



■ Features

- Output current level selectable by DIP S.W.
- 180~295VAC input only
- Built-in active PFC function
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- No load power consumption <0.5W
- Fully isolated plastic case
- Class II power unit, no FG
- Built-in 0~10VDC and PWM signal dimming function
- IP20 design
- No load power consumption <0.5W(Note.7)
- Power supplies synchronization function up to 10 units
- 3 years warranty

■ Applications

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

■ Description

LCM-25 is a 25Watts LED power supply that one single unit supplies multiple current levels, 350mA/500mA/ 600mA/700mA/900mA/1050mA. The current levels are easily switched by adjusting the built-in DIP switch. LCM-25 also provides the dimming function that control by external a 0~10VDC or PWM signal. Moreover, the synchronization design allows the dimming for up to 10 units of LCM-25 to be controlled simultaneously.

■ Model Encoding

LCM - 25

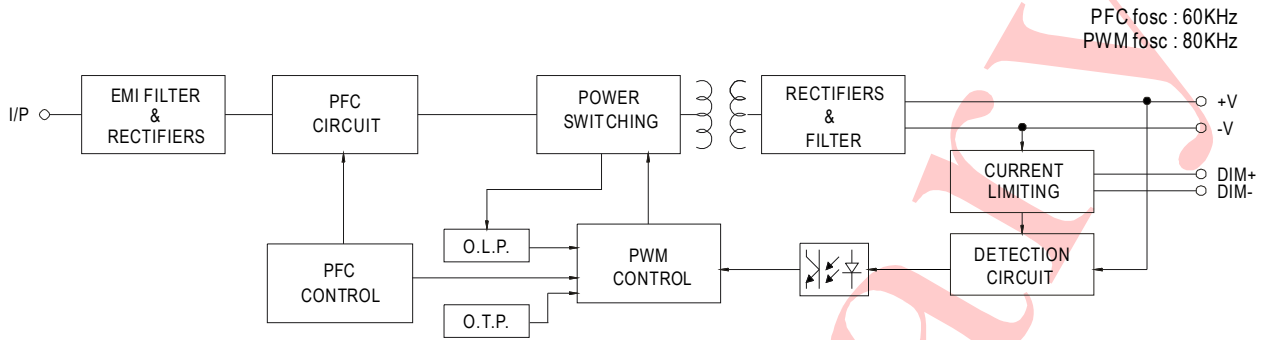




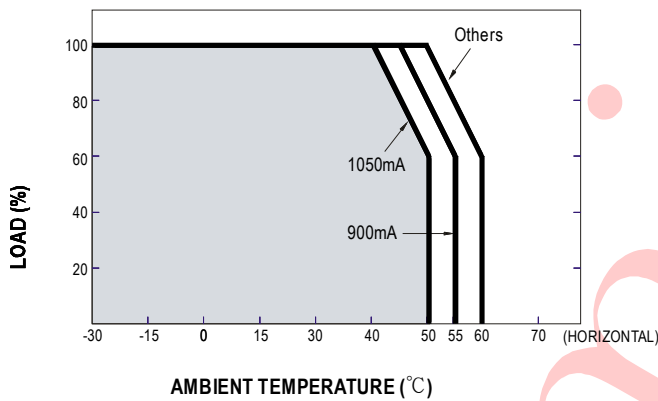
SPECIFICATION

MODEL		LCM-25					
OUTPUT	SELECTABLE CURRENT <small>Note.3</small>	350mA	500mA	600mA	700mA	900mA	1050mA
	DC VOLTAGE RANGE	6 ~ 54V	6 ~ 50V	6 ~ 42V	6 ~ 36V	6 ~ 28V	6 ~ 24V
	RATED POWER	18.9W	25.2W				
	RIPPLE CURRENT	±5.0%					
	RIPPLE & NOISE (max.) <small>Note.2</small>	400mVp-p					
	NO LOAD OUTPUT VOLTAGE (max.)	59V	41V				
	CURRENT ACCURACY	±5.0%					
	SETUP, RISE TIME <small>Note.5</small>	500ms, 50ms / 230VAC at full load					
	HOLD UP TIME (Typ.)	30ms / 230VAC at full load					
INPUT	VOLTAGE RANGE <small>Note.4</small>	180 ~ 295VAC	254 ~ 417VDC				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF ≥ 0.94/230VAC, PF ≥ 0.91/277VAC at full load (Please refer to "Power Factor Characteristic" curve)					
	TOTAL HARMONIC DISTORTION	THD < 20% when output loading ≥ 50% at 230VAC input and output loading ≥ 75% at 277VAC input					
	EFFICIENCY (Typ.) <small>Note.6</small>	86.5%					
	AC CURRENT (Typ.)	0.17A/230VAC	0.15A/277VAC				
	INRUSH CURRENT(max.)	COLD START 20A(t _{width} =260μs measured at 50% I _{peak}) at 230VAC					
	LEAKAGE CURRENT	<0.5mA / 240VAC					
PROTECTION	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed					
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down					
FUNCTION	DIMMING	Please see "Dimming Operation"					
	SYNCHRONIZATION	Please see "Synchronization Operation"					
ENVIRONMENT	WORKING TEMP.	-30 ~ +60°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, CSA C22.2 NO.250.0-08, ENEC EN61347-1, EN61347-2-13, EN62384 independent approved					
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC ; I/P-DA ±:1.875VAC ; O/P-DA ±:1.875VAC					
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH					
	EMC EMISSION	Compliance to EN55015, EN61000-3-2 Class C(≥50% load) ; EN61000-3-3					
OTHERS	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547 light industry level (surge 2KV), criteria A					
	MTBF	K hrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	105*68*23mm (L*W*H)					
NOTE	PACKING	0.16Kg ; 72pcs/12.5Kg/1.04CUFT					
	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Please see "DIP switch table".</p> <p>4. Derating may be needed under low input voltage. Please check the static characteristics for more details.</p> <p>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.</p> <p>6. Efficiency is measured at 500mA/50V output set by DIP switch.</p> <p>7. No load power consumption <0.5W is measured at 180~277VAC, with lighting fixture connected and output current dimmed to 0%.</p> <p>8. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.</p>						

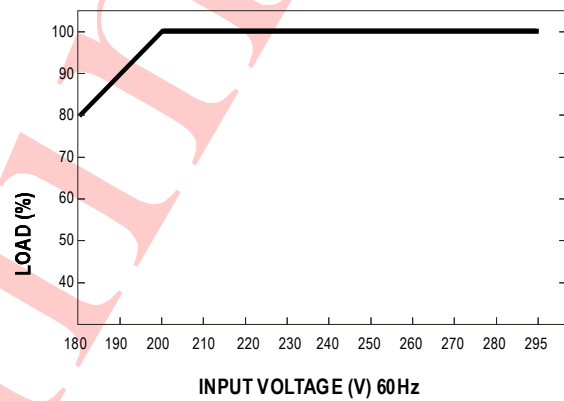
Block Diagram



Derating Curve



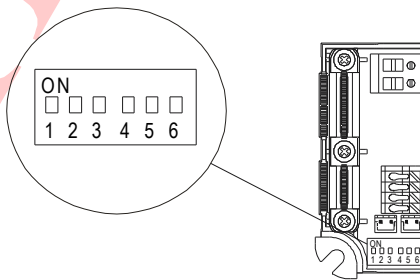
Static Characteristics



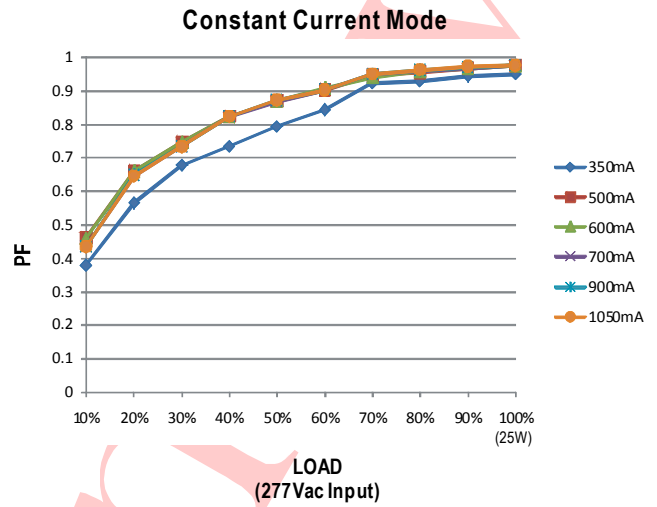
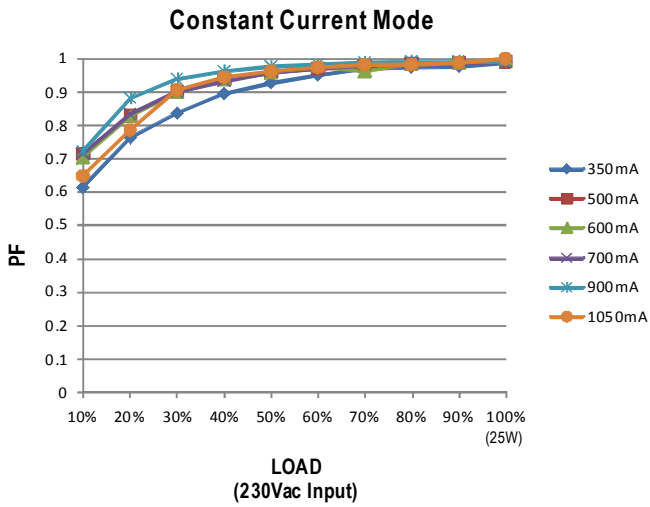
DIP Switch Table

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

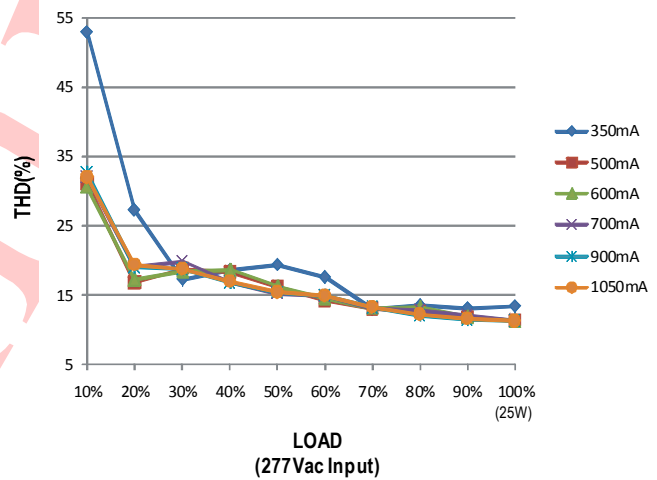
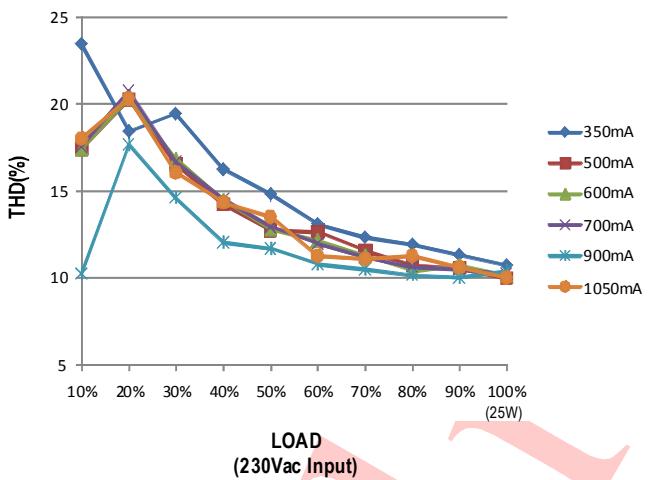
I_o \ DIP S.W.	1	2	3	4	5	6
350mA	----	----	---	----	----	----
500mA	ON	----	---	----	----	----
600mA	ON	ON	---	----	----	----
700mA(Factory Setting)	ON	ON	ON	----	----	ON
900mA	ON	ON	ON	ON	----	ON
1050mA	ON	ON	ON	ON	ON	ON



Power Factor Characteristic

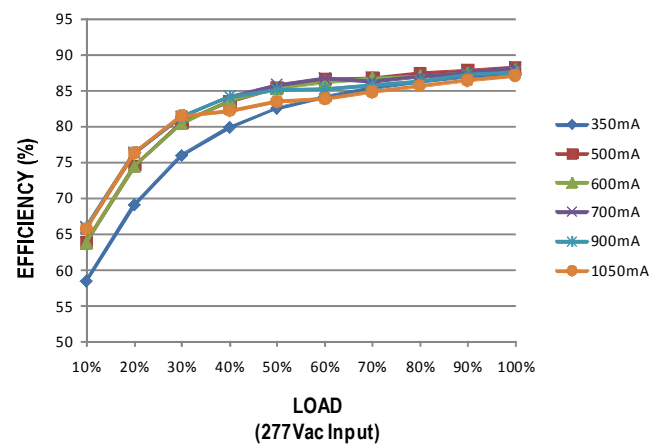
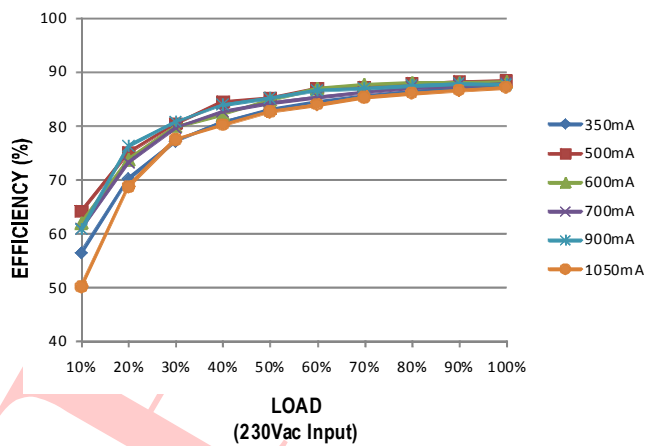


Total Harmonic Distortion Characteristic

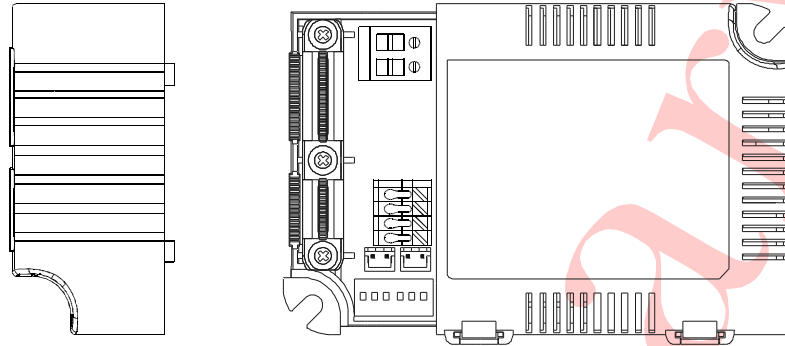


EFFICIENCY vs LOAD

LCM-25 possess superior working efficiency that up to 86.5% can be reached in field applications.



■ DIMMING OPERATION



※ Built-in 2 in 1 dimming function, output constant current level can be adjusted through output terminal by 0 ~ 10Vdc or 10V PWM signal between DIM+ and DIM-.

※ Please DO NOT connect "DIM-" to "-Vo".

※ 0 ~ 10V dimming function for output current adjustment (Typical)

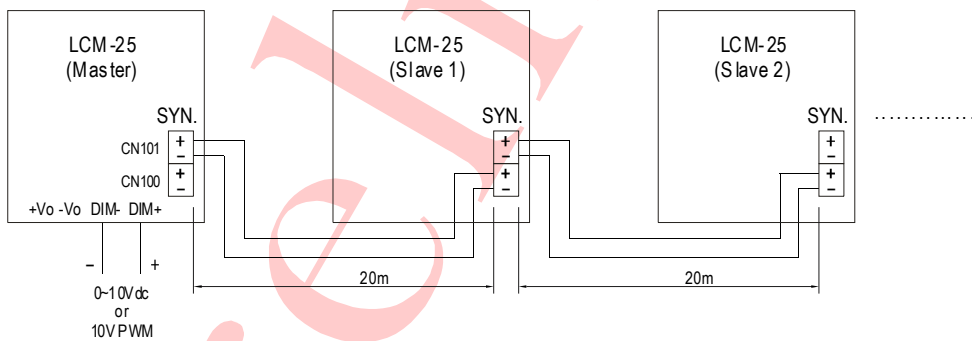
Dimming value	0V	1V	2V	3V	4V	5V	6V	7V	8V	9V	10V	OPEN
Output current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%~108%

※ 10V PWM signal for output current adjustment (Typical): Frequency range :100Hz ~ 3KHz

Duty value	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	OPEN
Output current	0%	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%	100%~108%

■ SYNCHRONIZATION OPERATION

- 10 drivers(max.) synchronization (1 master + 9 slaves)
- Maximum cable length between each units : 20 meter.
- The lights driven by LCM units(Slaves) can be dimmed synchronously through a LCM unit(the master) directly controlled via 0~10Vdc or 10V PWM dimming function. The wiring is shown as below.

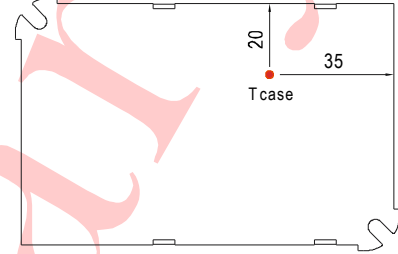
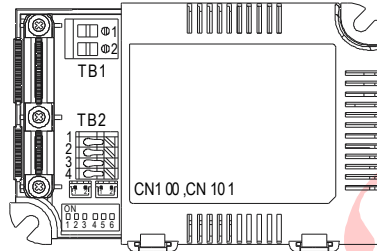
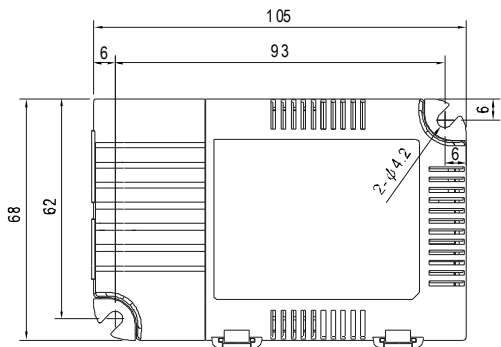


- CN100, CN101 : used to synchronously control the LCM units is parallel.

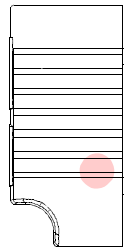
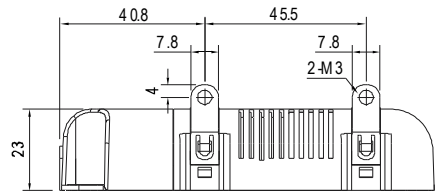
Mechanical Specification

Case No. LCM-25 Unit:mm

※ T case: Max. Case Temperature.



Bottom View



Terminal Pin No. Assignment(TB2)

Pin No.	Assignment	Pin No.	Assignment
1	+Vo	3	DIM-
2	-Vo	4	DIM+

Terminal Pin No. Assignment(TB1)

Pin No.	Assignment
1	AC/L
2	AC/N

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

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

Installation Manual

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