



# LDM60S SERIES

## 60 WATT SINGLE OUTPUT

### AC-DC LED DRIVER



## Features

- \* Universal Input 90-305VAC
- \* High Efficiency up to 90%
- \* Meets EN55015, EN61000-3-2 Class C
- \* Meets EN61347-1, EN61347-2-13
- \* Meets UL8750
- \* Dimming Input Range 1%~100%
- \* Active PFC Function
- \* IP67 Design for Indoor or Outdoor Installations (note7)
- \* Max. Output power 60W
- \* C.C+C.V Function
- \* Dimming function: 1~10Vdc, PWM (note10) and Resistance or DALI (Optional)
- \* Protections: Short Circuit, Over Current Over Voltage and Over Temperature
- \* No Load Power Consumption < 0.75W (note11)
- \* 3 Years Warranty



## LDM60 Series

MODEL	Output Voltage	Output Current Note.6	Ripple (mV p-p) Note.1	Voltage Accuracy Note.2	Line Regulation Note.3	Load Regulation Note.4	Constant Current Region	Current Adj. Rang (Optional) Note.5	Voltage Adj. Rang (Optional) Note.5	%EFF. (Typ.) Note.8
LDM60S120	12V	5.00A	120mV	±1%	±1%	±2%	6.5V~12V	3A~5A	10.8V~13.2V	87%
LDM60S240	24V	2.50A	120mV	±1%	±1%	±2%	13V~24V	1.5A~2.5A	21.6V~26.4V	88%
LDM60S360	36V	1.67A	120mV	±1%	±1%	±2%	19V~36V	1.0A~1.67A	32.4V~39.6V	89%
LDM60S480	48V	1.25A	120mV	±1%	±1%	±2%	26V~48V	0.75A~1.25A	43.2V~52.8V	90%

## Ordering information

### Model No.

LDM60SXXX

CODE: xx

#### 01: Constant Current Mode (IP67)

- No dimming
- No adjustment for output voltage and output current

#### 02: Constant Current Mode (IP65)

- No dimming
- With adjustment for output voltage and output current

#### 03: Constant Current Mode (IP67)

- Dimming: 1~10Vdc or PWM and Resistance
- No adjustment for output voltage and output current

#### 03A: Constant Current Mode (IP65)

- Dimming: 1~10Vdc or PWM and Resistance
- With adjustment for output voltage and output current

#### 04: Constant Current Mode (IP67)

- Dimming: DALI
- No adjustment for output voltage and output current

#### 04A: Constant Current Mode (IP65)

- Dimming: DALI
- With adjustment for output voltage and output current

# Specifications

## INPUT SPECIFICATIONS:

Voltage ..... 90~305Vac or 127~420Vdc  
 Frequency ..... 47 to 63Hz  
 Inrush Current .....60A max. @240Vac, Cold Start @25°C  
 Conducted EMI ..... CISPR/FCC Class B  
 Power Factor .....PF> = 0.9  
 Leakage Current.....1mA max.  
 Input Current.....0.6A typ. @110Vac ,Pout=59W  
 .....0.31A typ. @230Vac ,Pout=59W

## OUTPUT SPECIFICATIONS:

Holdup Time ..... 16ms typ. @115Vac  
 Short Circuit Protection .....Hiccup Mode (Auto Recover)  
 Temperature Coefficient ..... ±0.05% / °C  
 Over Voltage Protection .....TVS Component to Clamp  
 Over current Limit.....constant current mode (note 9)  
 Over Temperature Protection.....110°C typ  
 Altitude.....2000 m  
 Startup time.....2.5s typ.  
 Rise time.....50ms typ.  
 MTBF..... MIL-HDBK-217F, GB, at 25°C /115VAC...150Khrs typ.  
 Life time.....40000Hrs max,@ 25°C  
 Vibration.....15~2000Hz 4G period for 60min,each along X Y Z axes

## SAFETY AND EMC :

Emission and Immunity .....EN55015 ,CISPR22  
 EN61547, EN61000-3-2, EN61000-3-3  
 Isolation Voltage.....I/P-O/P 3750VAC  
 Surge.....4KV  
 Safety.....UL8750, EN61347-1,EN61347-2-13  
 Harmonic Current..... EN61000-3-2 Class C (>60% load)  
 Isolation Resistance.....100MΩ min.

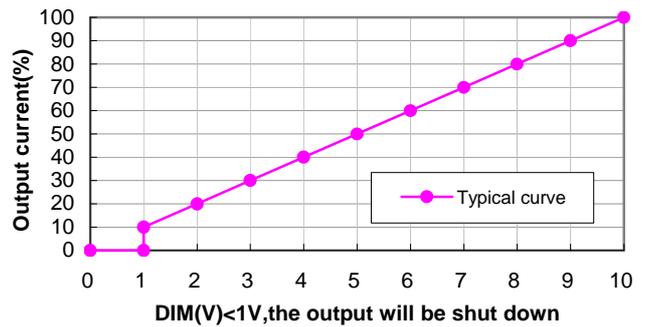
## GENERAL SPECIFICATIONS:

Operating Temperature .....-40 ~ 70°C (see Derating Curve)  
 Storage Temperature ..... -40~85°C  
 Cooling .....Natural Convection

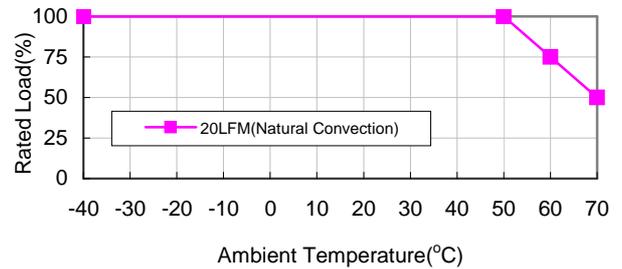
## MECHANICAL CHARACTERISTICS:

Dimensions ..... 1.5748x8.149x1.1023 Inches (40x207x28mm)  
 Weight .....454g typ.

1~10V Dimming function for output current curve:



Derating curve:

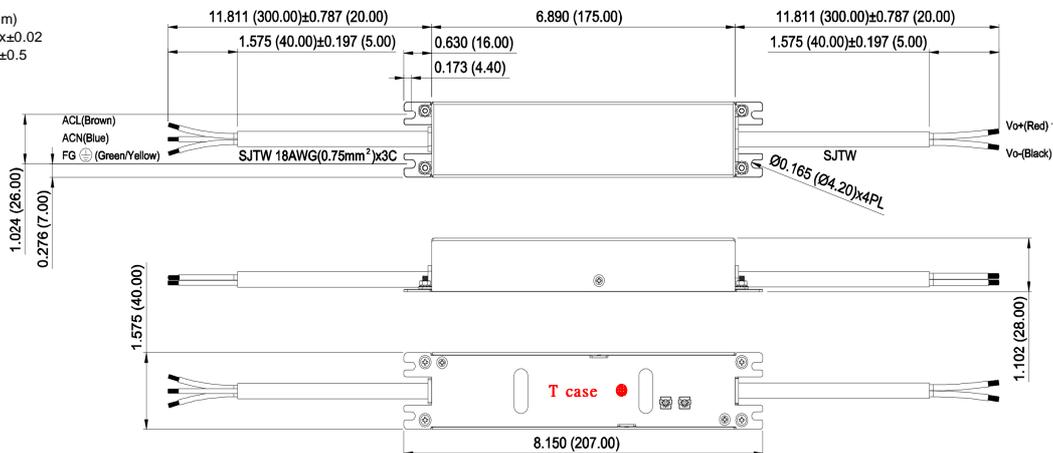


## NOTE:

1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for Ripple, Noise measuring @20MHz BW and 95% rated current.
2. Voltage accuracy is set of 90% rated current.
3. Line regulation is measured from High Line to Low Line with 90% Rated current.
4. Load regulation is measured from 90% to 10% Rated current.
5. Can be adjusted by internal potentiometer.
6. Output Constant Current Accuracy ±5%
7. IP67 for model: LDM60SXXX-01, LDM60SXXX-03, LDM60SXXX-04  
IP65 for model: LDM60SXXX-02, LDM60SXXX-03A, LDM60SXXX-04A
8. Efficiency is measured 95% rated power at Vin=230VAC.
9. Less than 50% (Typ.) of the rated output voltage will enter hiccup mode.
10. PWM function is signal reception, Non-Output PWM signal.
11. No load power consumption < 0.75W for LDM60SXXX-01, -02  
No load power consumption < 1.5W for LDM60SXXX-03, -03A, -04, -04A  
Stand by power consumption < 1.0W for LDM60SXXX-03, -03A, -04, -04A

## Mechanical Specification

All Dimensions in Inches(mm)  
 Tolerance Inches: x.xxx±0.02  
 Millimeters: x.xx±0.5



\* T case: Max. Case Temperature

Typical at 25°C, nominal line and 75% load, unless otherwise Specified