



60W Multiple-Stage Constant Current Mode LED Driver

**LCM-60KN** series



User's Manual



Video



AC Input: 200-240Vac

## Features

- Constant Current mode output with multiple levels selectable by dip switch
- KNX/EIB protocol
- Flicker free design
- Support emergency lighting(EL)
- Integrated constant light output
- Integrated KNX push button interface
- Synchronization up to 10units
- Functions: Manual dim, operation hours, power consumption feedback, log/linear curve selection...etc
- 3 years warranty

## Applications

- LED indoor lighting
- LED office lighting
- LED architectural lighting
- LED panel lighting

## GTIN CODE

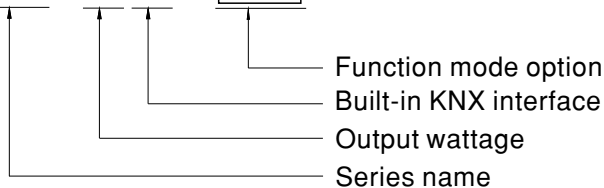
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## Description

LCM-60KN series is a 60W AC/DC constant current mode output LED driver featuring the multiple levels selectable by dip switch and the KNX interface to avoid using the complicated KNX-DALI gateway. LCM-60KN operates from 180~ 295VAC and offers different current levels ranging between 500mA and 1400mA. Thanks to the high efficiency up to 91%, with the fanless design, the entire series is able to operate for -30°C ~+90°C case temperature under free air convection. In addition, LCM-60KN is equipped with push dimming and synchronization so as to provide the optimal design flexibility for LED lighting system.

## Model Encoding

**LCM - 60KN - AUX**



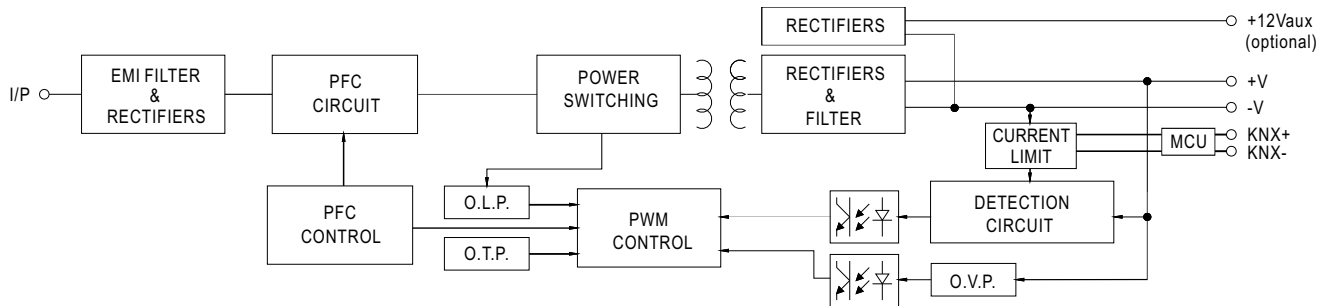
| Type  | Function                                                                           | Note       |
|-------|------------------------------------------------------------------------------------|------------|
| Blank | KNX and push dimming ,with standby power consumption <0.5W                         | In Stock   |
| AUX   | KNX and push dimming, with standby power consumption <1.2W and Auxiliary DC output | By request |

**SPECIFICATION**

| MODEL        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | LCM-60KN-□                                                                                                                                                                                                                                                                                                 |         |                |         |         |         |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|----------------|---------|---------|---------|
| OUTPUT       | CURRENT LEVEL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Current level selectable via DIP switch, please refer to"DIP SWITCH TABLE" section                                                                                                                                                                                                                         |         |                |         |         |         |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 500mA                                                                                                                                                                                                                                                                                                      | 600mA   | 700mA(default) | 900mA   | 1050mA  | 1400mA  |
|              | RATED POWER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 60.3W                                                                                                                                                                                                                                                                                                      |         |                |         |         |         |
|              | DC VOLTAGE RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2 ~ 90V                                                                                                                                                                                                                                                                                                    | 2 ~ 90V | 2 ~ 86V        | 2 ~ 67V | 2 ~ 57V | 2 ~ 42V |
|              | OPEN CIRCUIT VOLTAGE (max.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 95V                                                                                                                                                                                                                                                                                                        |         |                | 73V     |         |         |
|              | CURRENT RIPPLE     Note.5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 5.0% max. @rated current                                                                                                                                                                                                                                                                                   |         |                |         |         |         |
|              | CURRENT TOLERANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ±5%                                                                                                                                                                                                                                                                                                        |         |                |         |         |         |
|              | AUXILIARY DC OUTPUT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Nominal 12V(deviation 11.4~12.6V)@50mA for AUX-Type only                                                                                                                                                                                                                                                   |         |                |         |         |         |
|              | SETUP TIME         Note.3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 500ms / 230VAC                                                                                                                                                                                                                                                                                             |         |                |         |         |         |
| INPUT        | VOLTAGE RANGE         Note.2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 180 ~ 295VAC         220 ~ 392VDC<br>(Please refer to "STATIC CHARACTERISTIC" section)                                                                                                                                                                                                                     |         |                |         |         |         |
|              | FREQUENCY RANGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 47 ~ 63Hz                                                                                                                                                                                                                                                                                                  |         |                |         |         |         |
|              | POWER FACTOR (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | PF ≥ 0.975/230VAC, PF ≥ 0.93/277VAC@full load<br>(Please refer to "POWER FACTOR (PF) CHARACTERISTIC" section)                                                                                                                                                                                              |         |                |         |         |         |
|              | TOTAL HARMONIC DISTORTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | THD< 20%(@load≥75%)<br>(Please refer to "TOTAL HARMONIC DISTORTION(THD)" section)                                                                                                                                                                                                                          |         |                |         |         |         |
|              | EFFICIENCY (Typ.)         Note.4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 91%                                                                                                                                                                                                                                                                                                        |         |                |         |         |         |
|              | AC CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0.32A/230VAC                                                                                                                                                                                                                                                                                               |         |                |         |         |         |
|              | INRUSH CURRENT (Typ.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | COLD START 20A(twidth=320μs measured at 50% Ipeak) at 230VAC; Per NEMA 410                                                                                                                                                                                                                                 |         |                |         |         |         |
|              | MAX. No. of PSUs on 16A CIRCUIT BREAKER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 20 units (circuit breaker of type B) / 34 units (circuit breaker of type C) at 230VAC                                                                                                                                                                                                                      |         |                |         |         |         |
|              | LEAKAGE CURRENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <0.5mA / 240VAC                                                                                                                                                                                                                                                                                            |         |                |         |         |         |
|              | STANDBY POWER CONSUMPTION     Note.6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <0.5W for Blank-Type, <1.2W for AUX-Type                                                                                                                                                                                                                                                                   |         |                |         |         |         |
| PROTECTION   | SHORT CIRCUIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Constant current limiting, recovers automatically after fault condition is removed                                                                                                                                                                                                                         |         |                |         |         |         |
|              | OVER VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 105 ~ 125V                                                                                                                                                                                                                                                                                                 |         |                |         |         |         |
|              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Shutdown o/p voltage, re-power on to recover                                                                                                                                                                                                                                                               |         |                |         |         |         |
|              | OVER TEMPERATURE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Shutdown o/p voltage,re-power on to recover                                                                                                                                                                                                                                                                |         |                |         |         |         |
| FUNCTION     | DIMMING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Please refer to "DIMMING OPERATION" section                                                                                                                                                                                                                                                                |         |                |         |         |         |
|              | SYNCHRONIZATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Please refer to "SYNCHRONIZATION OPERATION" section                                                                                                                                                                                                                                                        |         |                |         |         |         |
|              | TEMP. COMPENSATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | By external NTC, please refer to "TEMPERATURE COMPENSATION OPERATION"section                                                                                                                                                                                                                               |         |                |         |         |         |
| ENVIRONMENT  | WORKING TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Tcase=-30 ~ +90℃ (Please refer to " OUTPUT LOAD vs TEMPERATURE" section)                                                                                                                                                                                                                                   |         |                |         |         |         |
|              | MAX. CASE TEMP.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Tcase=+90℃                                                                                                                                                                                                                                                                                                 |         |                |         |         |         |
|              | WORKING HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 20 ~ 90% RH non-condensing                                                                                                                                                                                                                                                                                 |         |                |         |         |         |
|              | STORAGE TEMP., HUMIDITY                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -40 ~ +80℃, 10 ~ 95% RH                                                                                                                                                                                                                                                                                    |         |                |         |         |         |
|              | TEMP. COEFFICIENT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | ±0.03%/℃ (0 ~ 50℃)                                                                                                                                                                                                                                                                                         |         |                |         |         |         |
|              | VIBRATION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes                                                                                                                                                                                                                                    |         |                |         |         |         |
| SAFETY & EMC | SAFETY STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ENEC BS EN/EN61347-1, BS EN/EN61347-2-13, BS EN/EN62384 independent, BIS IS15885(Part2/Sec13), EAC TP TC 004 approved, GB19510.14 and GB19510.1(by request); According to BS EN/EN50172, BS EN/EN 60598-2-22, BS EN/EN61347-2-13 appendix J suitable for emergency installations(EL)(AC Input: 200-240Vac) |         |                |         |         |         |
|              | KNX STANDARDS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Certified protocol                                                                                                                                                                                                                                                                                         |         |                |         |         |         |
|              | WITHSTAND VOLTAGE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | I/P-O/P:3.75KVAC                                                                                                                                                                                                                                                                                           |         |                |         |         |         |
|              | ISOLATION RESISTANCE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | I/P-O/P:>100M Ohms / 500VDC / 25℃ / 70% RH                                                                                                                                                                                                                                                                 |         |                |         |         |         |
|              | EMC EMISSION     Note.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Compliance to BS EN/EN55015, BS EN/EN61000-3-2 Class C(@load ≥ 40%) ; BS EN/EN61000-3-3; GB17625.1,GB17743, 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 2KV), EAC TP TC 020                                                                                                                                                                             |         |                |         |         |         |
| OTHERS       | MTBF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1764.2K hrs min.   Telcordia SR-332 (Bellcore) ; 190.0K hrs min.   MIL-HDBK-217F (25℃)                                                                                                                                                                                                                     |         |                |         |         |         |
|              | DIMENSION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 123.5*81.5*23mm (L*W*H)                                                                                                                                                                                                                                                                                    |         |                |         |         |         |
|              | PACKING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0.24Kg ; 54pcs/15Kg/1.12CUFT                                                                                                                                                                                                                                                                               |         |                |         |         |         |
| NOTE         | 1. All parameters NOT specially mentioned are measured at 230VAC input, rated current and 25℃ of ambient temperature.<br>2. De-rating may be needed under low input voltages. Please refer to "STATIC CHARACTERISTIC" sections for details.<br>3. Length of set up time is measured at first cold start. Turning ON/OFF the driver may lead to increase of the set up time.<br>4. Efficiency is measured at 900mA/67V output set by DIP switch.<br>5. Current ripple is measured 60%~100% of maximum voltage under rated power delivery.<br>6. Standby power consumption is measured at 180~230VAC.<br>7. 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.<br>8. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).<br>9. To fulfill requirements of the latest ErP regulation for lighting fixtures, this LED power supply can only be used behind a switch without permanently connected to the mains.<br>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a> |                                                                                                                                                                                                                                                                                                            |         |                |         |         |         |

## BLOCK DIAGRAM

PFC fosc : 60KHz  
PWM fosc : 80KHz



## DIP SWITCH TABLE

LCM-60KN is a multiple-stage constant current driver, selection of output current through DIP switch is exhibited below.

| Io \ DIP S.W.          | 1    | 2    | 3    | 4    | 5    | 6    | Max. LED voltage |
|------------------------|------|------|------|------|------|------|------------------|
| 500mA                  | ---- | ---- | ---- | ---- | ---- | ---- | 90V              |
| 600mA                  | ON   | ---- | ---- | ---- | ---- | ---- | 90V              |
| 700mA(factory default) | ON   | ON   | ---- | ---- | ---- | ---- | 86V              |
| 900mA                  | ON   | ON   | ON   | ---- | ---- | ON   | 67V              |
| 1050mA                 | ON   | ON   | ON   | ON   | ---- | ON   | 57V              |
| 1400mA                 | ON   | ON   | ON   | ON   | ON   | ON   | 42V              |

More current options through DIP switch are exhibited below.

| Io \ DIP S.W. | 1    | 2    | 3    | 4    | 5    | 6    | Max. LED voltage |
|---------------|------|------|------|------|------|------|------------------|
| 650mA         | ---- | ---- | ---- | ON   | ---- | ---- | 83V              |
| 750mA         | ON   | ---- | ---- | ON   | ---- | ---- | 80V              |
| 800mA         | ---- | ON   | ON   | ---- | ---- | ---- | 75V              |
| 850mA         | ---- | ---- | ---- | ---- | ON   | ---- | 71V              |
| 950mA         | ---- | ON   | ON   | ON   | ---- | ON   | 64V              |
| 1000mA        | ---- | ---- | ---- | ON   | ON   | ON   | 60V              |
| 1100mA        | ON   | ---- | ---- | ON   | ON   | ON   | 55V              |
| 1150mA        | ---- | ON   | ON   | ---- | ON   | ON   | 52V              |
| 1200mA        | ---- | ---- | ON   | ON   | ON   | ON   | 50V              |
| 1250mA        | ON   | ON   | ON   | ---- | ON   | ON   | 48V              |
| 1300mA        | ---- | ON   | ON   | ON   | ON   | ON   | 46V              |

Note: The max. LED voltage connected at the output should be always less than the table above.

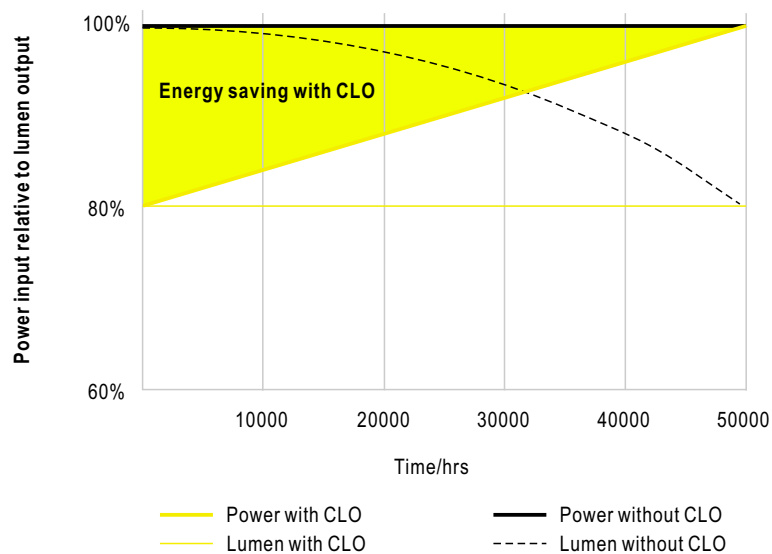
## ■ DIMMING OPERATION

### ※ KNX interface

- Apply KNX Bus cable between KNX+ and KNX-
- The application program(database) can be downloaded via Online Catalogs from ETS or via <http://www.meanwell.com/productCatalog.aspx>

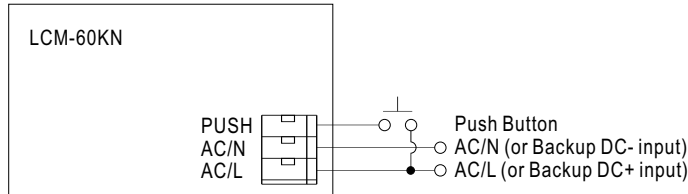
| Parametrization options    | Description                                                                                                                                                                                                                                                                                                          |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switch functions           | <ul style="list-style-type: none"> <li>• Turn on brightness</li> <li>• Dimming speed for turn on/off</li> <li>• Switch telegram and status</li> <li>• Switch on/off delay</li> </ul>                                                                                                                                 |
| Dimming                    | <ul style="list-style-type: none"> <li>• Dimming speed for 0~100%</li> <li>• Allow switch on via relative dimming</li> <li>• Push dimming with AC input port</li> <li>• Block object for push dimming</li> </ul>                                                                                                     |
| Brightness value           | <ul style="list-style-type: none"> <li>• Dimming speed for transition brightness values</li> <li>• Permit set switch on and off brightness via value</li> <li>• Brightness value and status</li> </ul>                                                                                                               |
| Fault message              | <ul style="list-style-type: none"> <li>• Lamp fault</li> <li>• AC/DC input monitor fault messages</li> </ul>                                                                                                                                                                                                         |
| Other functions            | <ul style="list-style-type: none"> <li>• Reaction on KNX voltage failure/recovery</li> <li>• Power-On level</li> <li>• Dimming curve select(linear/log)</li> <li>• Synchronous dimming output</li> <li>• Block function(Block1&amp;Block2)</li> <li>• Staircase lighting function(multi-stage switch-off)</li> </ul> |
| General function           | <ul style="list-style-type: none"> <li>• Cyclic monitoring telegram(In operation)</li> </ul>                                                                                                                                                                                                                         |
| 8 Scenes                   | <ul style="list-style-type: none"> <li>• Recall and save via KNX with 8-bit telegram</li> </ul>                                                                                                                                                                                                                      |
| Operating hours & CLO      | <ul style="list-style-type: none"> <li>• Operating hours counter</li> <li>• Constant light out(5 scheduled divisions)</li> </ul>                                                                                                                                                                                     |
| Power consumption feedback | <ul style="list-style-type: none"> <li>• Power consumption report</li> </ul>                                                                                                                                                                                                                                         |

### ※ CONSTANT LIGHT OUTPUT



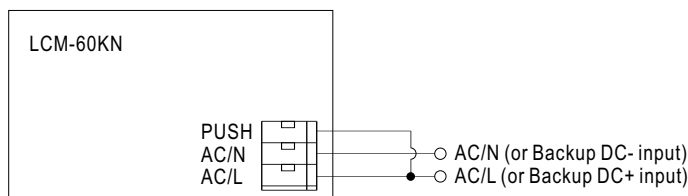
### ※PUSH dimming or AC/DC input monitor(Primary side)

#### ◎ PUSH dimming



- KNX bus need to be connected when using PUSH Dimming
- The detailed function of PUSH dimming, please refer to the database.
- The maximum length of the cable between the push button and driver is 20 meters.
- The mechanical push button can be connected only between the PUSH terminal, as displayed in the diagram, and AC/L (in brown or black); it will lead to short circuit if it is connected to AC/N.
- In case the PUSH dimming is set locally, up to 10 drivers can perform the PUSH dimming at the same time when utilizing one common push button.
- In case the PUSH dimming is set independently via ETS, the number of drivers is done through group address and determined by the ETS project designer.

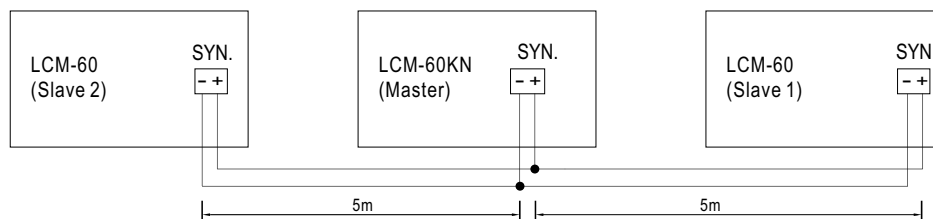
#### ◎ AC/DC input monitor



- KNX bus need to be connected when using AC/DC input monitor
- The detailed function of AC/DC input monitor(emergency lighting), please refer to the database and instruction manual.

### ■ SYNCHRONIZATION OPERATION

- Synchronization up to 10 drivers (1 master + 9 slaves)
- Dimming operating range : 6%~100%
- Sync cable length : < 5m
- Sync cable type : Flat cable
- Sync cable cross section area : 22 – 24 AWG (0.2~0.3mm<sup>2</sup>)

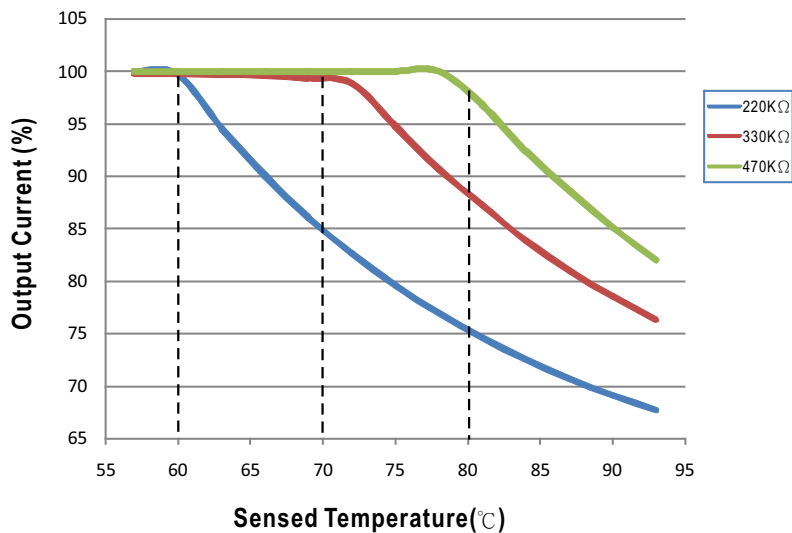


NOTE : Min. Dimming operating range depends on database setting.

## ■ TEMPERATURE COMPENSATION OPERATION

LCM-60KN have the built-in temperature compensation function ; by connecting a temperature sensor (NTC resistor) between the +NTC / -NTC terminal of LCM-60KN and the detecting point on the lighting system or the surrounding environment, output current of LCM-60KN could be correspondingly changed, based on the sensed temperature, to ensure the long life of LED.

**NTC derating curve**



◎ LCM-60KN can still be operated normally when the NTC resistor is not connected and the value of output current will be the current level selected through the DIP switch.

◎ NTC reference:

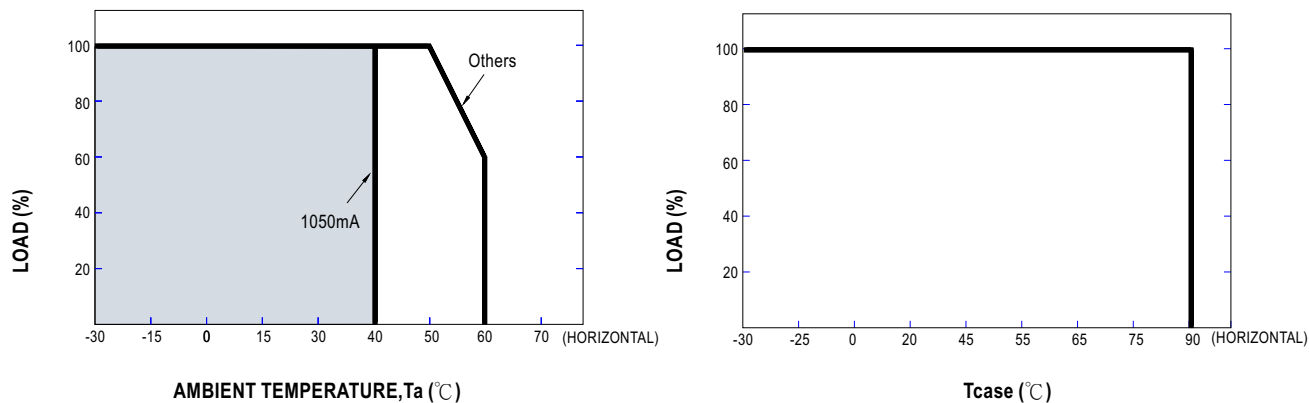
| NTC resistance | Output Current                                                                                                                                                  |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 220K           | < 60°C, 100% of the rated current (corresponds to the setting current level)<br>> 60°C, output current begins to reduce, please refer to the curve for details. |
| 330K           | < 70°C, 100% of the rated current (corresponds to the setting current level)<br>> 70°C, output current begins to reduce, please refer to the curve for details. |
| 470K           | < 80°C, 100% of the rated current (corresponds to the setting current level)<br>> 80°C, output current begins to reduce, please refer to the curve for details. |

Notes: 1. MEAN WELL does not offer the NTC resistor and all the data above are measured by using THINKING TTC03 series.

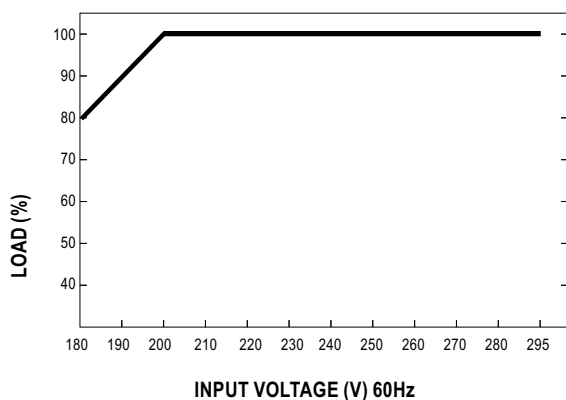
2. If other brands of NTC resistor is applied, please check the temperature curve first.

◎ KNX control, dimming and synchronization function of the driver will be invalid when the "temperature compensation" function is in use.

### ■ OUTPUT LOAD vs TEMPERATURE



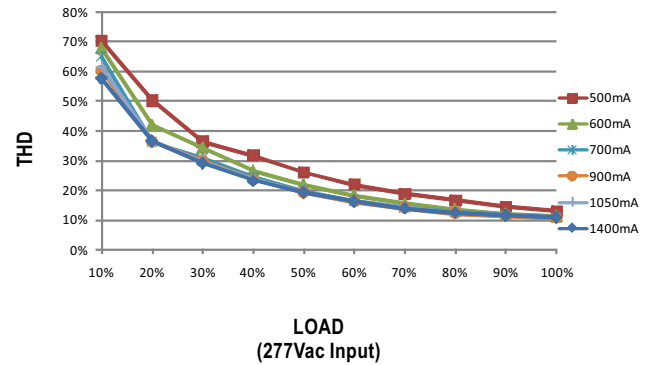
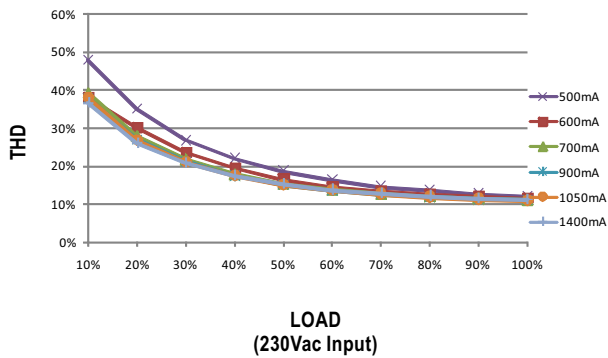
### ■ STATIC CHARACTERISTIC



※ De-rating is needed under low input voltage.

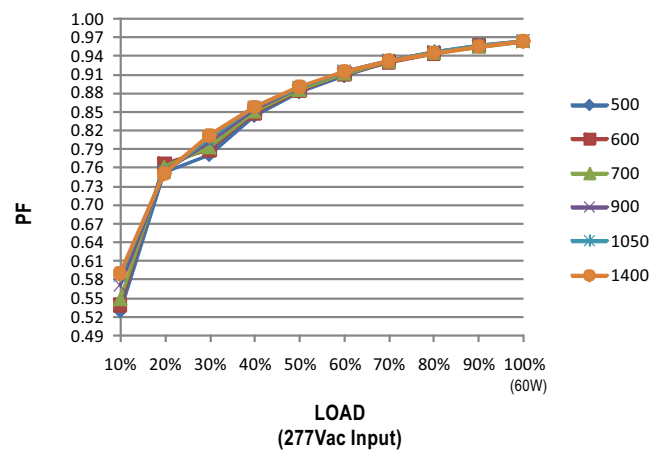
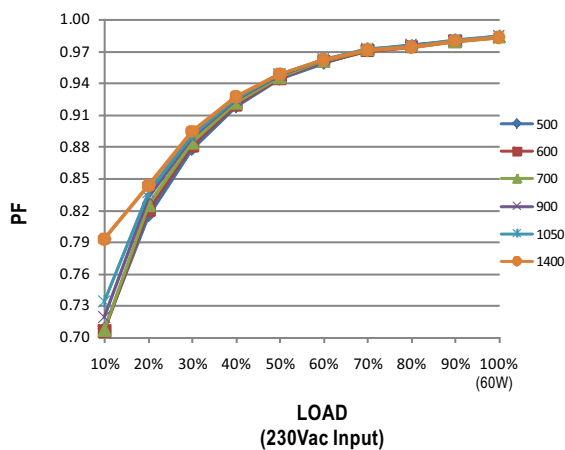
### TOTAL HARMONIC DISTORTION (THD)

※ Tcase at 80℃



### POWER FACTOR (PF) CHARACTERISTIC

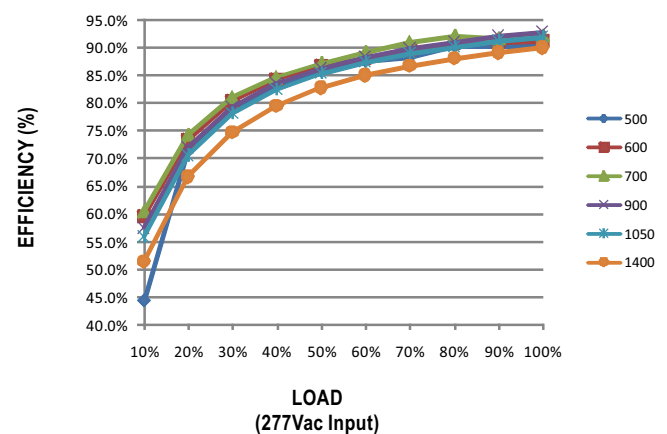
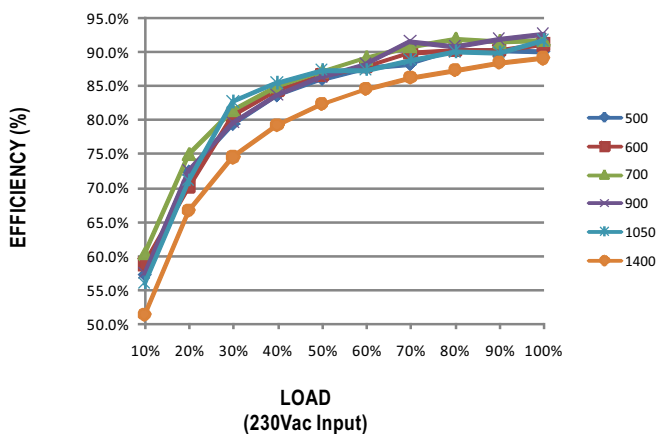
※ Tcase at 80℃



### EFFICIENCY vs LOAD

LCM-60KN series possess superior working efficiency that up to 91% can be reached in field applications.

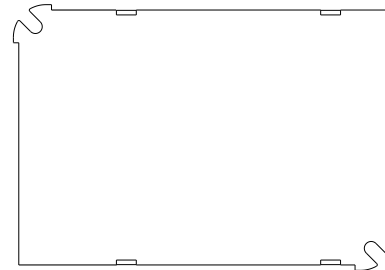
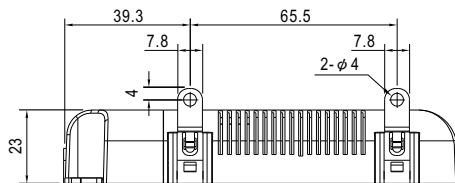
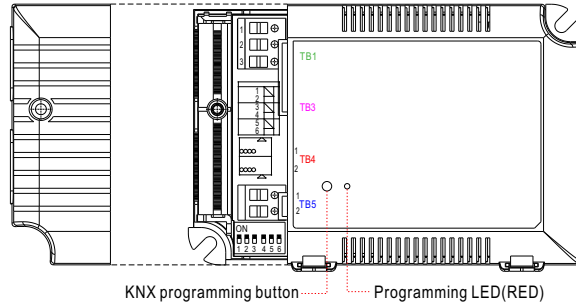
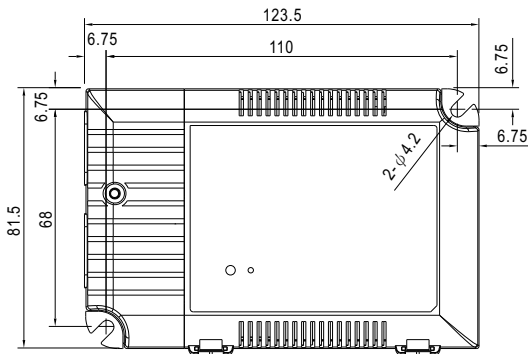
※ Tcase at 80℃



## MECHANICAL SPECIFICATION

Case No.LCM-60B

Unit:mm



Bottom View

### ※ Terminal Pin No. Assignment(TB1)

| Pin No. | Assignment |
|---------|------------|
| 1       | AC/L       |
| 2       | AC/N       |
| 3       | PUSH       |

### ※ Terminal Pin No. Assignment(TB3)

| Pin No. | Assignment     | Pin No. | Assignment | Pin No. | Assignment |
|---------|----------------|---------|------------|---------|------------|
| 1       | +FAN(optional) | 3       | +NTC       | 5       | +SYN       |
| 2       | -FAN(optional) | 4       | -NTC       | 6       | -SYN       |

◎ Pin1(+FAN) / Pin2(-FAN) is the Auxiliary DC output for the optional model LCM-60KN-AUX; it can be used to drive fan.

### ※ Terminal Pin No. Assignment(TB4)

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

### ※ Terminal Pin No. Assignment(TB5)

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

## Installation Manual

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