



50W LED Driver power supply < LCM-60UEO



■ Features :

- Wireless LED driver with integrated EnOcean module
- Output current level selectable by DIP S.W.
- 90~132VAC input only
- Built-in active PFC function
- Protections: Short circuit / Over voltage / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- Class II power unit, no FG
- Built-in 0~10Vdc or PWM signal or resistance
- IP20 design
- Temperature compensation function by external NTC
- Power supplies synchronization function up to 10 units
- Suitable for indoor LED lighting applications
- 3 years warranty

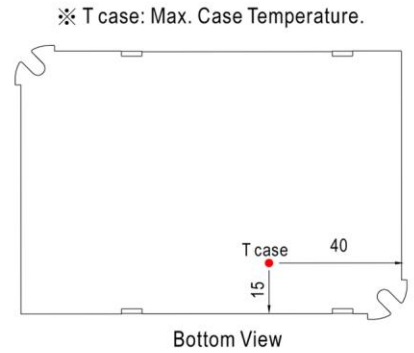
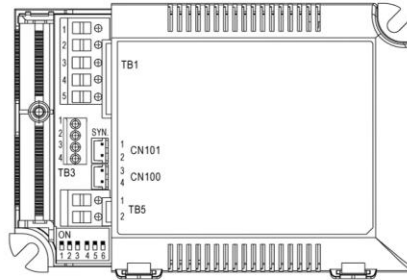
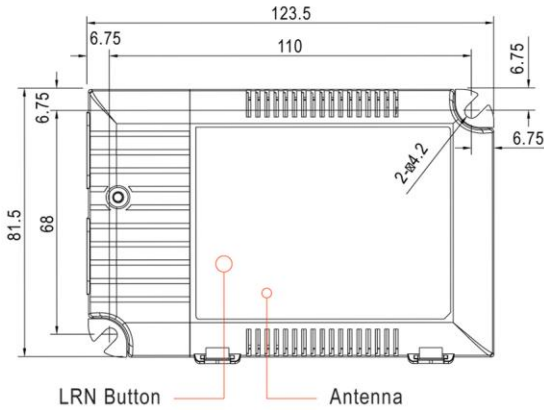


MODEL		LCM-60UEO					
OUTPUT	SELECTABLE CURRENT Note.3	500mA	600mA	700mA	900mA	1050mA	1400mA
	DC VOLTAGE RANGE	2 ~ 90V	2 ~ 84V	2 ~ 72V	2 ~ 56V	2 ~ 48V	2 ~ 36V
	RATED POWER	50.4W					
	RIPPLE CURRENT	±5%					
	RIPPLE & NOISE (max.) Note.2	700mVp-p					
	NO LOAD OUTPUT VOLTAGE (max.)	102V			76V		
	CURRENT ACCURACY	±5.0%					
	SETUP, RISE TIME Note.5	1000ms, 80ms / 115VAC at rated power					
	HOLD UP TIME (Typ.)	16ms/115VAC at rated power					
INPUT	VOLTAGE RANGE Note.4	90 ~ 132VAC		127 ~ 186VDC			
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF ≥ 0.98/115VAC at rated power (Please refer to "Power Factor Characteristic" curve)					
	TOTAL HARMONIC DISTORTION	Total harmonic distortion will be lower than 20% when output loading is 40% or higher					
	EFFICIENCY (Typ.) Note.6	89%					
	AC CURRENT (Typ.)	0.65A/115VAC					
	INRUSH CURRENT (Typ.)	COLD START 15A(twidth=270µs measured at 50% I _{peak}) at 115VAC					
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	15 units (circuit breaker of type B) / 25 units (circuit breaker of type C) at 115VAC					
	LEAKAGE CURRENT	<0.5mA / 120VAC					
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed					
	OVER VOLTAGE	105 ~ 125V Protection type : Shutdown o/p voltage, re-power on to recover					
	OVER TEMPERATURE	Shut down o/p voltage auto-recover or re-power on to recover					
FUNCTION	WIRELESS PROTOCOL	EnOcean standard 902 MHz for USA/ Canada; Max. device(switch) saved into the memory : 33					
	TEMP. COMPENSATION	By external NTC(not provide with the power supply), please see "Temperature compensation operation"					
	SYNCHRONIZATION	Please see "Synchronization Operation"					
ENVIRONMENT	WORKING TEMP.	-30 ~ +55°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS	UL8750 approved					
	DALI STANDARDS	Comply with IEC62386-101, 102, 207					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC					
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Compliance to FCC part 15					
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547 light industry level (surge 2KV), criteria A					
OTHERS	MTBF	193.6K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	123.5*81.5*23mm (L*W*H)					
	PACKING	0.28Kg ; 54pcs/16Kg/1.12CUFT					
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 115VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf parallel capacitor. 3. Please see "DIP switch table". 4. Derating may be needed under low input voltage. Please check the static characteristics for more details. 5. Length of set up time is measured at first cold start. Turning ON/OFF the power supply may lead to increase of the set up time. 6. Efficiency is measured at 700mA/72V output set by DIP switch. 7. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-quality EMC Directive on the complete installation again. 						

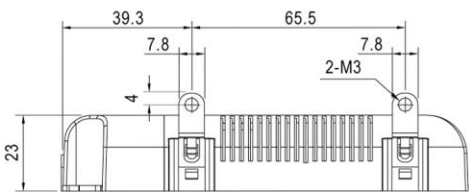
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Mechanical Specification

Case No. LCM-60A Unit:mm



※ T case: Max. Case Temperature.



Terminal Pin No. Assignment(TB1)

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

Terminal Pin No. Assignment(TB3)

Pin No.	Assignment	Pin No.	Assignment
1	+FAN(optional)	3	+NTC
2	-FAN(optional)	4	-NTC

Terminal Pin No. Assignment(TB5)

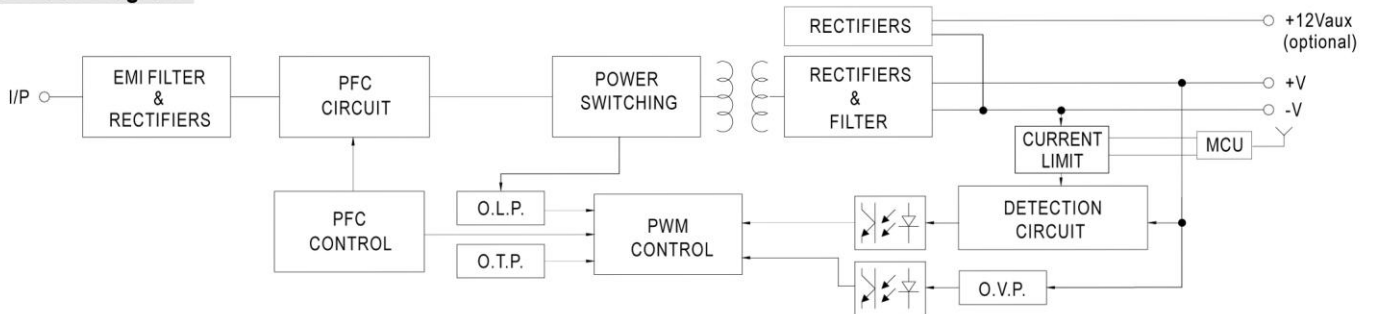
Pin No.	Assignment
1	+Vo
2	-Vo

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

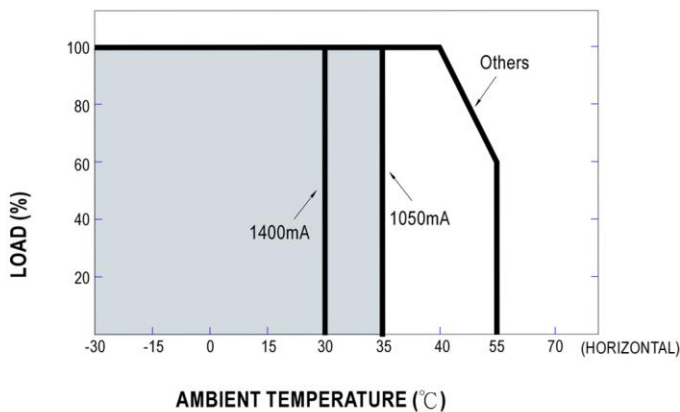
Pin No.	Assignment	Mating Housing	Terminal
1,3	+	JST XHP or equivalent	JST SXH-001T-P0.6 or equivalent
2,4	-		

PFC fosc : 60KHz
 PWM fosc : 80KHz

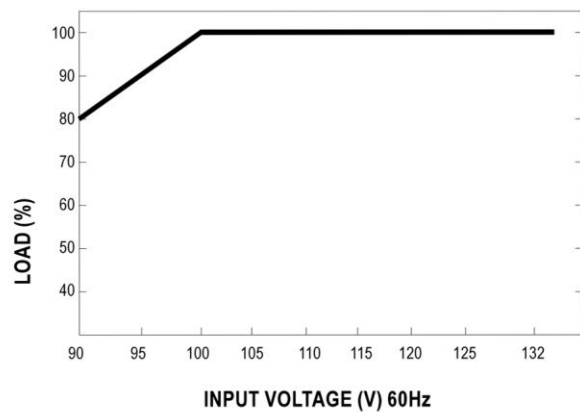
Block Diagram



Derating Curve



Static Characteristics





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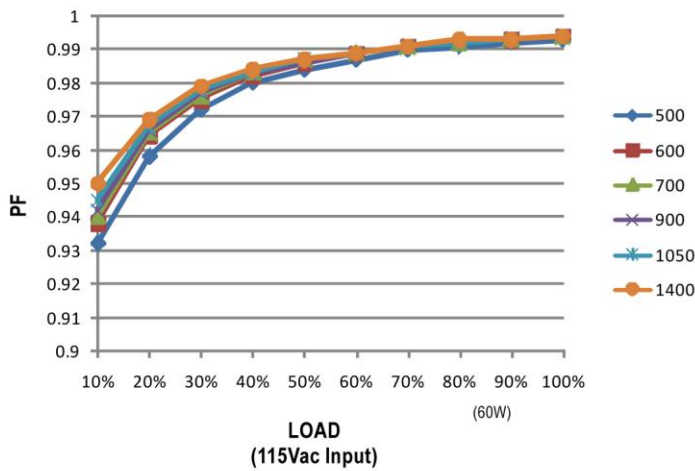
DIP Switch Table

LCM-60UEO is a multiple-stage output current supply, selection of output current through DIP switch as table below.

Io \ DIP S.W.	1	2	3	4	5	6
500mA	----	----	----	----	----	----
600mA	ON	----	----	----	----	----
700mA(Factory Setting)	ON	ON	----	----	----	----
900mA	ON	ON	ON	----	----	ON
1050mA	ON	ON	ON	ON	----	ON
1400mA	ON	ON	ON	ON	ON	ON

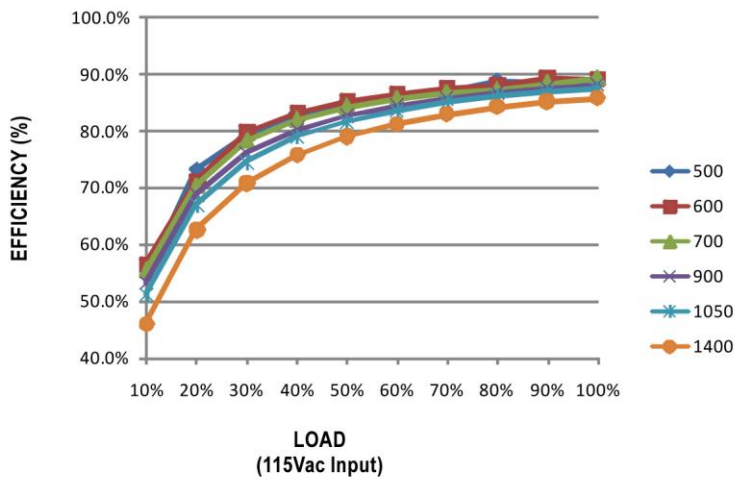
Power Factor Characteristic

Constant Current Mode



EFFICIENCY vs LOAD

LCM-60UEO series possess superior working efficiency that up to 90% can be reached in field applications.





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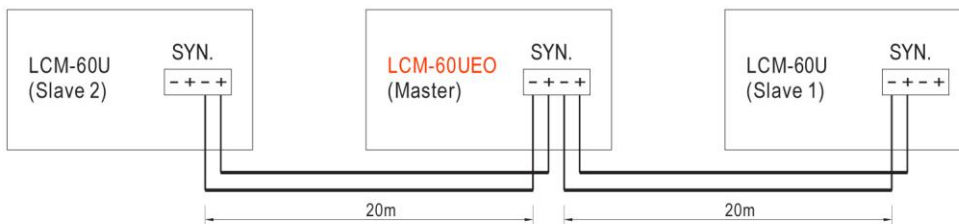
■ Interoperable products / EnOcean Equipment Profile(EEP)

Support Equipment	Telegram
Rocker Pad Switch	F6-02-02
Occupancy Sensor	A5-07-01
Occupancy Sensor	A5-07-02
Occupancy Sensor	A5-07-03
Light Level Sensor	A5-06-02
Light Level Sensor	A5-06-03
Central Controller	A5-38-08
Demand Response	A5-37-01

■ Batteryless wireless switch supplier

■ SYNCHRONIZATION OPERATION

- 10 drivers(max.) synchronization (1 master + 9 slaves)
- Maximum cable length between each units : 20 meter.

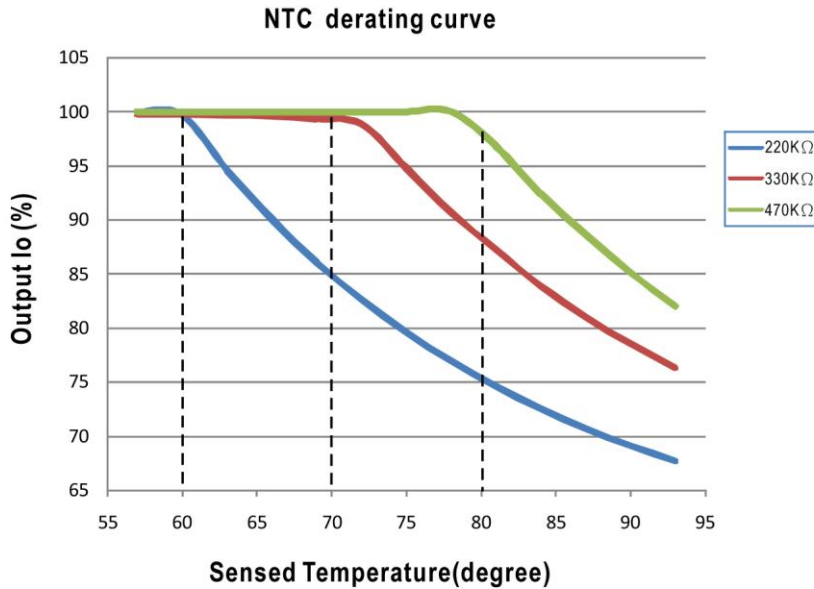


NOTE: Please make sure all units are set to 100% dimming setting(factory default) before synchronizing.



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TEMPERATURE COMPENSATION OPERATION



LCM-60UEO have the built-in temperature compensation function ($T \uparrow, I_o \downarrow$). By connecting a temperature sensor (NTC resistor) between the NTC +/- terminal of LCM-60UEO and the detecting point on the lighting system or the surrounding environment, output current of LCM-60UEO could be correspondingly changed to ensure the long life of LED.

1. LCM-60UEO can still be operated well when the NTC resistor is not connected and the value of output current will be the current level that you set through the DIP switch.
- 2.

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

- Notes: 1. MW 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.
 3. Synchronization function of the power supply will be invalid when the "temperature compensation function" is in use.

LRN button description

LRN (Learn) Button:
 Shortly press (around 2 second) the button to enter linking (pairing) / unlinking mode.
 The LED lamp connected at the output of LCM starts toggling between 10% and 90% indicating that linking mode is active. Once activated, this mode stays active to provide time to link or unlink multiple switches. The mode will stop and back to normal mode after 30 seconds if no wireless telegram from switch is received.

For the switch to be linked, click the "I" button (top button marked on the switch plastic or "I" symbol on the back of the switch 4 times quickly. In case the output is continuous 100% 4 seconds, it mean the switch is linked successfully.

LCM-40/60UEO is now ready to accept new links on another switch.

In case a linked switch to be unlinked, please use the same action as described from the linking method above.

To exit linking / unlinking mode and return to normal operation, wait 30s without doing anything or shortly press the button again.

In order to clear all linked switches and reset the LCM-40/60UEO to factory settings, please press and hold the button for 10 seconds.

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■ Installation & Pairing

Hardware connection:

1. Connect the LED lamp to the driver.
2. Connect the driver to the AC mains.

There are two approaches for linking(pairing):

1. Using the LRN button on the driver
The instruction is in the LRN button description.
2. Using the NAVIGAN wireless software
Benefit to use NAVIGAN is more dimming parameters can be configured .

The software can be download in the website link below.

<http://www.navigan.com/>

After the software installation, insert the USB300 into one of USB port from the computer.

For more details, please check the manual.

