



## ■ Features

- Constant Current mode output
- Flicker free design
- Plastic housing with class II design
- Built-in active PFC function
- No load power consumption < 0.5W (Blank-Type)
- IP67 rating for indoor or outdoor installations
- Function options: 2 in 1 dimming (dim-to-off); Auxiliary DC output
- 3 years warranty

## ■ Applications

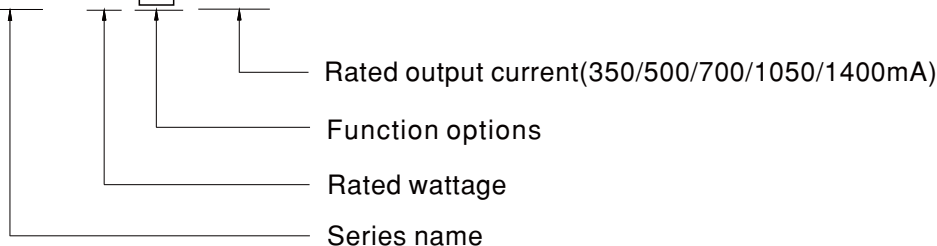
- LED panel lighting
- LED flood lighting
- Indoor LED lighting

## ■ Description

ODLC-45 series is a 45W LED AC/DC driver featuring the constant current mode output with flicker free design. ODLC-45 operates from 90~295VAC and offers models with different rated current ranging between 350mA and 1400mA. Thanks to the efficiency up to 86%, with the fanless design, the entire series is able to operate for -20°C~+85°C case temperature under free convection. The design of plastic housing and IP67 ingress protection level allows this series to fit indoor wet applications. ODLC-45 is equipped with various function options, such as dimming methodologies, so as to provide the optimal design flexibility for lighting system.

## ■ Model Encoding

ODLC- 45 **A** - 350



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

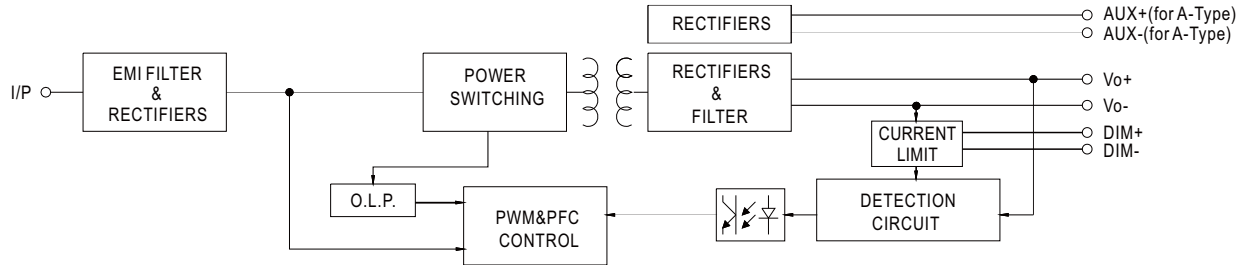


## SPECIFICATION

| MODEL        |  | ODLC-45□-350   | ODLC-45□-500 | ODLC-45□-700 | ODLC-45□-1050 | ODLC-45□-1400 |
|--------------|--|--|--------------|--------------|---------------|---------------|
| OUTPUT       | RATED CURRENT  | 350mA  | 500mA        | 700mA        | 1050mA        | 1400mA        |
|              | RATED POWER  | 33.25W   | 45W          | 44.8W        | 45.15W        | 44.8W         |
|              | CONSTANT CURRENT REGION <small>Note.2</small>  | 57 ~ 95V   | 54 ~ 90V     | 38 ~ 64V     | 26 ~ 43V      | 19 ~ 32V      |
|              | OPEN CIRCUIT VOLTAGE <sub>(max.)</sub>   | 118V   | 115V         | 84V          | 63V           | 50V           |
|              | CURRENT RIPPLE   | 5% max. @rated current   |              |              |               |               |
|              | CURRENT TOLERANCE  | ±7.0%  |              |              |               |               |
|              | SETUP TIME <small>Note.4</small>   | 500ms / 230VAC 1200ms/115VAC   |              |              |               |               |
|              | AUXILIARY DC OUTPUT <small>Note.5</small>  | Nominal 12V(deviation 11.4~12.6)@50mA for A-Type only  |              |              |               |               |
| INPUT        | VOLTAGE RANGE <small>Note.3</small>  | 90 ~ 295VAC 127 ~ 417VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)  |              |              |               |               |
|              | FREQUENCY RANGE  | 47 ~ 63Hz  |              |              |               |               |
|              | POWER FACTOR (Typ.)  | PF>0.95/115VAC, PF>0.92/230VAC, PF>0.9/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)        |              |              |               |               |
|              | TOTAL HARMONIC DISTORTION  | THD< 20%(@load≥60%/230VAC; @load≥75%/277VAC)<br>(Please refer to "TOTAL HARMONIC DISTORTION" section)                          |              |              |               |               |
|              | EFFICIENCY (Typ.)  | 86%  | 85%          | 85%          | 84%           | 83%           |
|              | AC CURRENT   | 0.6A/115VAC 0.4A/230VAC 0.3A/277VAC  |              |              |               |               |
|              | INRUSH CURRENT (Typ.)  | COLD START 30A(twidth=100μs 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  |              |              |               |               |
|              | LEAKAGE CURRENT  | <0.75mA / 277VAC   |              |              |               |               |
|              | NO LOAD POWER CONSUMPTION  | <0.5W for Blank-Type   |              |              |               |               |
| PROTECTION   | SHORT CIRCUIT  | 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(type"HL"),CSA C22.2 NO.250.13-12;ENEC EN61347-1 & EN61347-2-13 independent, EN62384,GB19510.1,GB19510.14; IP67 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 EN55015, EN61000-3-2 Class C (@load≥ 60%) ; EN61000-3-3,GB17743,GB17625.1  |              |              |               |               |
|              | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11; EN61547, light industry level(surge immunity:Line-Line:1KV)                            |              |              |               |               |
| OTHERS       | MTBF   | 408.8Khrs min. MIL-HDBK-217F (25°C)  |              |              |               |               |
|              | DIMENSION  | 111*77*28.5mm(L*W*H)   |              |              |               |               |
|              | PACKING  | 0.42Kg; 24pcs/ 11Kg/ 0.72CUFT  |              |              |               |               |
| NOTE         | <ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25°C of ambient temperature.</li> <li>Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.</li> <li>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.</li> <li>There is no design of short circuit protection for the Auxiliary DC output; this function can not be used when dimming input terminals(DIM+,DIM-) are short circuit or when it is no load or short circuit at output(Vo+,Vo-).</li> <li>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-quality EMC Directive on the complete installation again.</li> </ol> |  |              |              |               |               |

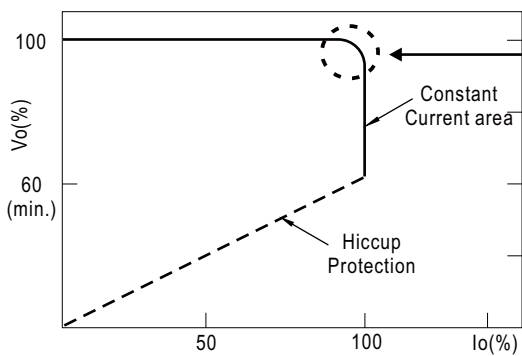
■ Block Diagram

fosc : 70KHz



■ DRIVING METHODS OF LED MODULE

※ This series works in constant current mode to directly drive the LEDs.

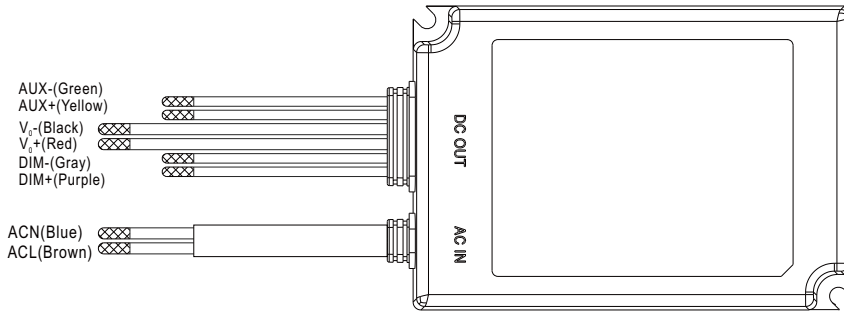


Typical output current normalized by rated current (%)

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.  
Should there be any compatibility issues, please contact MEAN WELL.

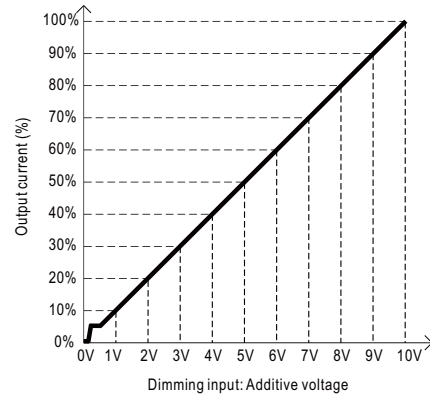
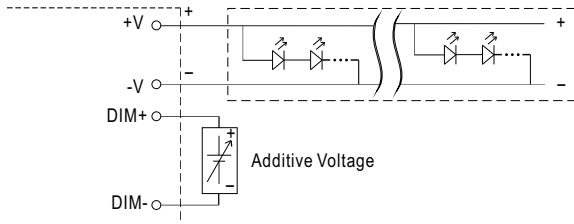
**■ DIMMING OPERATION**

※ 2 in 1 dimming function

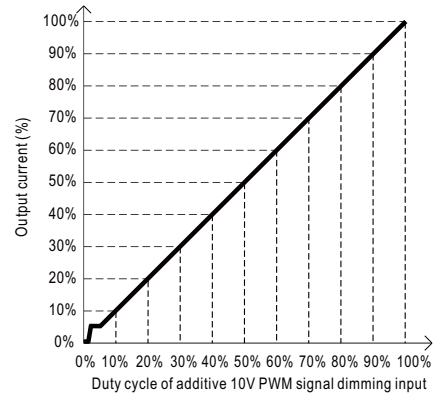
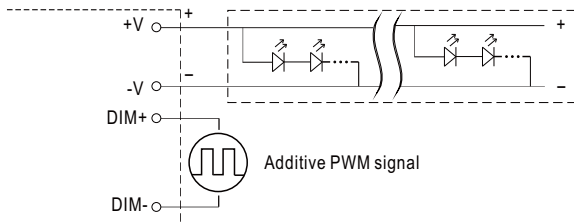


- Output constant current level can be adjusted by applying one of the two methodologies between DIM+ and DIM-: 0 ~ 10VDC, or 10V PWM signal.
- Direct connecting to LEDs is suggested. It is not suitable to be used with additional drivers.

◎ Applying additive 0 ~ 10VDC

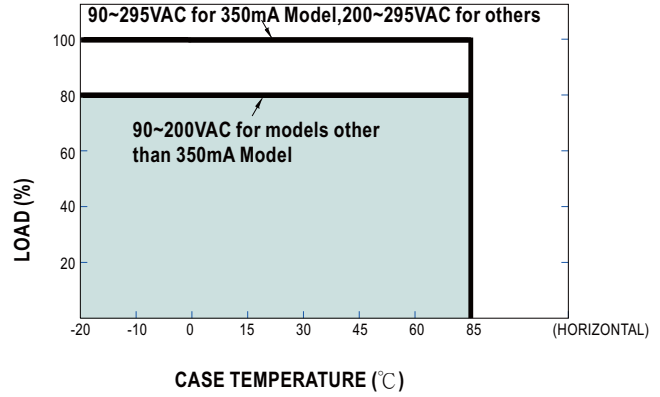
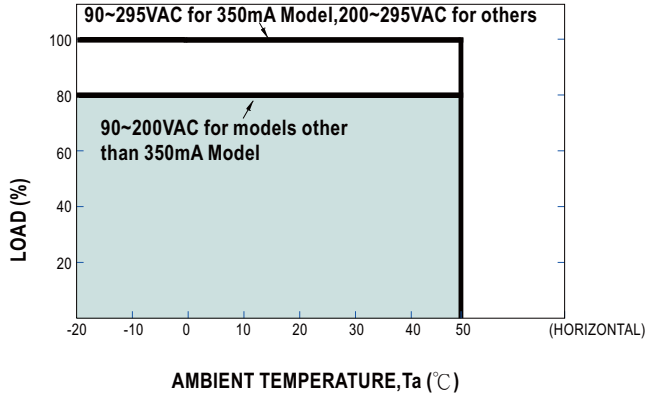


◎ Applying additive 10V PWM signal (frequency range 300Hz ~ 3KHz):

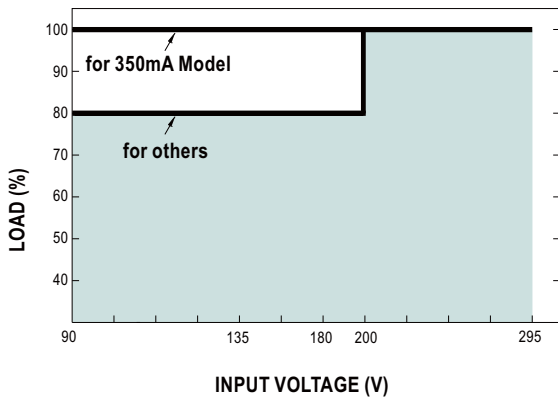


- Note : 1. Min. dimming level is about 8% and the output current is not defined when 0% < I<sub>out</sub> < 8%.  
 2. The output current could drop down to 0% when dimming input is about 0Vdc or 10V PWM signal with 0% duty cycle.

### OUTPUT LOAD vs TEMPERATURE

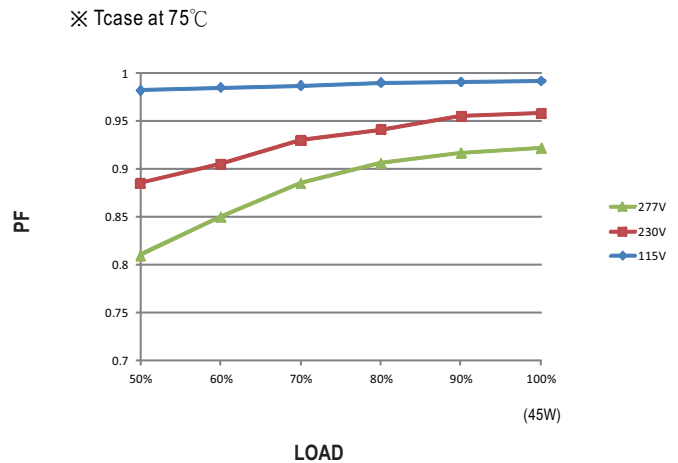


### STATIC CHARACTERISTIC

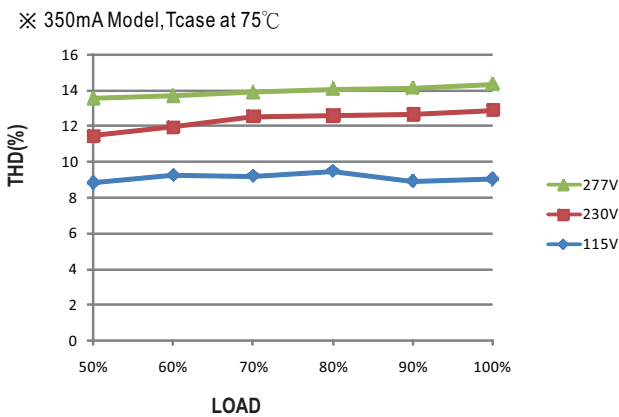


※ De-rating is needed under low input voltage.

### POWER FACTOR (PF) CHARACTERISTIC



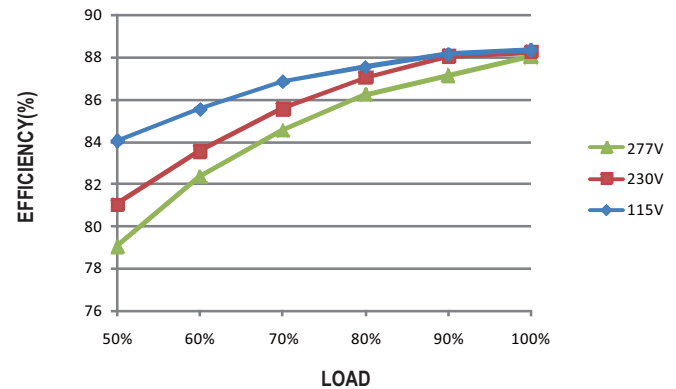
### TOTAL HARMONIC DISTORTION (THD)



### EFFICIENCY vs LOAD

ODLC-45 series possess superior working efficiency that up to 86% can be reached in field applications.

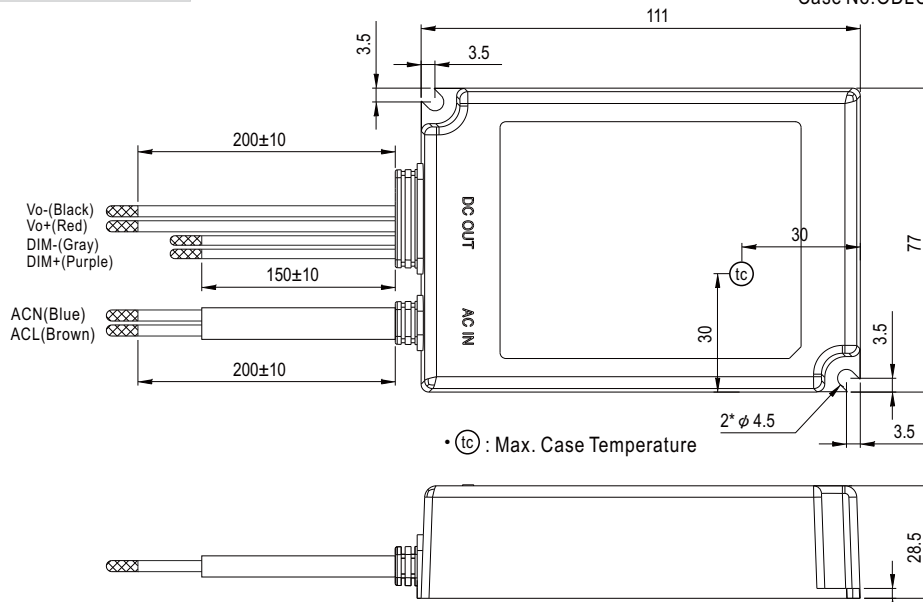
※ 350mA Model,  $T_{case}$  at 75°C



**MECHANICAL SPECIFICATION**

Case No.ODLC-45A Unit:mm

※ Blank-Type:



• (tc) : Max. Case Temperature

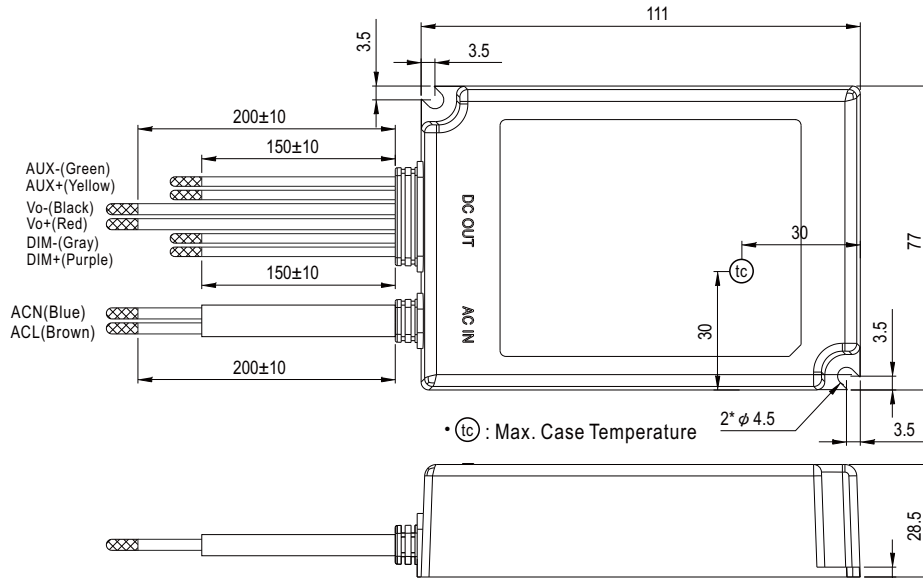
AC wire No. Assignment(AC IN)

|            |           |
|------------|-----------|
| ACN(Blue)  | SVT 18AWG |
| ACL(Brown) | SVT 18AWG |

DC wire No. Assignment(DC OUT)

|              |              |
|--------------|--------------|
| Vo-(Black)   | UL1007 18AWG |
| Vo+(Red)     | UL1007 18AWG |
| DIM-(Gray)   | UL1007 22AWG |
| DIM+(Purple) | UL1007 22AWG |

※ A-Type:



• (tc) : Max. Case Temperature

AC wire No. Assignment(AC IN)

|            |           |
|------------|-----------|
| ACN(Blue)  | SVT 18AWG |
| ACL(Brown) | SVT 18AWG |

DC wire No. Assignment(DC OUT)

|              |              |
|--------------|--------------|
| AUX-(Green)  | UL1007 22AWG |
| AUX+(Yellow) | UL1007 22AWG |
| Vo-(Black)   | UL1007 18AWG |
| Vo+(Red)     | UL1007 18AWG |
| DIM-(Gray)   | UL1007 22AWG |
| DIM+(Purple) | UL1007 22AWG |

**INSTALLATION MANUAL**

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