



40W Single Output AC Dimmable LED Power Supply

PLM-40 series



■ Features :

- Universal AC input / Full range (up to 295VAC)
- Three-step analog dimming
- Built-in active PFC function
- Constant current design
- Protections: Short circuit / Over temperature
- Cooling by free air convection
- Fully isolated plastic case
- IP30 design
- Class II power unit, no FG
- Suitable for indoor LED lighting applications
- 100% full load burn-in test
- Low cost
- High reliability
- 2 years warranty

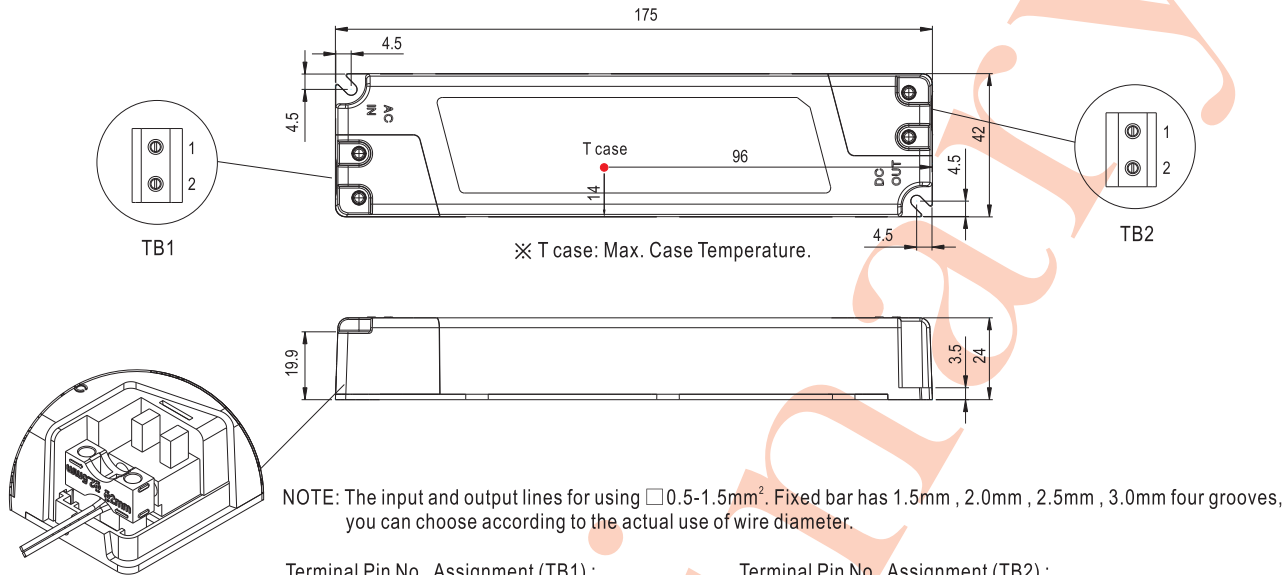


SPECIFICATION

MODEL	PLM-40-350	PLM-40-500	PLM-40-700	PLM-40-1050	PLM-40-1400	PLM-40-1750	
OUTPUT	RATED CURRENT	350mA	500mA	700mA	1050mA	1750mA	
	OPERATING VOLTAGE RANGE Note.4	53 ~ 105V	40 ~ 80V	28 ~ 55V	19 ~ 38V	15 ~ 29V	
	CURRENT RANGE	0 ~ 350mA	0 ~ 500mA	0 ~ 700mA	0 ~ 1050mA	0 ~ 1400mA	
	CURRENT ACCURACY	±5.0%					
	RATED POWER	36.75W	40W	38.5W	39.9W	40.6W	40.25W
	RIPPLE & NOISE (max.) Note.2	10Vp-p	8Vp-p	6Vp-p	4Vp-p	3Vp-p	2.5Vp-p
	NO LOAD OUTPUT VOLTAGE (max.)	112V	86V	60V	43V	33V	27V
SETUP TIME	500ms / 115VAC, 230VAC at full load						
INPUT	VOLTAGE RANGE Note.3	90 ~ 295VAC	127 ~ 417VDC				
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF ≥ 0.97/115VAC, PF ≥ 0.95/230VAC, PF > 0.9/277VAC (at full load) (Please refer to "Power Factor Characteristic" curve)					
	EFFICIENCY (Typ.)	88%	88%	87%	87%	86%	86%
	AC CURRENT (Typ.)	0.5A/115VAC	0.3A/230VAC	0.25A/277VAC			
	INRUSH CURRENT (typ.)	COLD START 15A (width=75µs measured at 50% Ipeak) at 230VAC					
LEAKAGE CURRENT	<0.5mA / 240VAC						
PROTECTION	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed.					
	OVER TEMPERATURE	100°C ±10°C (TSW1) Protection type : Hiccup mode, recovers automatically after temperature goes down.					
ENVIRONMENT	WORKING TEMP.	-30 ~ +60°C (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)					
	VIBRATION	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes					
SAFETY & EMC	SAFETY STANDARDS	UL8750, CSA C22.2 No. 250.13-12 (for PLM-40-1400/1750), ENEC EN61347-1, EN61347-2-13, EN62384, IP30 approved					
	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 EN55015, EN61000-3-2 Class C (≥50% load) ; EN61000-3-3					
	EMC IMMUNITY	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11, EN61547, light industry level, criteria A (Surge 2KV)					
OTHERS	MTBF	Khrs min. MIL-HDBK-217F (25°C)					
	DIMENSION	175*42*24mm (L*W*H)					
	PACKING	Kg					
NOTE	<ol style="list-style-type: none"> 1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1µf & 47µf parallel capacitor. 3. Derating may be needed under low input voltage, please check the static characteristic for more details. 4. Constant current operation region is within 50% ~100% rated output voltage. This is the suitable operation region for LED related applications, but please reconfirm special electrical requirements for some specific system design. 5. 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. 6. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers. 						

■ Mechanical Specification

Case No. PLM-40 Unit:mm



Terminal Pin No. Assignment (TB1) :
SWITCLAB DG235-7.5-2P(GRAY)

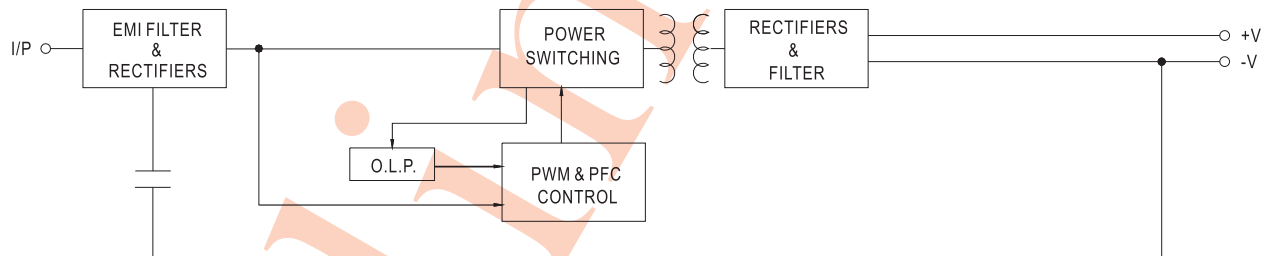
Pin No.	Assignment
1	AC/L
2	AC/N

Terminal Pin No. Assignment (TB2) :
SWITCLAB DG235-7.5-2P(BLUE)

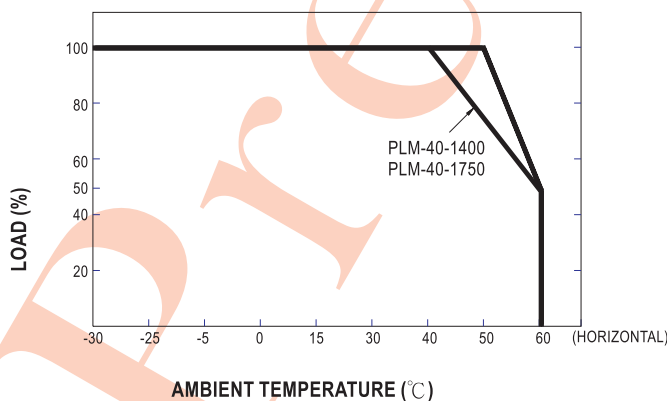
Pin No.	Assignment
1	-V
2	+V

■ Block Diagram

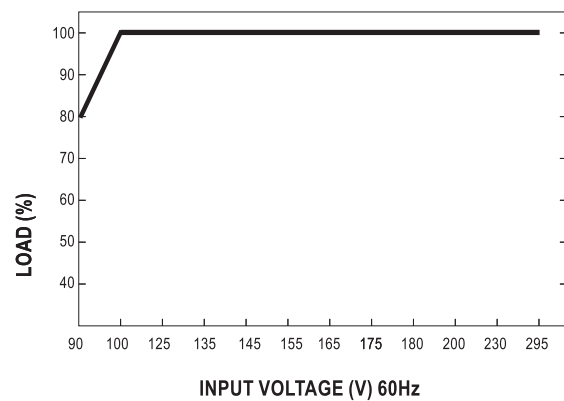
fosc : 67KHz



■ Derating Curve

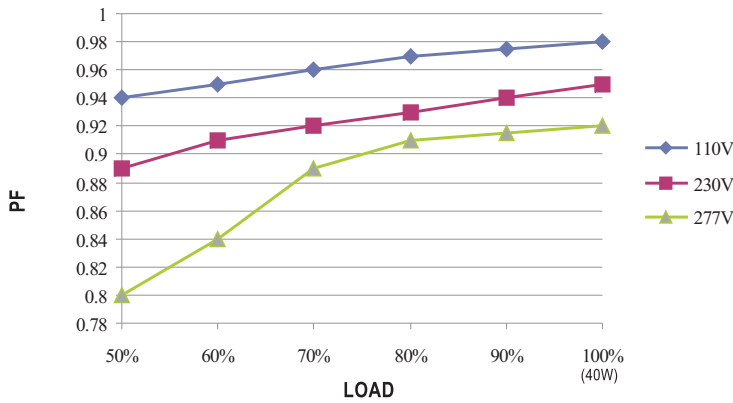


■ Static Characteristics



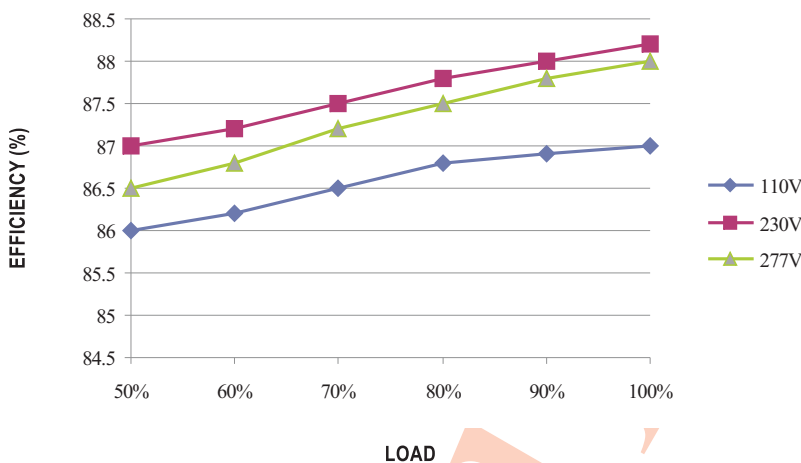
Power Factor Characteristic

Constant Current Mode



EFFICIENCY vs LOAD (PLM-40-350)

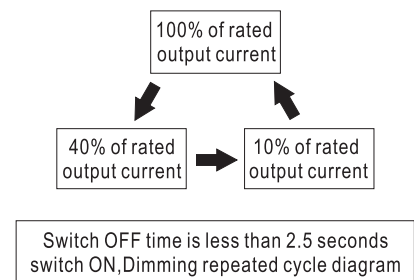
PLM-40 series possess superior working efficiency that up to 88% can be reached in field applications.



Three-step analog dimming

3-level analog dimming control using a wall switch

	STEP 1	STEP 2	STEP 3
three-step analog dimming	Switch turn ON	Switch turn OFF Less than 2.5 seconds Switch turn ON	Switch turn OFF Less than 2.5 seconds Switch turn ON
percentage of rated current	100%	40%	10%



NOTE: if the OFF time is longer than 2.5 seconds, once switch on again, PLM-40 will provide 100% of rated output current