



25W Multiple-Stage Output Current LED Power Supply **LCM-25DA** series



■ Features

- Output current level selectable by DIP S.W.
- 180~277VAC input only
- Built-in active PFC function
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- Class II power unit, no FG
- Built-in DALI interface and push dimming function
- IP20 design
- Logarithm or linear dimming curve selectable (Meet IEC62386-207)
- No load power consumption <0.5W(Note.7)
- Power supplies synchronization function up to 10 units
- 3 years warranty

■ Applications

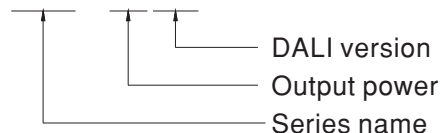
- Indoor LED lighting
- Office LED lighting
- LED decorative lighting

■ Description

LCM-25DA is a 25W LED power supply that one single unit supplies multiple current levels, 350mA/ 500mA/600mA/700mA/900mA/1050mA. The current levels are able to be easily switched by adjusting the built-in DIP switch. LCM-25DA also provides the dimming function that is controlled by push dimming or DALI signal. Moreover, the synchronization design allows the dimming for up to 10 units of LCM-25DA to be controlled simultaneously.

■ Model Encoding

LCM - 25 DA



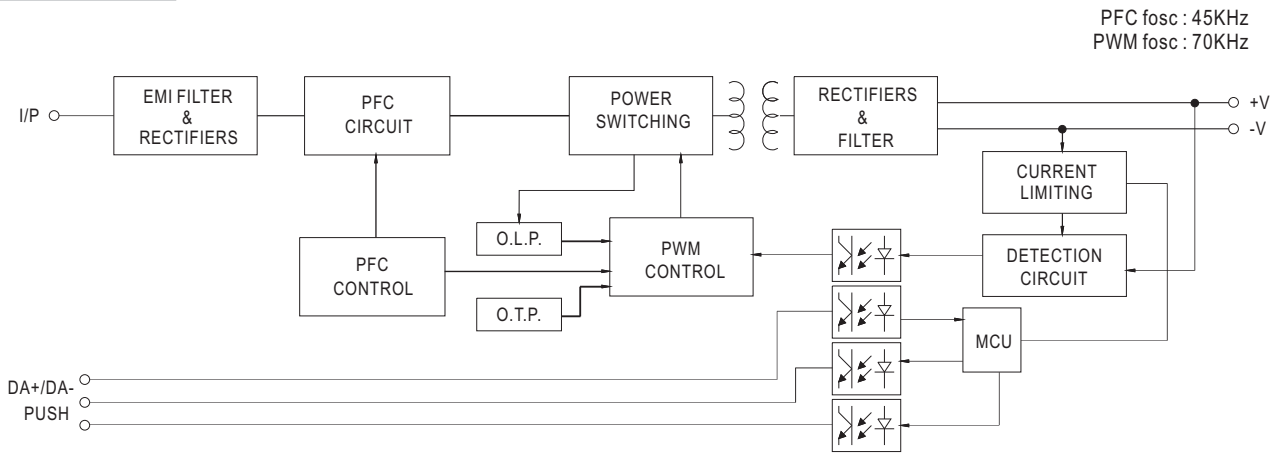


25W Multiple-Stage Output Current LED Power Supply **LCM-25DA** series

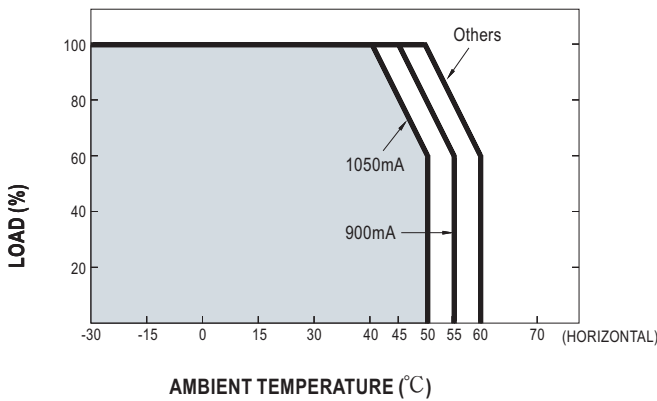
SPECIFICATION

| MODEL | LCM-25DA | | | | | | |
|---------------------|--|---|--------------|---------|---------|---------|---------|
| OUTPUT | SELECTABLE CURRENT <small>Note.3</small> | 350mA | 500mA | 600mA | 700mA | 900mA | 1050mA |
| | DC VOLTAGE RANGE | 6 ~ 54V | 6 ~ 50V | 6 ~ 42V | 6 ~ 36V | 6 ~ 28V | 6 ~ 24V |
| | RATED POWER | 18.9W | 25.2W | | | | |
| | RIPPLE CURRENT | ± 5.0% | | | | | |
| | RIPPLE & NOISE (max.) <small>Note.2</small> | 400mVp-p | | | | | |
| | NO LOAD OUTPUT VOLTAGE (max.) | 59V | | | | 41V | |
| | CURRENT ACCURACY | ± 5.0% | | | | | |
| | SETUP, RISE TIME <small>Note.5</small> | 500ms, 50ms / 230VAC at full load | | | | | |
| HOLD UP TIME (Typ.) | 30ms / 230VAC at full load | | | | | | |
| INPUT | VOLTAGE RANGE <small>Note.4</small> | 180 ~ 277VAC | 254 ~ 392VDC | | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | | |
| | POWER FACTOR (Typ.) | PF ≥ 0.94/230VAC, PF ≥ 0.91/277VAC at full load (Please refer to "Power Factor Characteristic" section) | | | | | |
| | TOTAL HARMONIC DISTORTION | THD < 20% when output loading ≥ 50% at 230VAC input and output loading ≥ 75% at 277VAC input | | | | | |
| | EFFICIENCY (Typ.) <small>Note.6</small> | 86% | | | | | |
| | AC CURRENT (Typ.) | 0.17A/230VAC | 0.15A/277VAC | | | | |
| | INRUSH CURRENT(max.) | COLD START 20A(t _{width} =260μs measured at 50% I _{peak}) at 230VAC | | | | | |
| LEAKAGE CURRENT | < 0.5mA / 240VAC | | | | | | |
| PROTECTION | SHORT CIRCUIT | Constant current limiting, recovers automatically after fault condition is removed | | | | | |
| | OVER TEMPERATURE | Shut down o/p voltage, recovers automatically after temperature goes down | | | | | |
| FUNCTION | DIMMING | Please refer to "Dimming Operation" section | | | | | |
| | SYNCHRONIZATION | Please refer to "Synchronization Operation" section | | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +60°C (Please refer to "Derating Curve" section) | | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +80°C, 10 ~ 95% RH | | | | | |
| | TEMP. COEFFICIENT | ± 0.03%/°C (0 ~ 50°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.250.0-08, ENEC EN61347-1, EN61347-2-13, EN62384 independent approved | | | | | |
| | DALI STANDARDS | Comply with IEC62386-101,102,207 | | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.75KVAC ; I/P-DA ±:1.875KVAC ; O/P-DA ±:1.875KVAC | | | | | |
| | ISOLATION RESISTANCE | I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH | | | | | |
| | EMC EMISSION | Compliance to EN55015, EN61000-3-2 Class C(≥ 50% load) ; EN61000-3-3 | | | | | |
| OTHERS | EMC IMMUNITY | Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547 light industry level (surge 2KV), criteria A | | | | | |
| | MTBF | 213.3K hrs min. MIL-HDBK-217F (25°C) | | | | | |
| | DIMENSION | 105*68*23mm (L*W*H) | | | | | |
| | PACKING | 0.17Kg ; 72pcs/13.2Kg/1.04CUFT | | | | | |
| NOTE | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 3. Please refer to "DIP Switch Table" section. 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. 6. Efficiency is measured at 500mA/50V output set by DIP switch. 7. No load power consumption<0.5W is measured at 230VAC, with lighting fixture connected and output current dimmed to 0%. 8. The power supply 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. | | | | | | |

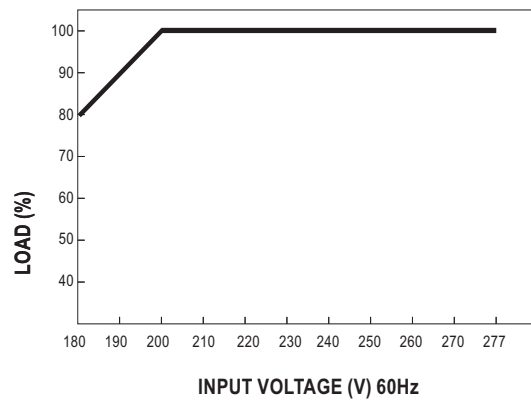
Block Diagram



Derating Curve



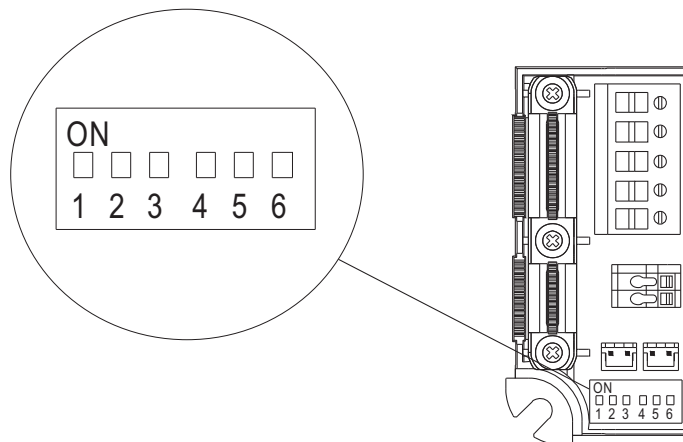
Static Characteristics



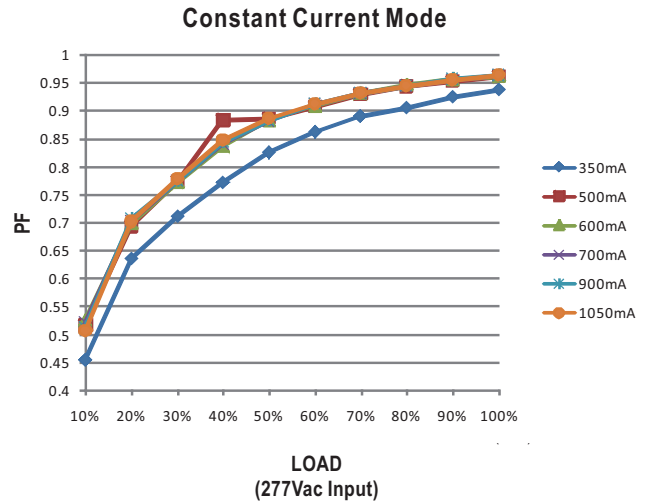
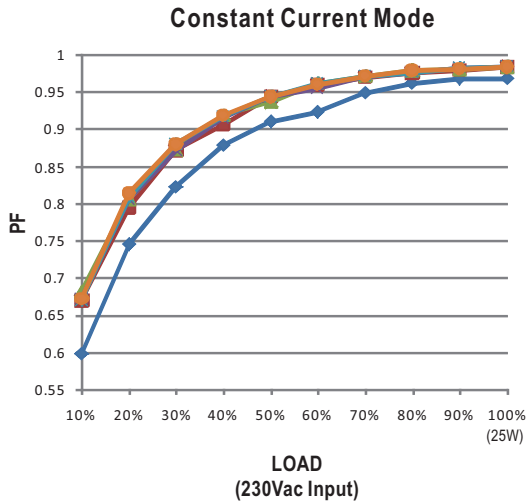
DIP Switch Table

LCM-25DA is a multiple-stage output current supply, selection of output current through DIP switch as table below.

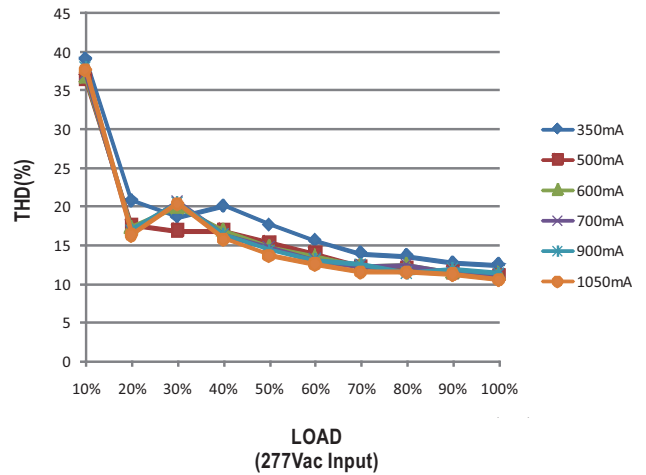
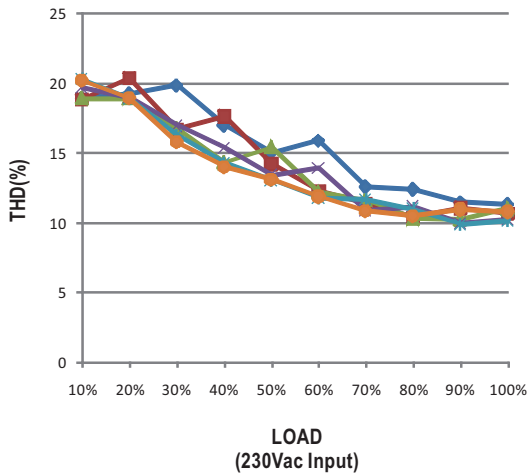
| Io | DIP S.W. | 1 | 2 | 3 | 4 | 5 | 6 |
|------------------------|----------|------|------|------|------|------|------|
| 350mA | | ---- | ---- | ---- | ---- | ---- | ---- |
| 500mA | | ON | ---- | ---- | ---- | ---- | ---- |
| 600mA | | ON | ON | ---- | ---- | ---- | ---- |
| 700mA(Factory Setting) | | ON | ON | ON | ---- | ---- | ON |
| 900mA | | ON | ON | ON | ON | ---- | ON |
| 1050mA | | ON | ON | ON | ON | ON | ON |



Power Factor Characteristic

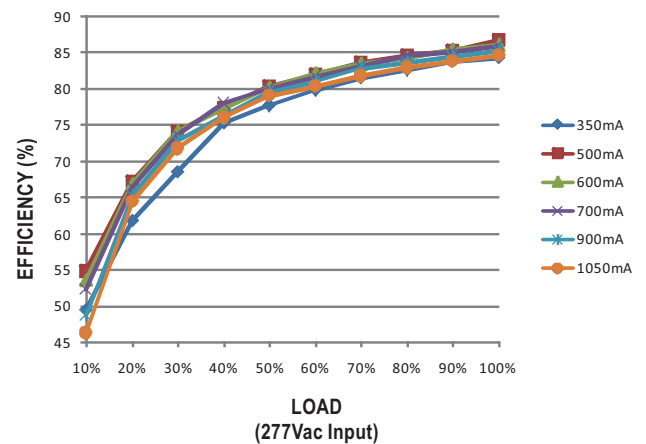
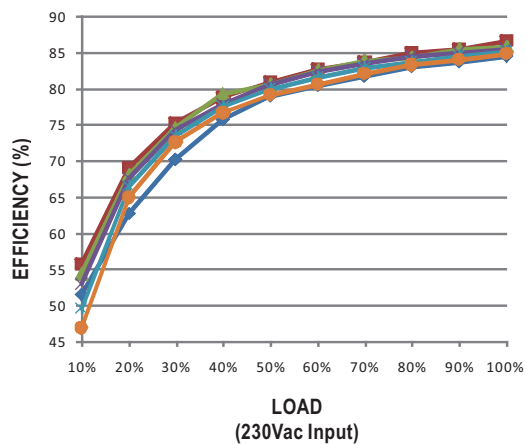


Total Harmonic Distortion Characteristic



Efficiency vs Load

LCM-25DA possess superior working efficiency that up to 86% can be reached in field applications.

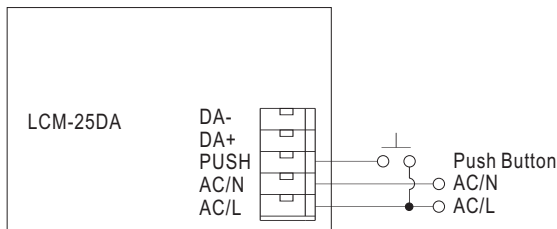


■ Dimming Operation

※ PUSH dim(primary side)

| | | |
|------------|-------------------------------|-------------|
| Ignore | To avoid reaction on AC spike | <0.05 sec. |
| Short push | Push to turn ON-OFF | 0.1~1 sec. |
| Long push | Dimming up or down | 1.5~10 sec. |
| Reset push | Setting light to 100% | >11 sec. |

- Maximum number of drivers up to 10 pcs.
- Maximum length of the cable, from push button to the last driver is 135 meters.
- Factory setting at 100%.
- Every long pushing action will change the dimming direction.



Warning: The push button can only be connected in between the PUSH terminal of LCM-25DA and AC/L (brown or black color). It would cause short circuit if it is connected to AC/N.

※ DALI interface(primary side)

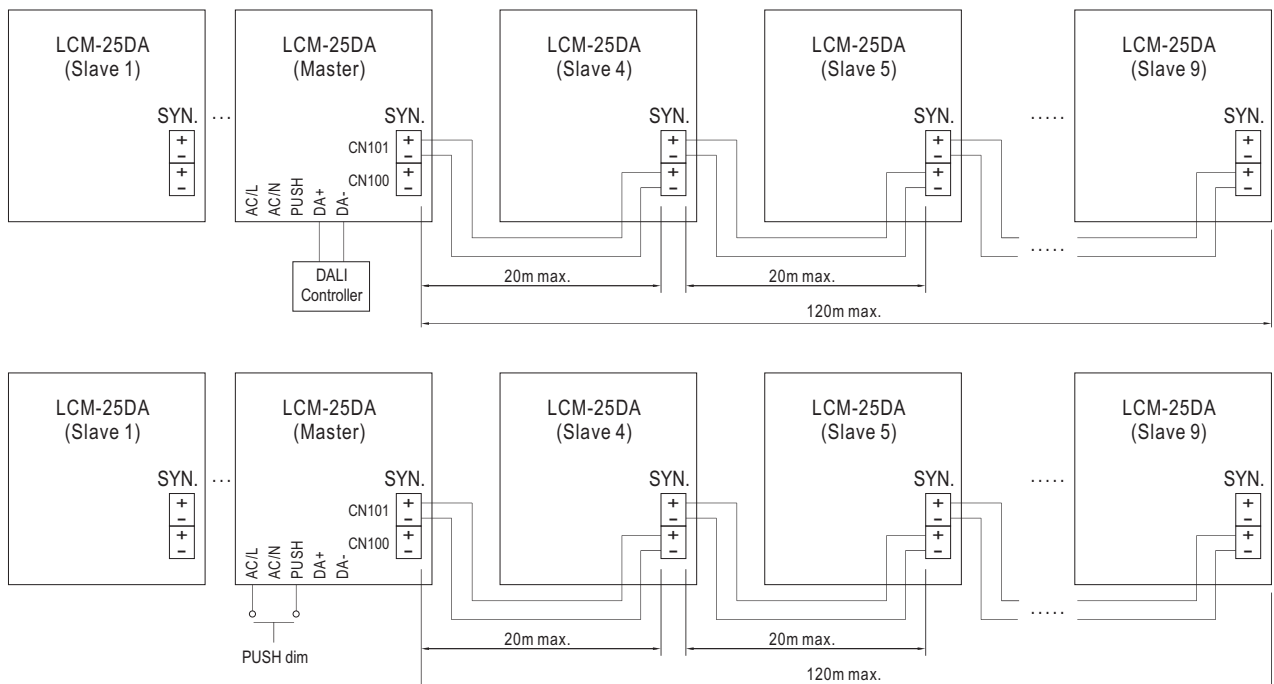
- DALI protocol including 16 groups and 64 addresses.
- First step is fixed at 6% of output.
- Maximum DALI cable length is 300 meters.(based on a 1.5 mm² or 14 AWG cable)

■ Synchronization Operation

- 10 drivers(max.) synchronization (1 master + 9 slaves).
- Maximum cable length between each units : 20 meters.
- Maximum cable length from the master unit to each end of the last slave units : 120 meters.

※ Please make sure all units are set to 100% dimming setting (factory default) before synchronization.

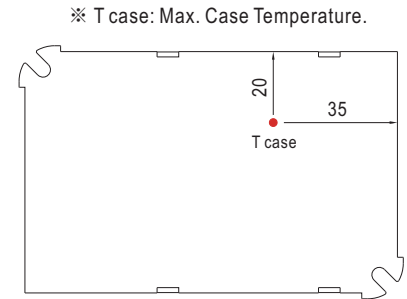
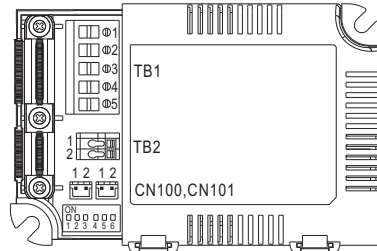
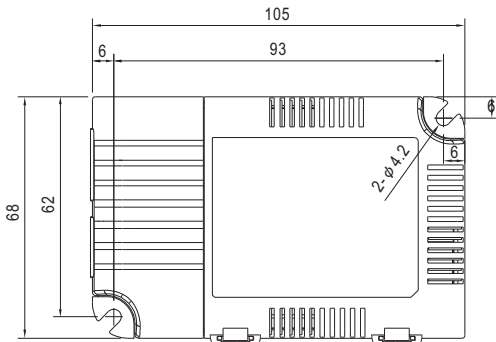
- The lighting units driven by LCM units(Slaves) can be dimmed synchronously through a LCM unit(the master) directly controlled via DALI or push dim dimming function. The wiring is shown as follows.



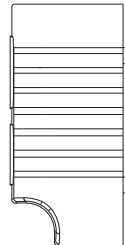
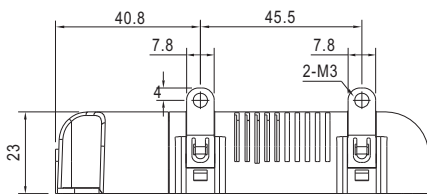
- CN100, CN101 : used to synchronously control the LCM units in parallel.

Mechanical Specification

Case No. LCM-25 Unit: mm



Bottom View



Terminal Pin No. Assignment(TB2)

| Pin No. | Assignment |
|---------|------------|
| 1 | +Vo |
| 2 | -Vo |

SYN. Connector(CN100/CN101): JST B2B-PH-KL or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|-------------------------|----------------------------------|
| 1 | - | JST PHR-2 or equivalent | JST SPH-002T-P0.5S or equivalent |
| 2 | + | | |

Terminal Pin No. Assignment(TB1)

| Pin No. | Assignment | Pin No. | Assignment |
|---------|------------|---------|------------|
| 1 | AC/L | 4 | DA+ |
| 2 | AC/N | 5 | DA- |
| 3 | PUSH | | |

Note: Please use wires with a cross section of 0.5~2.5mm² (14~20AWG) for TB1 and wires with a cross section of 0.5~1.5 mm² (16~20AWG) for TB2. Please use wires with a cross section of 0.126~0.205mm² (24~26AWG) for CN100/CN101

Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>