

LV(100-250)W24CG2

Constant Voltage Driver

Model:LV(100-250)W24CG2



Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)
LV100W24CG2	220-240VAC	≤115W	≤0.6A	≥0.95	0-100W	24V	0-4.17A	92%
LV150W24CG2		≤168W	≤0.9A		0-150W		0-6.25A	93%
LV250W24CG2		≤275W	≤1.5A		0-250W		0-10.42A	93%

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

* Recommended minimum power is 10% 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,NO Load			
Output	Output Voltage	24VDC+5%			
	No load Voltage	24VDC+5%			
	Output Voltage Ripple	<240mV _{PK-PK} (0.5%)			
	Line Regulation	±1%			
	Load Regulation	±2%			
	Flicker	SVM ≤0.4, PstLM ≤1.0			
	Overshoot	<105%Vo			
	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%,
100W		9.2	69.6		

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		150W	10	384	turn-off time measure from AC input turn-off to output voltage drop to 10%	
		250W	16.2	676		
	Efficiency	100W	≥91%	92% typ.	230VAC, Rated Load, at o output terminals, see graphs	
		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°C, Auto Recovery				
	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°C				
	Ts/Storage Temperature	-40....+85°C				
	Tc/Enclosure Temperature For Safety	90°C				
	Humidity	5% 85%RH				
	Atmosphere	86-108KPa				
Construction	Connection Method	Terminal				
	Cable Terminals	Input	1 terminal block(300V 10A)			
		Output	2terminals block(min.150V 10A)			
	Installation	Independent				
	Input Wire Cross Section	0.75mm ² -1.5 mm ²				
	Output Wire Cross Section	100W/150W	2*0.75mm ² -1.0 mm ²			
		250W	2*0.75mm ² -1.5 mm ²			
	Cable stripping lengths	6mm				
	Output Cable Length	Max. 3M				
	Cable diameters range	Input	2.2-4mm or 9.5-10.5mm			
Output & Dimming		2.2-4mm				
Dimension	100W/150W	350*30*18mm (L*W*H)				
	250W	400*40*22mm (L*W*H)				
Standards	Certification	CE, ENEC, SAA				
	Safety Standards	EN61347-2-13:2014/A1:2017,EN 61347-1:2015/A1:2021, EN IEC 62384:2020,EN61347-1:2015, EN62493:2015, AS61347.2.13:2018,AS/NZS 61347.1:2016 IncA1				
	EMC Standards	EN IEC 55015:2019,EN IEC 55015:2019/A11:2020, EN IEC 61000-3-2:2019/A1:2021,EN61547:2009, EN 61000-3-3:2013/A2:2021				
	Performance	EN62384				
	Surge	L-N:2KV				
Others	RoHS	2011/65/EU				
	MTBF	≥250KHours,Ta=25°C(MIL-HDBK-217F)				
	Life Time	100W	≥60K Hrs	@230VAC , full load, see graphs.		

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		150W	≥55K Hrs	End of Life: Failure Rate<10%.
		250W	≥52K Hrs	
Warranty		5years		
Noise		≤ 24dB @Background noise ≤18dB , Interval≥15cm		

Remark:

All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.

Terminal wiring must be operated with a suitable screwdriver. After installation, check to make sure that the terminals cannot be pressed against the wire sheath

LED Driver is a component of the luminaires, Luminaires and wire layout will affect the EMC, please check the EMC with end products again.

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. Connected quantities of different current Breaker

TYPE	LV100W24CG2 Connected quantities of different current Breaker						Input Voltage	Inrush Current <50A	Time
	current (A)	10	13	16	20	25			
	Installation wire diameter	1.5mm ²	2.5mm ²	2.5mm ²	4mm ²	4mm ²			
TYPE B	13	17	21	27	33	@230VAC	45	250us	
TYPE C	21	28	34	43	53				
TYPE D	34	44	55	68	85				

TYPE	LV150W24CG2 Connected quantities of different current Breaker						Input Voltage	Inrush Current <60A	Time
	current (A)	10	13	16	20	25			
	Installation wire diameter	1.5mm ²	2.5mm ²	2.5mm ²	4mm ²	4mm ²			
TYPE B	11	14	17	21	27	@230VAC	56	185us	
TYPE C	17	22	27	34	43				
TYPE D	27	36	44	55	69				

TYPE	LV250W24CG2 Connected quantities of different current Breaker						Input Voltage	Inrush Current <80A	Time
	current (A)	10	13	16	20	25			
	Installation wire diameter	1.5mm ²	2.5mm ²	2.5mm ²	4mm ²	4mm ²			
TYPE B	8	10	13	16	20	@230VAC	76	310us	
TYPE C	13	16	20	25	32				
TYPE D	20	26	32	40	51				

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3. Label

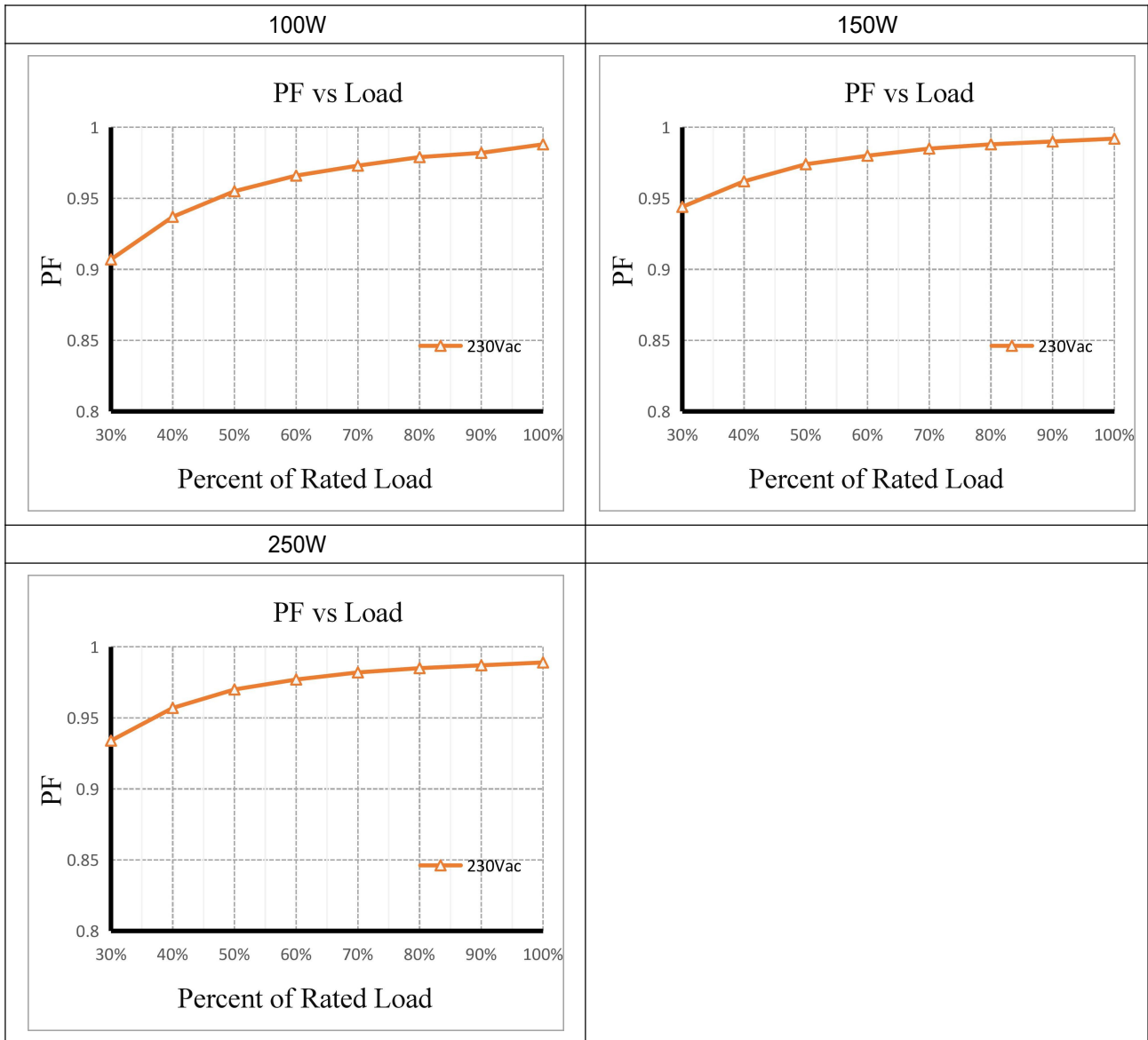
<input type="checkbox"/> L <input type="checkbox"/> N wire preparation (6mm) INPUT:0.75-1.5° OUTPUT:0.75-1.0°	KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Driver LV100W24CG2 Constant Voltage Type For LED modules only	Input Voltage:220-240V~ Input Frequency:50/60Hz Power Factor(λ): ≥ 0.95 $I_{in} \leq 0.6A$	U _{rated} =24V= I _{range} =0-4170mA P _{range} =0-100W ta:-25to+45°C tc:90°C	•tc 	
		SELV				

<input type="checkbox"/> L <input type="checkbox"/> N wire preparation (6mm) INPUT:0.75-1.5° OUTPUT:0.75-1.0°	KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Driver LV150W24CG2 Constant Voltage Type For LED modules only	Input Voltage:220-240V~ Input Frequency:50/60Hz Power Factor(λ): ≥ 0.95 $I_{in} \leq 0.9A$	U _{rated} =24V= I _{range} =0-6250mA P _{range} =0-150W ta:-25to+45°C tc:90°C	•tc 	
		SELV				

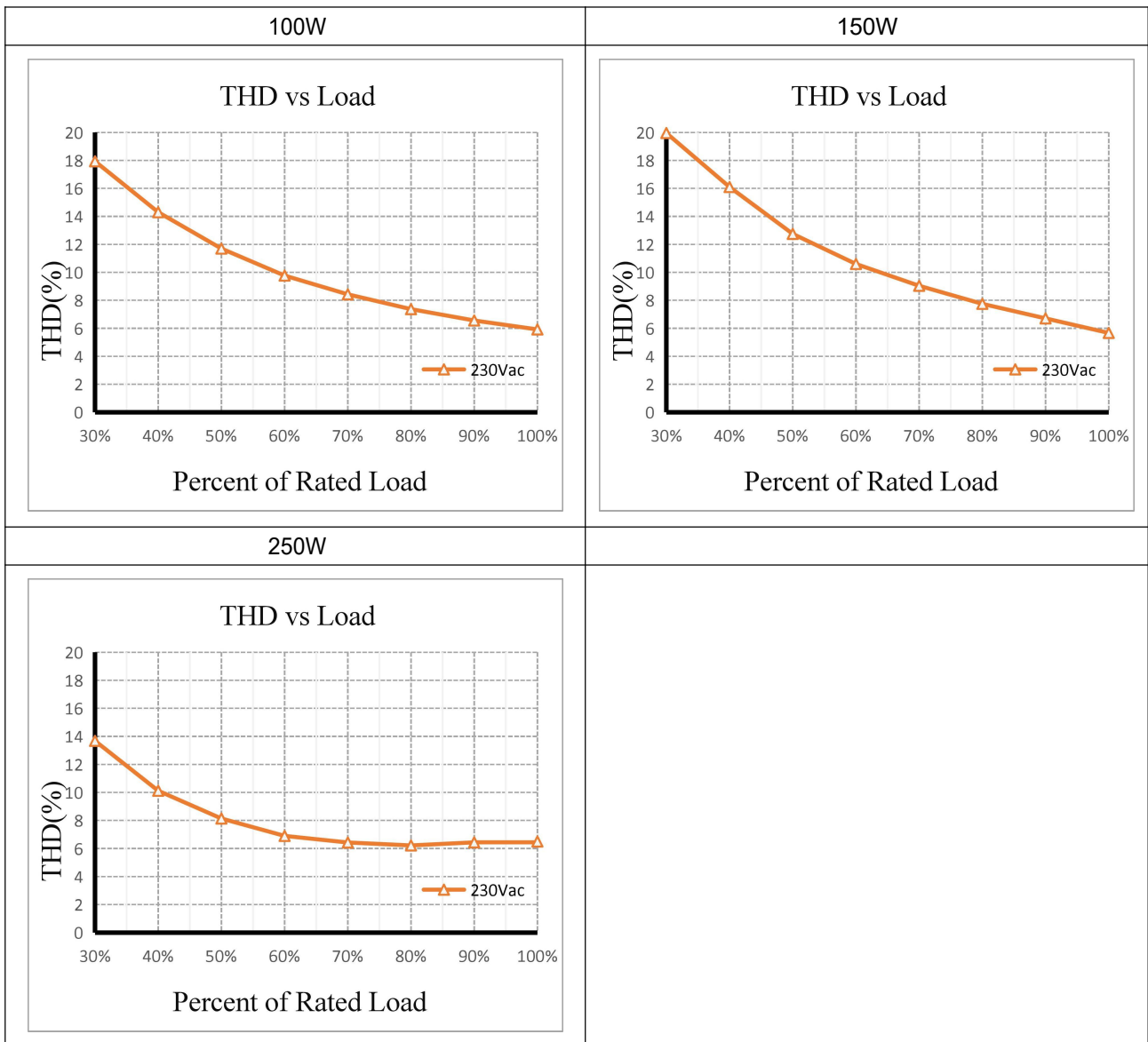
<input type="checkbox"/> L <input type="checkbox"/> N wire preparation (6mm) INPUT:0.75-1.5° OUTPUT:0.75-1.0°	KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Driver LV250W24CG2 Constant Voltage Type For LED modules only	Input Voltage:220-240V~ Input Frequency:50/60Hz Power Factor(λ): ≥ 0.95 $I_{in} \leq 1.5A$	U _{rated} =24V= I _{range} =0-10420mA P _{range} =0-250W ta:-25to+45°C tc:90°C	•tc 	
		SELV				

4. Graph

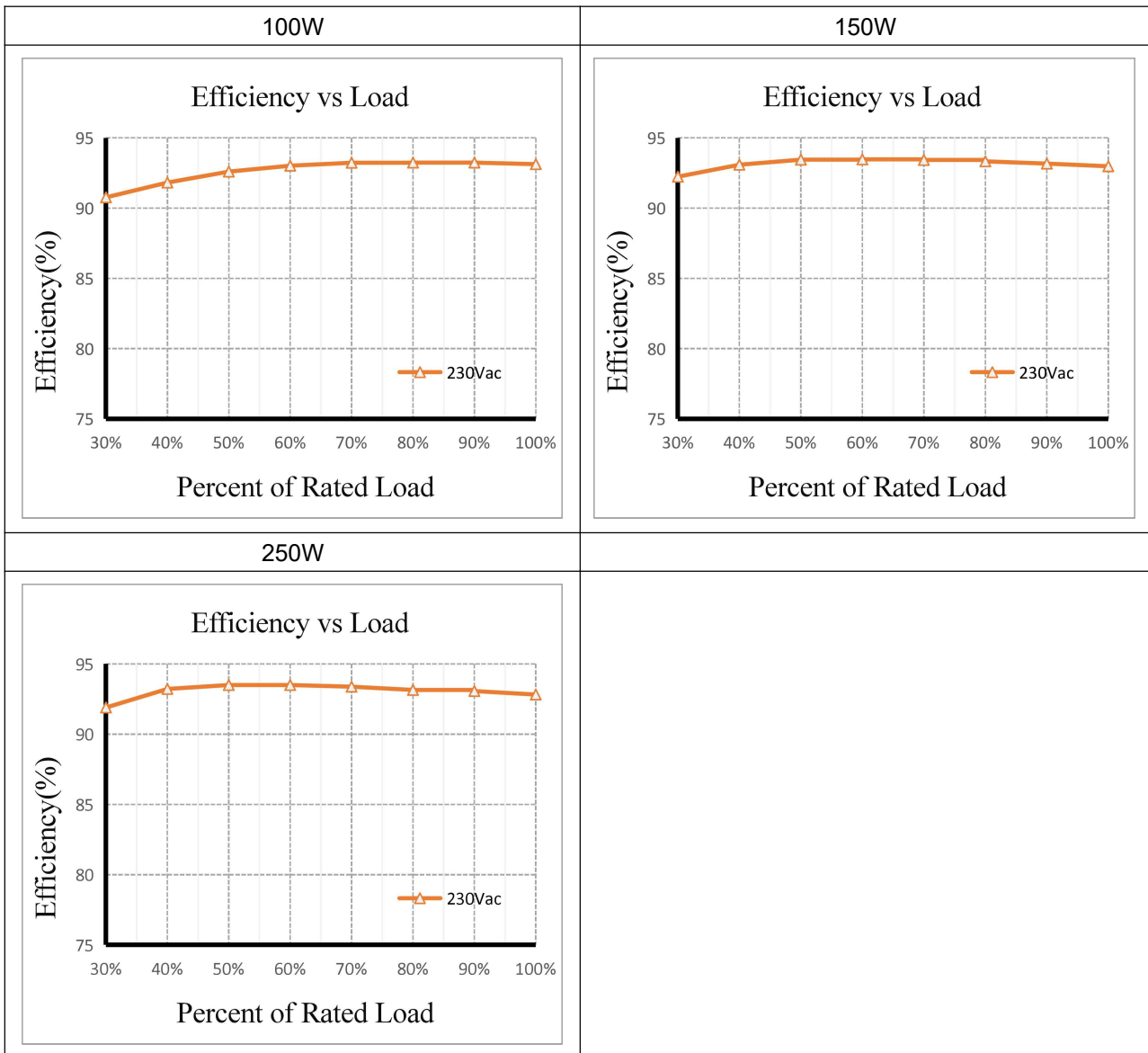
PF VS LOAD Curve



THD VS LOAD Curve



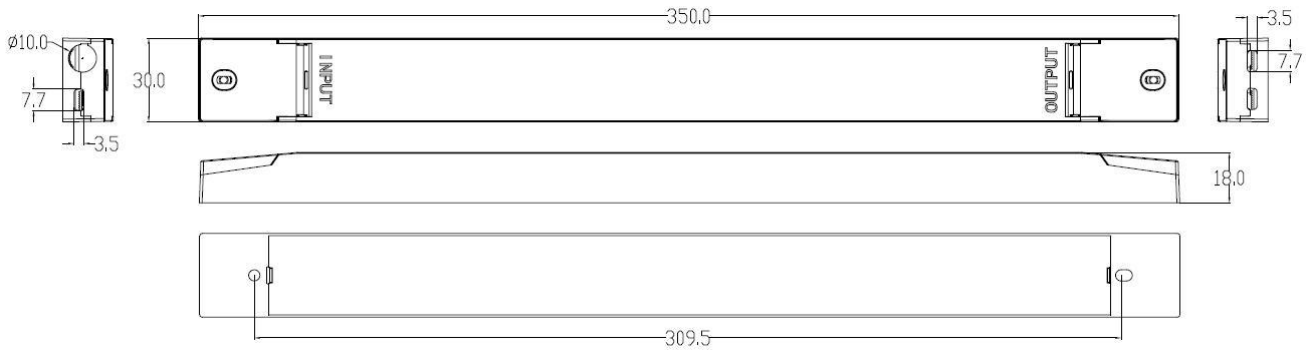
Efficiency VS LOAD Curve



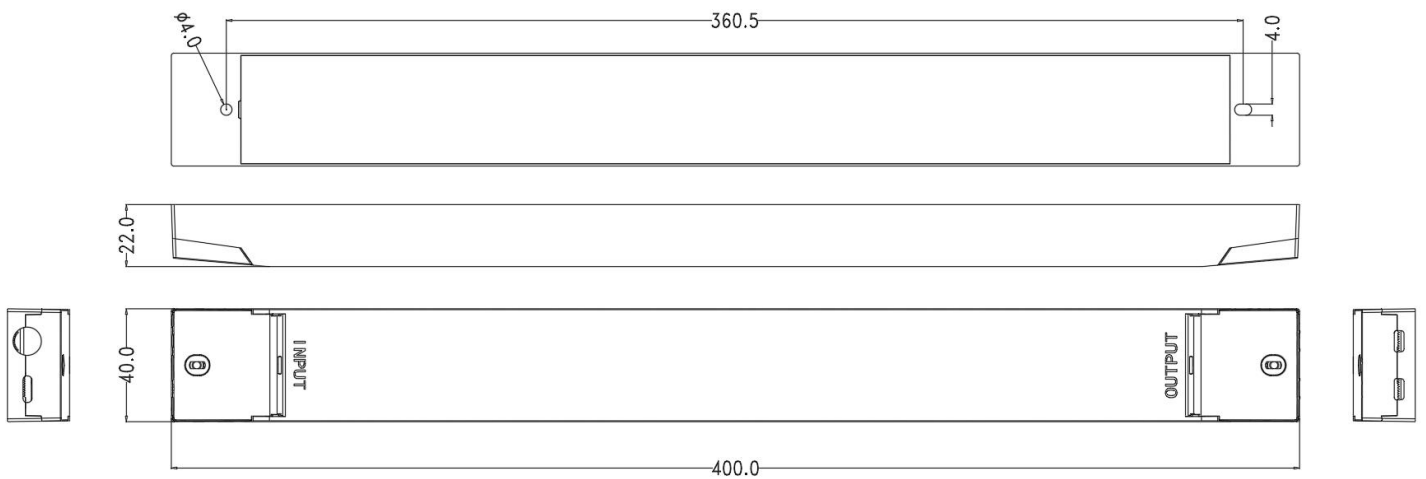
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5. Dimension (Unit: mm)

LV100W24CG2 & LV150W24CG2:



LV250W24CG2:



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6. 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	LV100W24CG2	375*235*195 R15	50	0.21	10.5	11.03
	LV150W24CG2			0.31	15.5	16.02
	LV250W24CG2	420*230*160 R16	25	0.53	13.25	13.76
Without white box and manual	LV100W24CG2	440*345*155 R15	40	0.19	7.6	8.18
	LV150W24CG2			0.28	11.2	11.75
	LV250W24CG2	440*300*155 R15	25	0.5	12.5	13.0

7. Wiring instructions

- All connections must be kept as short as possible to ensure good EMI behaviour
- Mains leads should be kept apart from LED Driver and other leads (ideally 5 – 10 cm distance)
- Advice the maximum length of output wires is 3 m
- Secondary switching is not permitted (Except for constant voltage)
- Incorrect wiring can damage LED modules.
- The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)

8. REVISION HISTORY

DATE	VER	REMARK
2022-04-13	V1.0	Initial release.
2022-06-02	V1.1	Add circuit breaker table.
2022-09-05	V1.2	Update safety standards and EMC standards.