

Constant Voltage Driver

Model:LV(100-250)W48CG 1-10



Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)
LV100W48CG 1-10	220-240VAC	≤115W	≤0.6A	≥0.95	0-100.8W	48V	0-2.1A	92%
LV150W48CG 1-10		≤168W	≤0.9A		0-150W		0-3.125A	92%
LV250W48CG 1-10		≤275W	≤1.5A		0-250W		0-5.21A	93%

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

1. Parameters

category	Item	Technical Norm	
Features	Output Type	Constant Voltage	
	Dimmable Type	3 in 1: 1-10VDC, PWM signal, Resistance	
	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	
	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} (typ.) Duration time
		100W	<50A 45A 250us
		150W	<60A 56A 185us
250W		<80A 76A 310us	
Connected quantity of 16A Breaker	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	48VDC±3%	
	Output Voltage Ripple	<480mV _{PK-PK} (0.5%)	
	Line Regulation	±1%	
	Load Regulation	±2%	
	Overshoot	<105%Vo	
	Start-up Time	≤0.5S (220-240VAC)	

	Efficiency	100W	≥90%	92% typ.	230VAC, Rated Load, at output terminals, see graphs
		150W	≥90%	92% 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			
Control Method	1-10V(0-10V)dimming	0-10Vdc, Port source current 0.1mA typical			
	PWM dimming	PWM Signal dimming Duty: 0- 99%,0.25KHz-2KHz, Voltage amplitude:3-10V			
	Resistance dimming	0-100/N Kohm (N=driver quantity for synchronized dimming operation)			
	Output Dimming range	Output duty:1%-100%,1.38KHz, Dim-to-off			
Environment	Ta/Operation Temperature	-25....+45			
	Ts/Storage Temperature	-40....+85°C			
	Tc/Enclosure Temperature	100W/150W/250W	90°C		
	Humidity	5%....85%RH			
	Atmosphere	86-108KPa			
Construction	Connection Method	Terminal			
	Cable Terminals	Input		1 terminal block (300V/10A)	
		Output	100W/150W		1 terminal block (300V/10A)
			250W		2 terminals block(300V/10A)
		Dimming		1 terminal block(300V/10A)	
	Installation	Independent			
	Input Wire Cross Section	0.75mm ² -1.5 mm ²			
	Output Wire Cross Section	100W/150W		1*0.75mm ² -1.5 mm ²	
		250W		2*0.75mm ² -1.5 mm ²	
	Dimming Wire Cross Section	1*0.5mm ² -1.5mm ²			
	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	EN61347-1:2015,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°C (MIL-HDBK-217F)		
	Audible Noise	<25dB @ 10cm distance, 20dB background		
	Life Time(@Ta max)	100W	≥100K Hrs	@230VAC , full load, End of Life: Failure Rate<10%
		150W	≥55K Hrs	
250W		≥63K Hrs		
Warranty	5years			

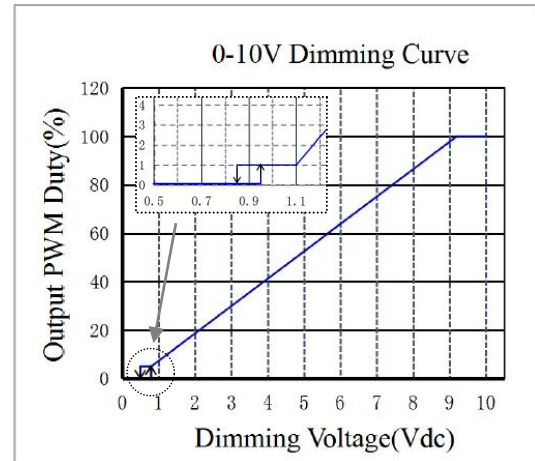
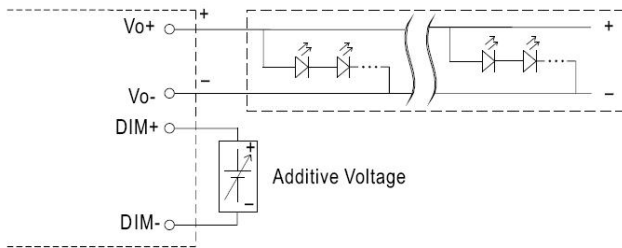
Remark:

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.

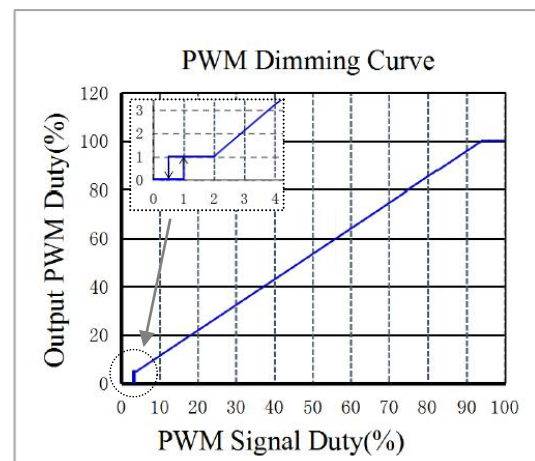
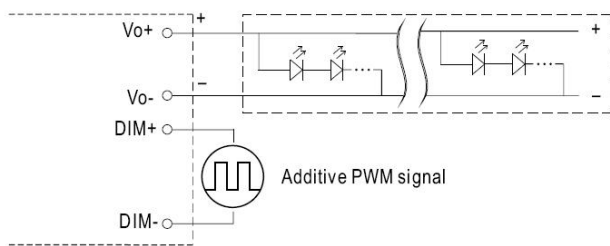
2. 3 in 1 Dimming Function

Output power can be adjusted by applying one of the three methodologies between DIM+ and DIM-: 0-10VDC, or PWM signal or resistance.

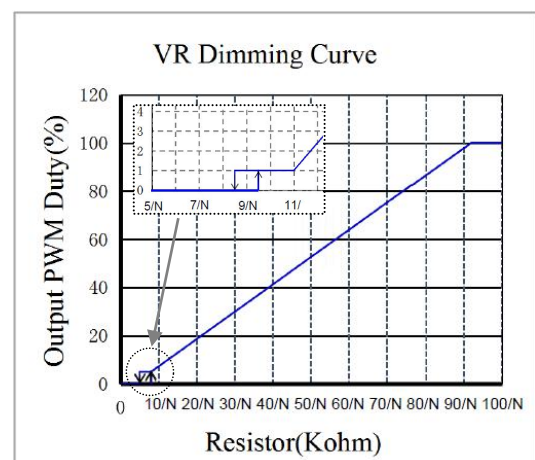
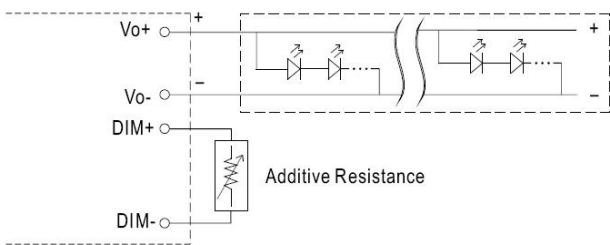
Applying additive 0 ~ 10VDC



Applying additive PWM signal (Duty: 0- 99%,frequency range 0.25KHz ~ 2KHz,Voltage amplitude:3-10V)



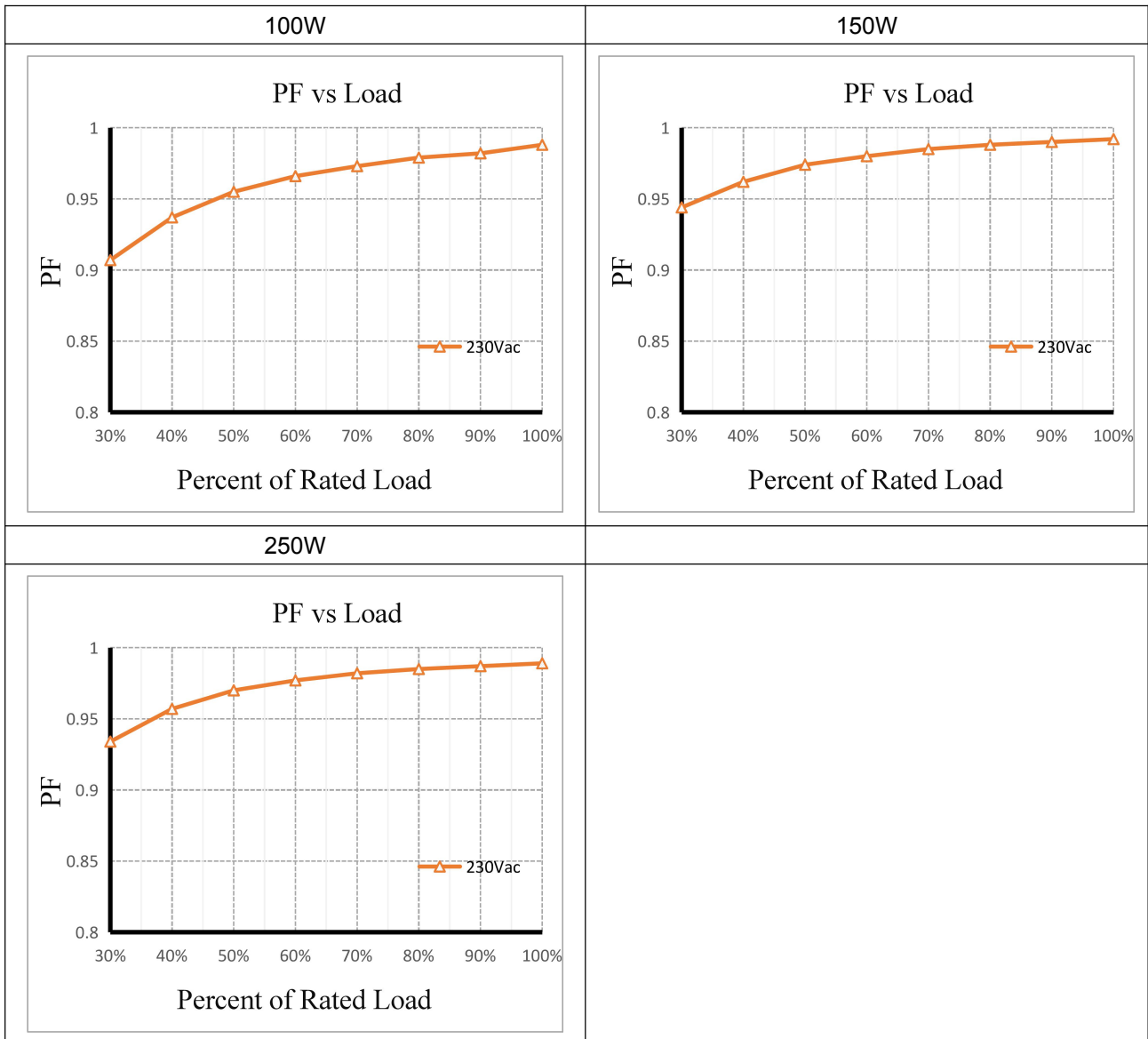
Applying additive resistance



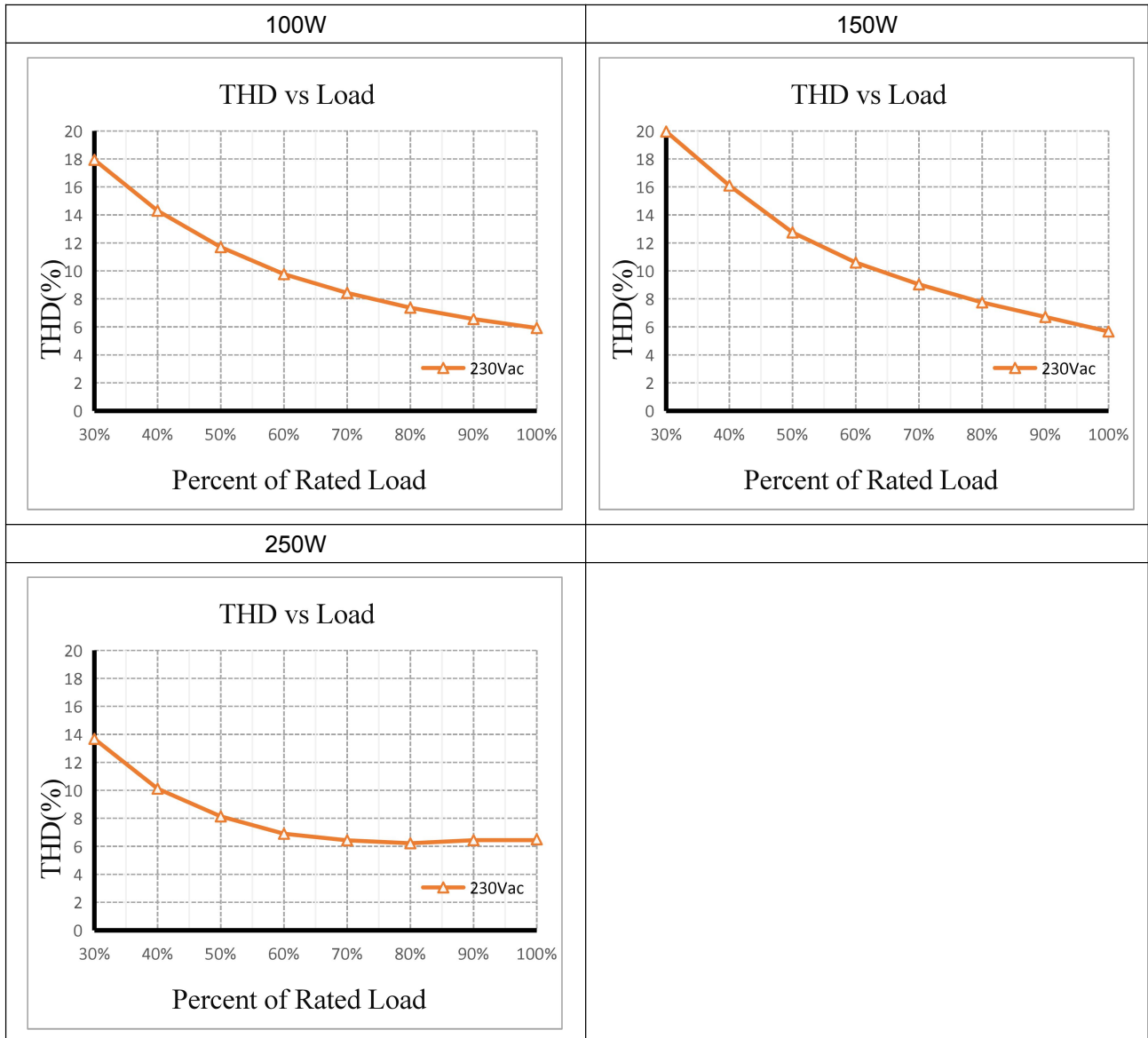
(N=driver quantity for synchronized dimming operation)

3. Graph

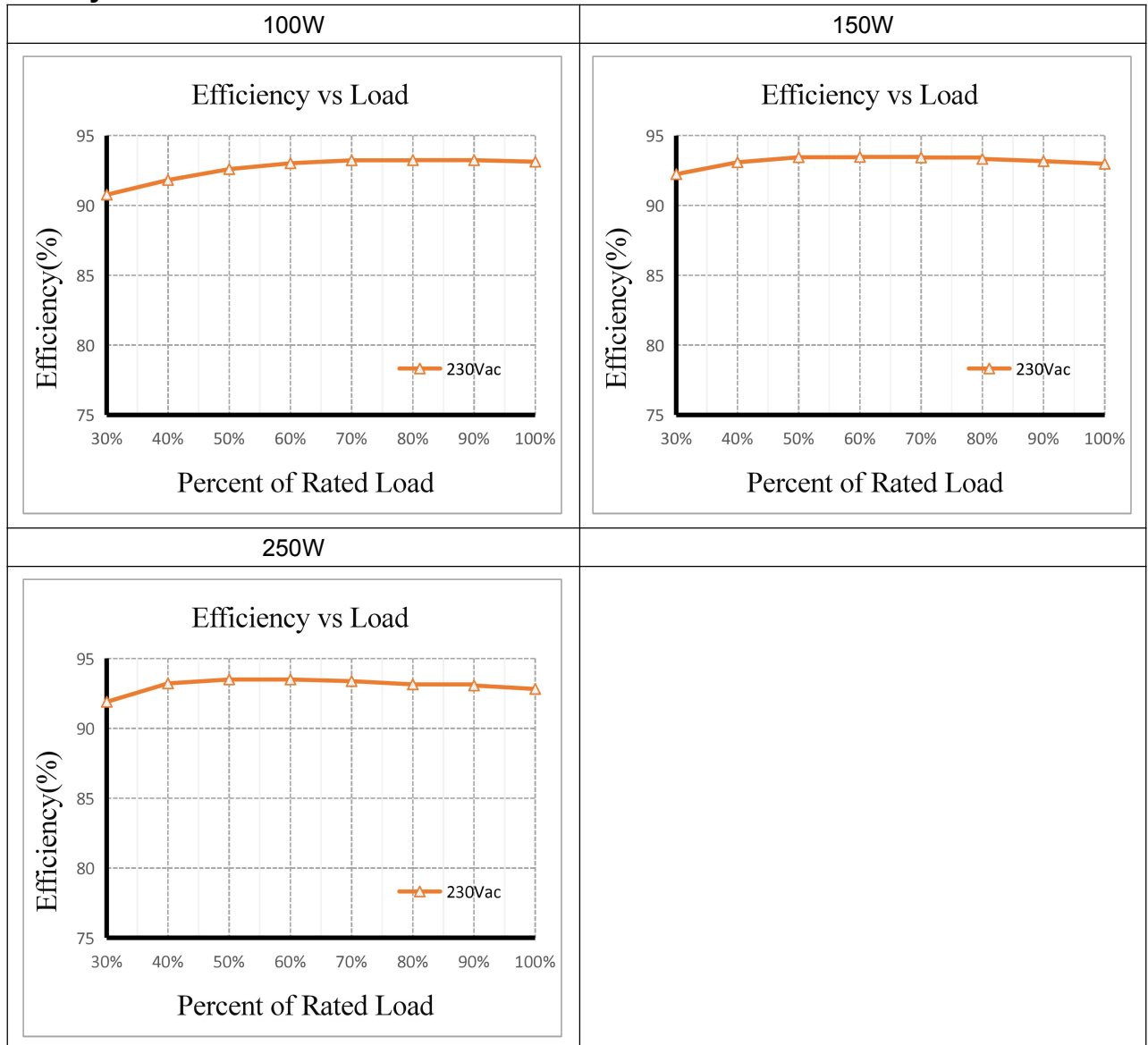
PF VS LOAD Curve



THD VS LOAD Curve



Efficiency VS LOAD Curve



4. Label

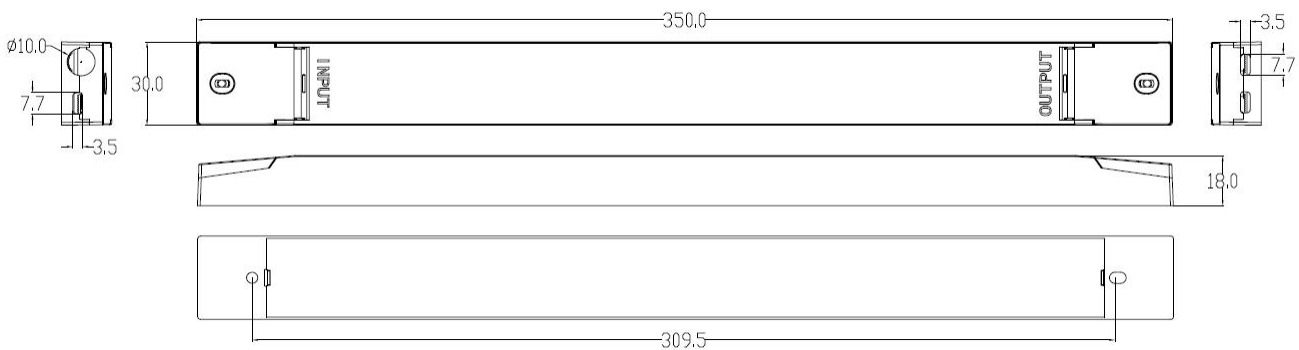
<input type="checkbox"/> L <input type="checkbox"/> N wire preparation (mm) INPUT:0.75-1.5° OUTPUT:0.75-1.5° DIM:0.5-1.5°	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Dimmable Driver LV100W48CG 1-10 Constant Voltage Type For LED modules only	Input Voltage:220-240V~ Input Frequency:50/60Hz Power Factor(λ): ≥ 0.95 $I_{in} \leq 0.6A$	U _{rated} =48V= I _{range} =0-2100mA P _{range} =0-100.8W Ta:-25to+45°C Tc:90°C	•tc CE EAC W W SELV	<input type="checkbox"/> OUTPUT
						<input type="checkbox"/> DIM

<input type="checkbox"/> L <input type="checkbox"/> N wire preparation (mm) INPUT:0.75-1.5° OUTPUT:0.75-1.5° DIM:0.5-1.5°	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Dimmable Driver LV150W48CG 1-10 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} =48V= I _{range} =0-3125mA P _{range} =0-150W Ta:-25to+45°C Tc:90°C	•tc CE EAC W W SELV	<input type="checkbox"/> OUTPUT
						<input type="checkbox"/> DIM

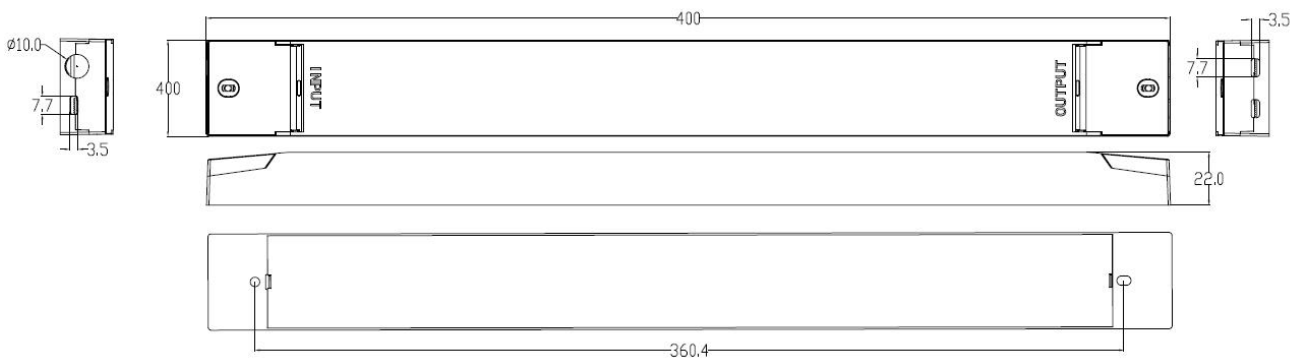
<input type="checkbox"/> L <input type="checkbox"/> N wire preparation (mm) INPUT:0.75-1.5° OUTPUT:0.75-1.5° DIM:0.5-1.5°	KGP KGP Electronics GmbH Hueckstraße 19 DE-58511 Lüdenscheid	LED Dimmable Driver LV250W48CG 1-10 Constant Voltage Type For LED modules only	Input Voltage:220-240V~ Input Frequency:50/60Hz Power Factor(λ): ≥ 0.95 $I_{in} \leq 1.5A$	U _{rated} =48V= I _{range} =0-5210mA P _{range} =0-250W Ta:-25to+45°C Tc:90°C	•tc CE EAC W W SELV	LED- <input type="checkbox"/> LED+ <input type="checkbox"/> DIM- <input type="checkbox"/> DIM+ <input type="checkbox"/>
						<input type="checkbox"/> DIM

5. Dimension (Unit: mm)

LV100W48CG 1-10 & LV150W48CG 1-10:



LV250W48CG 1-10:



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	LV100W48CG 1-10	450*240*200	35	0.21	7.35	7.87
	LV150W48CG 1-10		35	0.309	10.82	11.34
	LV250W48CG 1-10		30	0.535	16.05	16.57
Without white box and manual	LV100W48CG 1-10		70	0.184	12.88	13.48
	LV150W48CG 1-10		70	0.281	19.67	20.27
	LV250W48CG 1-10		40	0.502	20.08	20.68

7. REVISION HISTORY

DATE	REV.	REMARK
2020-05-15	V0.01	Initial release.