

Constant Voltage Driver

Model: LV(30-250)W24CG



Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)
LV30W24CG	220-240VAC	≤38W	≤0.19A	≥0.95	0-30W	24V	0-1.25A	85%
LV60W24CG		≤72W	≤0.35A		0-60W		0-2.5A	88%
LV100W24CG		≤115W	≤0.6A		0-100W		0-4.17A	93%
LV150W24CG		≤168W	≤0.9A		0-150W		0-6.25A	93%
LV250W24CG		≤275W	≤1.5A		0-250W		0-10.42A	93%

* Test result @230V, 50Hz, Full Load.

1. Parameters

category	Item	Technical Norm					
Features	Output Type	Constant Voltage					
	Dimmable Type	Non-dimmable					
	Output Features	Isolation SELV					
	IP Grade	IP20					
	Insulation Class	Class II					
Input	Rated Input Voltage	220-240VAC					
	Range of AC Input Voltage	176-264VAC					
	Range of DC Input Voltage	175-280VDC(EMI not evaluated)					
	Frequency	Rate:50/60Hz, Range:47~63Hz					
	Power Factor	≥0.95, 220-240VAC, Rated Load, see graphs					
	THD	≤7%	230VAC, Rated Load, see graphs				
	Standby Power Consumption	≤0.5W, @230VAC,Dim to OFF					
	Inrush Current	Model	I _{peak}	I _{peak} (typ.)	Duration time	240Vac/50Hz, 90-degree phase, full load, cold start-up, duration time measure from 50%I _{pk} to 50%I _{pk}	
		30W	<100A	82A	0.8us		
		60W	<30A	26A	220us		
		100W	<50A	45A	250us		
		150W	<60A	56A	185us		
		250W	<80A	76A	310us		
	Connected quantity of 16A Breaker	30W	36pcs,16A type B / 60pcs 16A type C				
		60W	18pcs,16A type B / 30pcs 16A type C				
100W		10pcs,16A type B / 17pcs 16A type C					
150W		8pcs,16A type B / 13pcs 16A type C					
250W		6pcs,16A type B / 8pcs 16A type C					

Output	Output Voltage	24VDC±3%				
	Output Voltage Ripple	30W		<480mV _{PK-PK} (1%)		
		60W/100W/150W/250W		<240mV _{PK-PK} (0.5%)		
	Line Regulation	±1%				
	Load Regulation	±2%				
	Overshoot	<105%Vo (<110%Vo, only for 30W)				
	Start-up Time	≤0.5S (220-240VAC)				
	Hold-up time & Turn off time (Typical)	Model	Hold-up time(mS)	Turn-off time(mS)	230VAC, LED Rated Load, Hold-up time measure from AC input turn-off to output voltage drop to 90%, turn-off time measure from AC input turn-off to output voltage drop to 10%	
		30W	6.8	800		
		60W	22.8	62.8		
		100W	9.2	69.6		
		150W	10	384		
		250W	16.2	676		
	Efficiency	30W	≥84%	85% typ.	230VAC, Rated Load, at output terminals, see graphs	
60W		≥86%	88% typ.			
100W		≥91%	93% typ.			
150W		≥91%	93% typ.			
250W		≥91%	93% typ.			
Protection	Short Circuit Protection	Auto Recovery				
	Over Current Protection	120%-180%Io, Auto Recovery				
	Over Voltage Protection	110%-150%Vo, Auto Recovery				
	Over Temperature Protection	90<Tc<110℃, Auto Recovery(only for 100W/150W/250W)				
	Insulation voltage	I/P to O/P,3KVac/5mA/1min				
	Insulation resistance	>100M ohm @ 500VDC				
	Leakage current	I/P to O/P < 250μA				
Environment	Ta/Operation Temperature	-25....+45℃				
	Ts/Storage Temperature	-40....+85℃				
	Tc/Enclosure Temperature For Safety	30W/60W		80℃		
		100W/150W/250W		90℃		
	Humidity	5%....85%RH				
	Atmosphere	86-108KPa				
Construction	Connection Method	Terminal				
	Cable Terminals	Input		1 terminal block(300V 10A)		
		Output	30W/60W		1 terminal block(300V 10A)	
			100W/150W/250W		2terminals block(min.150V 10A)	
	Installation	Independent				
	Input Wire Cross Section	0.75mm²-1.5 mm²				
	Output Wire Cross Section	30W		1*0.5mm²-1.5 mm²		
		60W		1*0.75mm²-1.5 mm²		
		100W/150W		2*0.75mm²-1.0 mm²		
		250W		2*0.75mm²-1.5 mm²		
Output Cable Length	Max. 3M					

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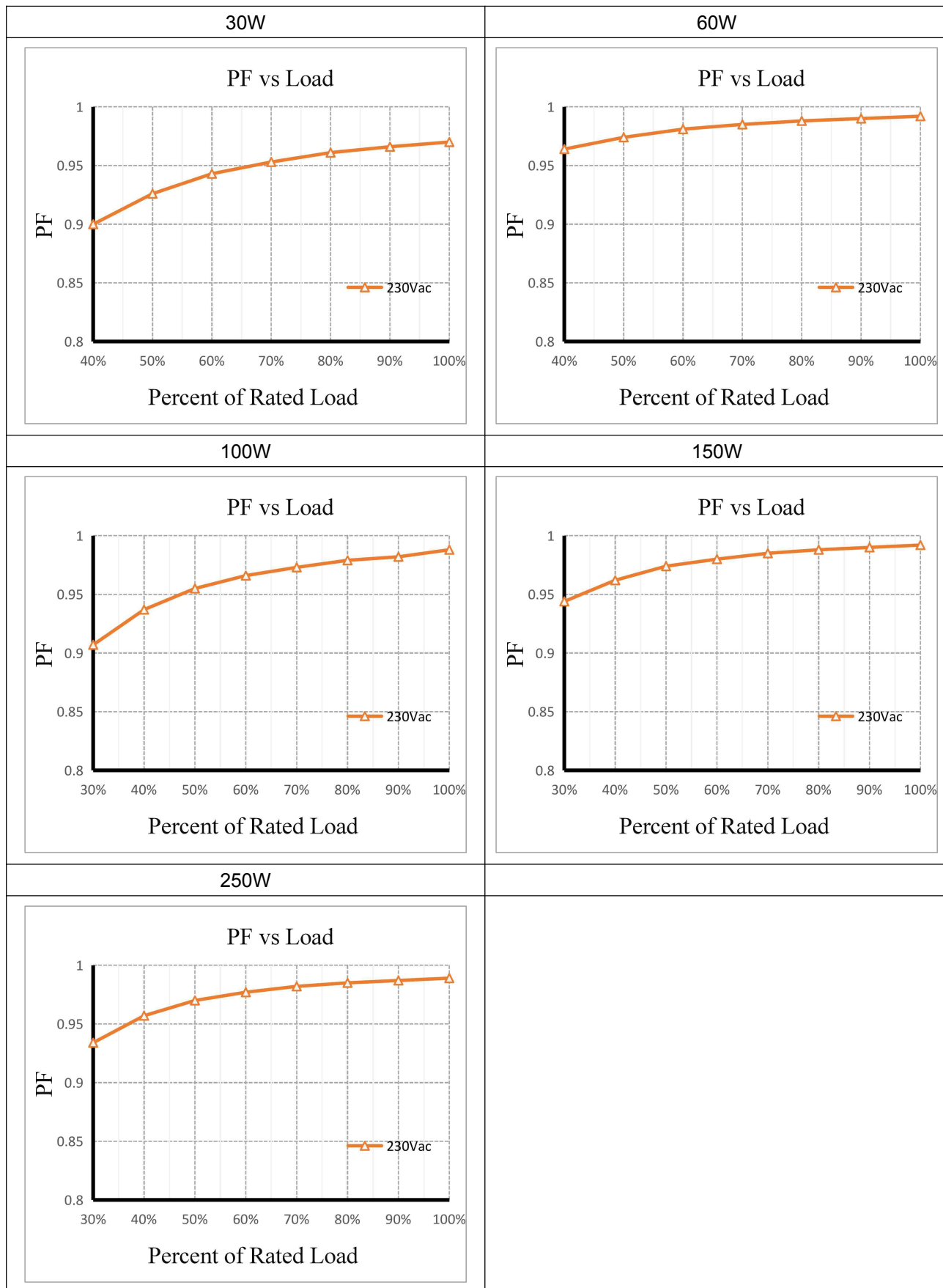
	Cable diameters range	Input	2.2-4mm or 9.5-10.5mm	
		Output & Dimming	2.2-4mm	
	Dimension	30W/60W	300*30*16mm (L*W*H)	
		100W/150W	350*30*18mm (L*W*H)	
		250W	400*40*22mm (L*W*H)	
Standards	Certification	CE, ENEC, SAA		
	Safety Standards	EN61347-1:2015,EN61347-2-13:2014/A1:2017,EN62493:2015, AS61347.2.13:2018,AS/NZS 61347.1:2016 Inc A1		
	EMC Standards	EN55015:2013/A1:2015,EN61000-3-2:2014, EN61000-3-3:2013,EN61547:2009		
	Performance	EN62384		
	Surge	L-N:2KV		
Others	RoHS	2011/65/EU		
	MTBF	≥250KHours,Ta=25℃(MIL-HDBK-217F)		
	Audible Noise	<25dB @ 10cm distance, 20dB background		
	Life Time	30W	≥80K Hrs	@230VAC , full load, see graphs. End of Life: Failure Rate<10%.
		60W	≥65K Hrs	
		100W	≥60K Hrs	
		150W	≥55K Hrs	
		250W	≥52K Hrs	
Warranty	5years			

Remark:

1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.
2. LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3. Output ripple should be measured at the output end which has with 0.1uF/50V ceramic capacitance and 47uF/50V Aluminum capacitance connected in parallel. Measured using oscilloscope with bandwidth limited to 20MHz.

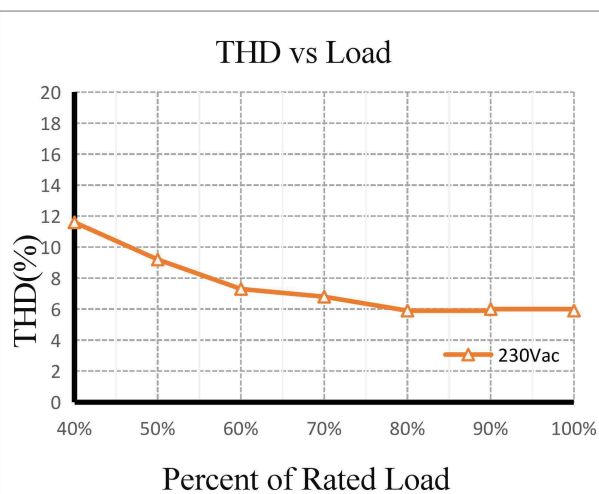
2. Graph

PF VS LOAD Curve

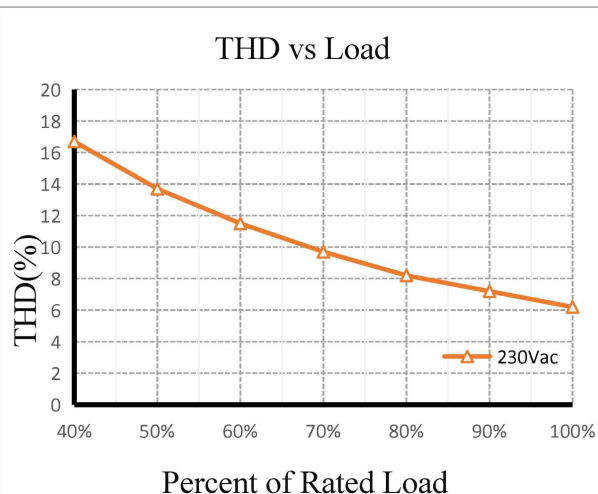


THD VS LOAD Curve

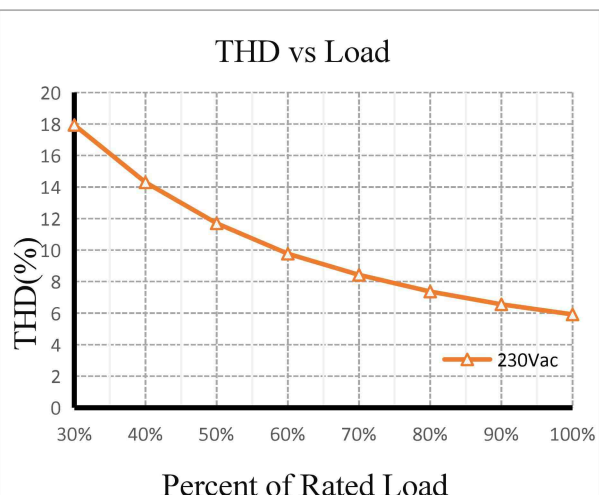
30W



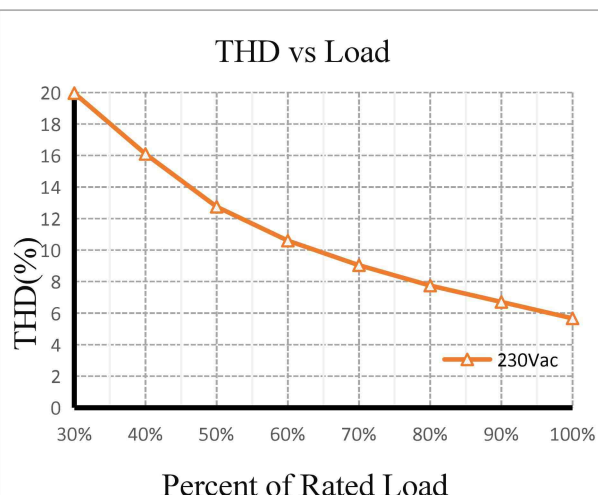
60W



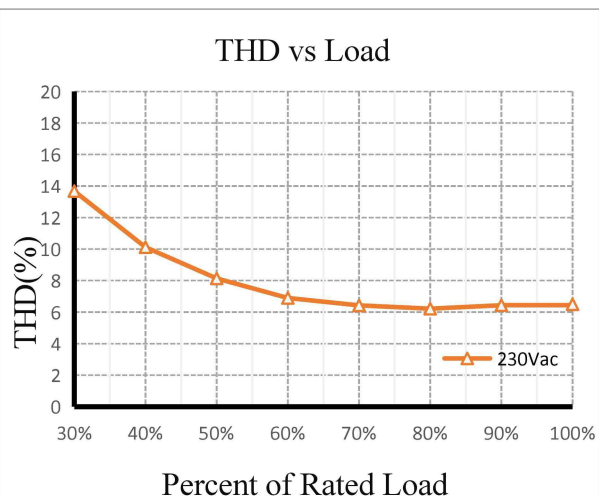
100W



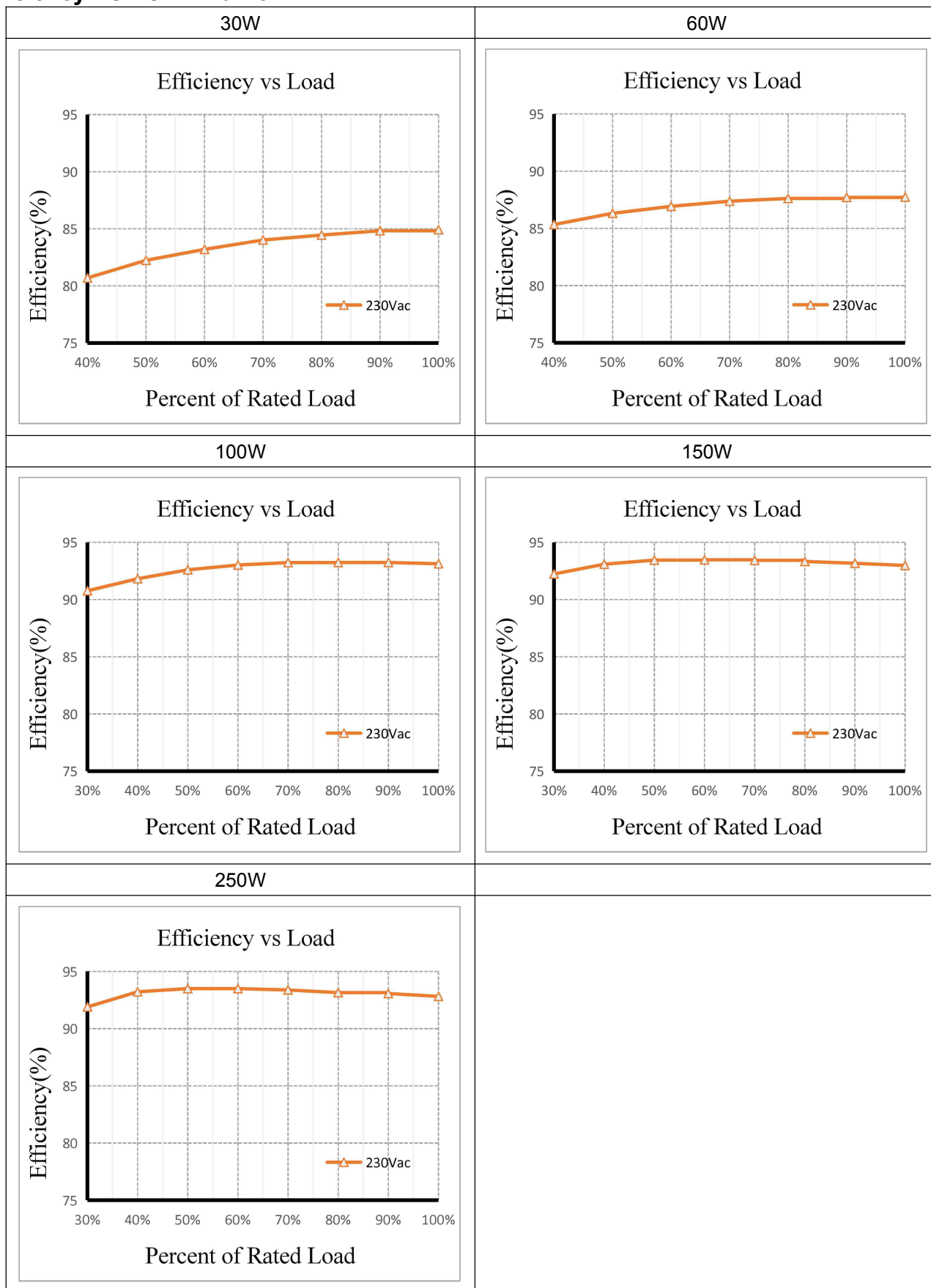
150W



250W



Efficiency VS LOAD Curve



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☐ L ☐ N Wire preparation  INPUT: 0.75-1.5" OUTPUT: 0.75-1.5"	KGP KGP Electronics GmbH Hausstraße 19 DE-58511 Lüdenscheid	LED Driver LV30W24CG Constant Voltage Type For LED modules only	Input Voltage: 220-240V ~ Input Frequency: 50/60Hz Power Factor (A): ≥ 0.95 I _{in} : $\leq 0.19A$	Unrated = 24V = I _{range} = 0-1250mA P _{range} = 0-30W Ta: 25to+45°C Tc: 80°C		☐ INPUT ☐ OUTPUT
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☐ L
 INPUT
☐ N
 wire preparation
 (mm)
 INPUT: 0.75-1.5"
 OUTPUT: 0.75-1.5"

KGP
 KGP Electronics GmbH
 Hausstraße 19
 DE-58511 Lüdenscheld

LED Driver
LV60W24CG
 Constant Voltage Type
 For LED modules only

Input Voltage: 220-240V ~
 Input Frequency: 50/60Hz
 Power Factor (λ): ≥ 0.95
 I_{in}: ≤ 0.35A

U_{rated} = 24V =
 I_{range} = 0-2500mA
 P_{range} = 0-60W
 Ta: -25to+45°C Tc: 80°C

•tc


INPUT □ L □ N wire preparation 16mm INPUT: 0.75-1.0° OUTPUT: 0.75-1.0°	KGP KG Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Driver LV100W24CG Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(λ): ≥ 0.95 I in : ≤ 0.6A	Rated = 24V = I range = 0~4170mA P range = 0~100W Ta: -25to+45°C Tc: 90°C •tc SELV LED- + LED+ -
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INPUT □ L □ N wire preparation 16mm INPUT: 0.75-1.0° OUTPUT: 0.75-1.0°	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Driver LV150W24CG Constant Voltage Type For LED modules only	Input Voltage: 220-240V~ Input Frequency: 50/60Hz Power Factor(α): ≥ 0.95 I_{in} : ≤ 0.9A	U_{rated} = 24V = I_{range} = 0 ~ 6250mA P_{range} = 0 ~ 150W Ta: 25to+45°C Tc: 90°C            
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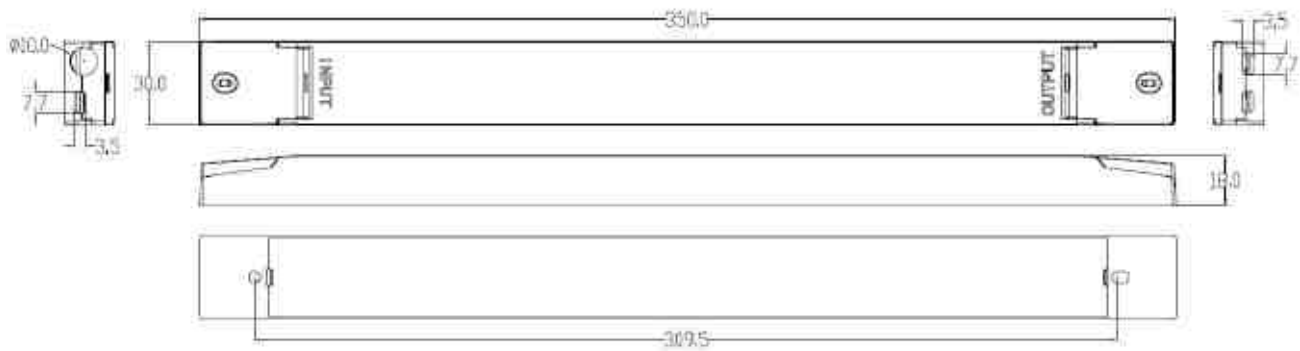
INPUT □ L □ N wire preparation 6mm INPUT:0.75-1.5" OUTPUT:0.75-1.5"	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Driver LV250W24CG Constant Voltage Type For LED modules only	Input Voltage:220-240V~ Input Frequency:50/60Hz Power Factor(λ):≥0.95 I_{in} ≤1.5A	Rated = 24V^{±5%} I_{range} = 0~10420mA Prange = 0~250W Ta:25to+45°C Tc:90°C	
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4. Dimension (Unit: mm)

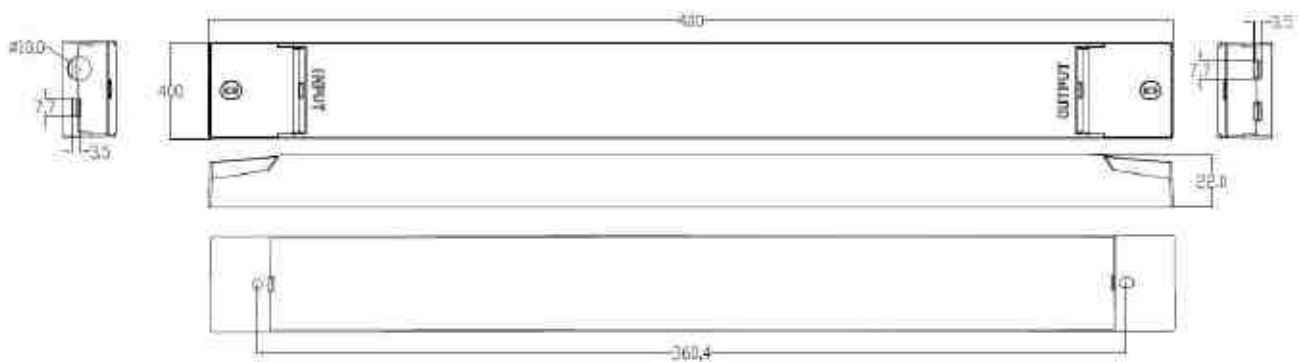
LV30W24CG & LV60W24CG:



LV100W24CG & LV150W24CG:



LV250W24CG:



5. Packing information

Packing way	Model	Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
With white box and manual	LV30W24CG	450*240*200	45	0.143	6.44	6.96
	LV60W24CG		45	0.23	10.35	10.87
	LV100W24CG		35	0.21	7.35	7.87
	LV150W24CG		35	0.31	10.78	11.3
	LV250W24CG		30	0.53	15.9	16.42
Without white box and manual	LV30W24CG		75	0.125	9.38	10.08
	LV60W24CG		75	0.21	15.75	16.45
	LV100W24CG		70	0.19	12.88	13.48
	LV150W24CG		70	0.28	19.6	20.2
	LV250W24CG		40	0.5	20	20.6

6. REVISION HISTORY

DATE	REV.	REMARK
2020-05-18	V0.01	Initial release.