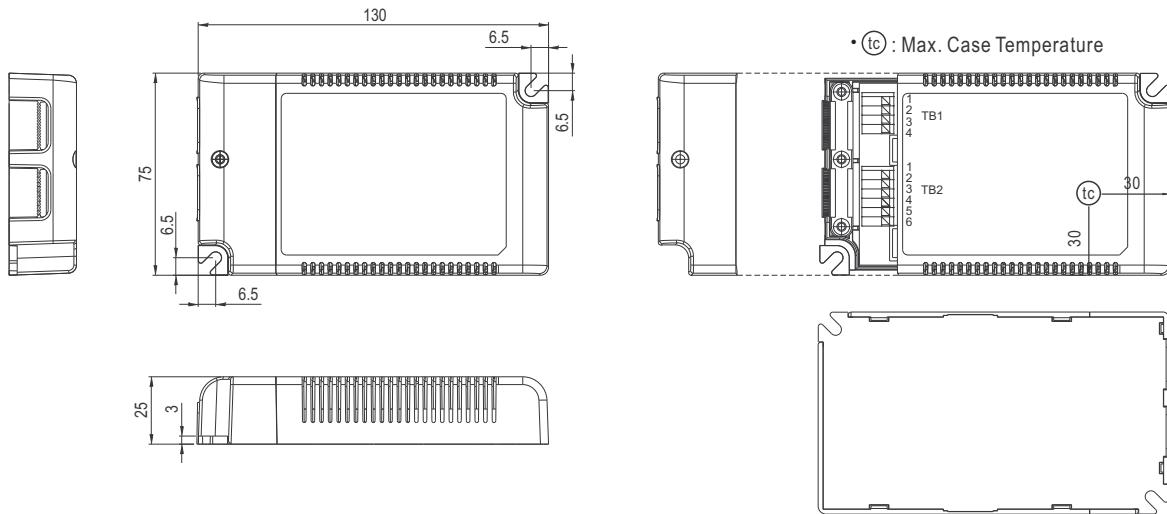
Terminal Pin No. Assignment(TB1)

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

Terminal Pin No. Assignment(TB2)

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

※ A-Type



NOTE: Please use wires with a cross section of 0.75~1.5mm<sup>2</sup> for TB1 and wires with a cross section of 0.5~1.5mm<sup>2</sup> for TB2.

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.	Assignment
1	DIM+	4	Vo-
2	DIM-	5	AUX+
3	Vo+	6	AUX-

## ■ INSTALLATION MANUAL

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