

**Professionally approved products.**

## Datasheet

# Constant Voltage LED Driver 61W 36V 1.7A RS CLG-60-36

RS Stock number 660-0369



### ■ Features :

- Universal AC input / Full range (up to 295VAC)
- Built-in active PFC function
- High efficiency up to 89%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Cooling by free air convection
- IP67 design for indoor or outdoor installations
- Class 2 power unit
- Pass LPS
- 100% full load burn-in test
- High reliability
- Suitable for LED lighting and moving sign applications (Note.2)
- Compliance to worldwide safety regulations for lighting
- Suitable for dry / damp / wet locations

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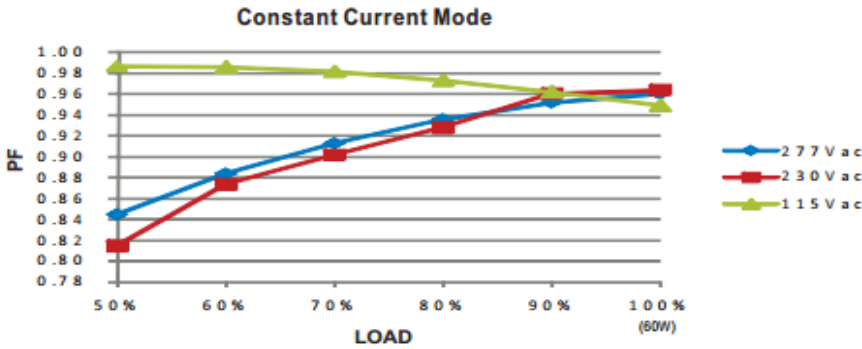
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MODEL		CLG-60-12	CLG-60-15	CLG-60-20	CLG-60-24	CLG-60-27	CLG-60-36	CLG-60-48
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	27V	36V	48V
	CONSTANT CURRENT REGION <i>Note.5</i>	8.4 – 12V	10.5 – 15V	14 – 20V	16.8 – 24V	18.9 – 27V	25.2 – 36V	33.6 – 48V
	RATED CURRENT	5A	4A	3A	2.5A	2.3A	1.7A	1.3A
	CURRENT RANGE	0 – 5A	0 – 4A	0 – 3A	0 – 2.5A	0 – 2.3A	0 – 1.7A	0 – 1.3A
	RATED POWER	60W	60W	60W	60W	62.1W	61.2W	62.4W
	RIPPLE & NOISE (max.) <i>Note.2</i>	2Vp-p	2.4Vp-p	1.8Vp-p	2.7Vp-p	2.7Vp-p	3.6Vp-p	4.6Vp-p
	VOLTAGE ADJ. RANGE	11.5 – 13V	14.5 – 16.2V	19.5 – 22V	24 – 26V	25 – 30V	32.5 – 39V	43.6 – 51.8V
		Fixed can be modified between the range above						
	CURRENT ADJ. RANGE	Fixed. Can be modified between 3% – -25% rated output current						
	VOLTAGE TOLERANCE <i>Note.3</i>	±10%						
LINE REGULATION	±3.0%							
LOAD REGULATION	±5.0%							
SETUP TIME	500ms / 230VAC 3000ms / 115VAC at full load							
INPUT	VOLTAGE RANGE <i>Note.4</i>	90 – 295VAC	127 – 417VDC					
	FREQUENCY RANGE	47 – 63Hz						
	POWER FACTOR (Typ.)	PF>0.94/115VAC, PF>0.9/230VAC, PF>0.9/277VAC at full load (Please refer to "Power Factor Characteristic" curve)						
	TOTAL HARMONIC DISTORTION	THD< 20% when output loading≥70% at 115VAC/230VAC input and output loading≥75% at 277VAC input						
	EFFICIENCY (Typ.)	85%	86%	87.5%	87%	88%	89%	89%
	AC CURRENT (Typ.)	0.8A/115VAC	0.4A/230VAC	0.3A/277VAC				
	INRUSH CURRENT(Typ.)	COLD START 35A(twidth=45µs measured at 50% Ipeak) at 230VAC						
	MAX. No. of PSUs on 16A CIRCUIT BREAKER	32 units (circuit breaker of type B) / 32 units (circuit breaker of type C) at 230VAC						
LEAKAGE CURRENT	<0.75mA / 240VAC							
PROTECTION	OVER CURRENT	95 – 110%						
		Protection type : Constant current limiting, recovers automatically after fault condition is removed						
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE	13.8 – 16V	17.5 – 21V	23 – 28V	28 – 32V	31 – 35V	41 – 46V	54 – 60V
	Protection type : Shut down o/p voltage, re-power on to recover							
OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down							
ENVIRONMENT	WORKING TEMP.	-30 ~ +70°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, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes							
SAFETY & EMC	SAFETY STANDARDS	UL879, UL8750, UL1310, TUV EN61347-1, EN61347-2-13 independent, CAN/CSA C22.2 No. 223-M91(except for 48V), CSA C22.2 No. 250.0-08(except for 48V), CSA C22.2 No. 207-M89(except for 48V), IP67, J61347-1, J61347-2-13 approved						
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC						
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH						
	EMC EMISSION	Compliance to EN55015, EN55022 (CISPR22) Class B, EN61000-3-2 Class C (≥75% load) ; EN61000-3-3						
EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547, light industry level (surge 4KV), criteria A							
OTHERS	MTBF	495.7Khrs min. MIL-HDBK-217F (25°C)						
	DIMENSION	195.6*61.5*38.8mm (L*W*H)						
	PACKING	0.86Kg; 16pcs/14.8Kg/0.54CUFT						
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</li> <li>Tolerance : includes set up tolerance, line regulation and load regulation.</li> <li>Derating may be needed under low input voltage. Please check the static characteristics for more details.</li> <li>Please refer to "DRIVING METHODS OF LED MODULE".</li> <li>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.</li> <li>Direct connecting to LEDs is suggested, but is not suitable for using additional drivers.</li> <li>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.</li> </ol>							



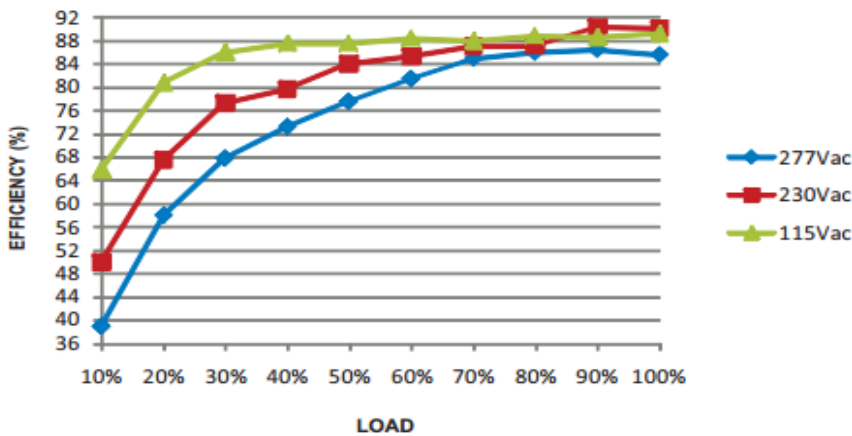
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## Power Factor Characteristic

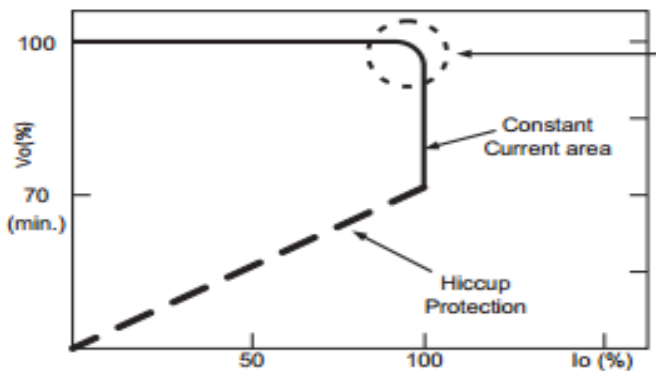


## EFFICIENCY vs LOAD (48V Model)

CLG-60 series possess superior working efficiency that up to 89% can be reached in field applications.



## DRIVING METHODS OF LED MODULE



Typical LED power supply I-V curve