Constant Voltage LED Driver

Constant Voltage Driver

Model: XSV Series

Model	Item Code	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)
XSV30W24	149171	220-240VAC	≤36W	≤0.2A	≥0.95	0-30W	24V	1.25A	86%
XSV60W24	149311		≤72W	≤0.4A		0-60W		2.50A	88%
XSV100W24	148851		≤115W	≤0.6A		0-100W		4.17A	90%
XSV160W24	148941		≤180W	≤0.9A		0-160W		6.67A	92%
XSV240W24	149041		≤265W	≤1.5A		0-240W		10.00A	92%
XSV400W24	149221		≤435W	≤2.3A		0-400W		16.67A	93%

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

1.Parameters

category	Item	Technical Norm				
Features	Output Type	Constant Voltage				
	Dimming Type	NA				
	Output Features	Isolation SELV				
	IP Grade	IP67				
	Installation	Independent				
	Insulation Class	Class I				
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	≤10%, 230VAC，Rated Load, see graphs				
	No Load Power Consumption	≤0.5W, @230VAC				
	Inrush Current	Model	IP	IP (typ.)	Duration time	240Vac/50Hz, 90-degree phase, full load, cold start-up, duration time measure from 50%Ipk to 50%Ipk
		30W	<30A	25A	200us	
		60W	<30A	26A	220us	
		100W	<50A	45A	250us	
		160W	<60A	56A	250us	
		240W	<80A	76A	320us	

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		400W	<100A	88A	430us	
	Connected quantity of 16A Breaker	30W	16pcs,16A type B / 26pcs 16A type C			
		60W	16pcs,16A type B / 26pcs 16A type C			
		100W	10pcs,16A type B / 16pcs 16A type C			
		160W	8pcs,16A type B / 13pcs 16A type C			
		240W	6pcs,16A type B / 8pcs 16A type C			
		400W	4pcs,16A type B / 5pcs 16A type C			
Output	Output Voltage	24VDC±3%				
	Rated Load Range	30W	12-30W			
		60W	24-60W			
		100W	30-100W			
		160W	48-160W			
		240W	72-240W			
		400W	120-400W			
	Output Voltage Ripple	<240mVPK-PK (0.5%)				
	Line Regulation	±1%				
	Load Regulation	±2%				
	Overshoot	<105%Vo (<110%Vo, only for 30W)				
	Start-up Time	<0.5S (220-240VAC)				
	Efficiency	30W	≥84%	86% typ.	230VAC, Rated Load, at output terminals, see graphs	
		60W	≥86%	88% typ.		
		100W	≥90%	92% typ.		
		160W	≥90%	92% typ.		
		240W	≥90%	92% typ.		
		400W	≥91%	93% typ.		
Protection	Short Circuit Protection	Auto Recovery				
	Over Current Protection	120%-200%Io, Auto Recovery				
	Over Voltage Protection	120%-150%Vo, Auto Recovery				
	Over Temperature Protection	90<Tc<110℃, 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….+50℃				
	Ts/Storage Temperature	-40….+85℃				
	Tc/Enclosure Temperature For Safety	30W/60W/100W	75℃			
		160W	85℃			
		240W/400W	90℃			
	Humidity	5%....85%RH				
	Atmosphere	86-108KPa				
Standards	Certification	CE				
	Safety Standards	EN61347-1:2015, EN61347-2-13:2014/A1:2017,EN62493:2015, AS61347.2.13:2018,AS/NZS 61347.1:2016 Inc A1				

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	EMC Standards	EN55015:2013/A1:2015, EN61000-3-2:2014, EN61000-3-3:2013, EN61547:2009	
	Performance	EN62384	
	Surge	L-N:4KV, L/N-PE:6KV	
Others	RoHS	2011/65/EU	
	MTBF	≥250KHours,Ta=25℃(MIL-HDBK-217F)	
	Audible Noise	<25dB @ 10cm distance, 20dB background	
	Life Time	30W/60W/100W/160W	≥100K Hrs 65 ℃ case temperature, refer to life vs. Tc curve
		240W/400W	≥100K Hrs 75 ℃ case temperature, refer to life vs. Tc curve
	Warranty	5years	
	Dimensions（L*W*H）	30W	235*30*21MM (body), 250*30*21MM (endcaps included)
		60W	275*30*21MM (body), 290*30*21MM (endcaps included)
		100W	305*30*21MM (body), 320*30*21MM (endcaps included)
		160W	335*30*21MM (body), 350*30*21MM (endcaps included)
		240W	385*30*21MM (body), 400*30*21MM (endcaps included)
		400W	385*60*22MM (body), 400*60*22MM (endcaps included)
	Wiring	Input	H05RN-F/3X1.0mm^2, Brown/Blue/(Yellow/Green)
		Output	H05RN-F/2X1.0mm^2, Red/Black
	Output Cable Length	Max. 3M	

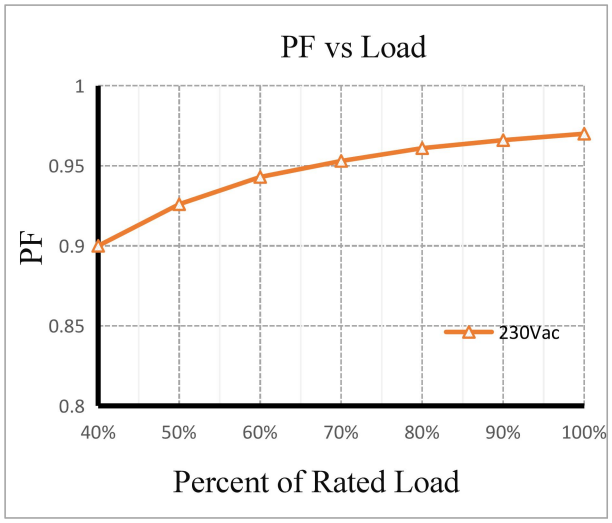
Remark:

1. All Parameters, if not specified, are measured at 230VAC/50Hz and 25℃ 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.

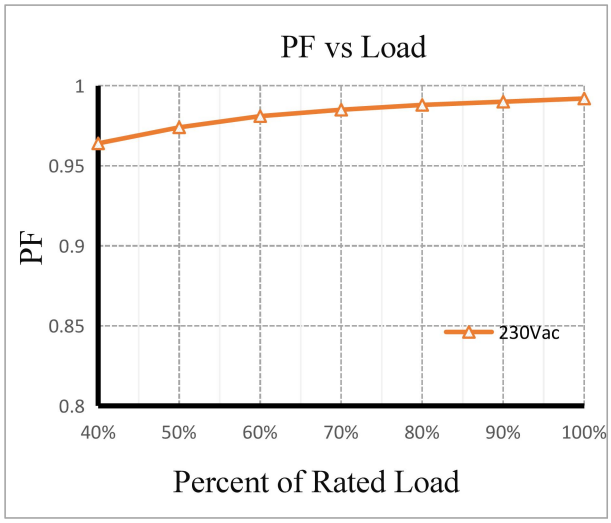
2.Graph

PF VS LOAD Curve

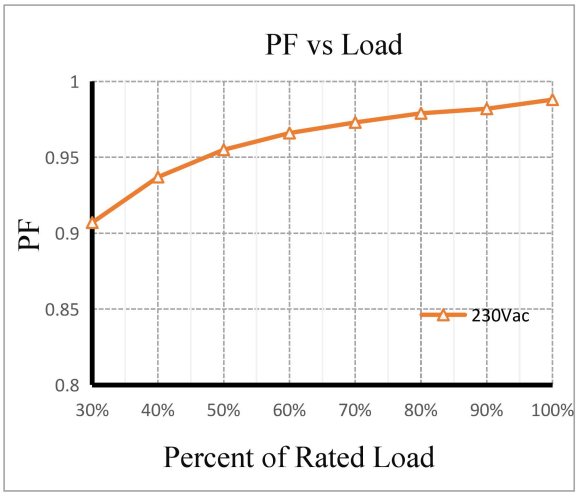
30W



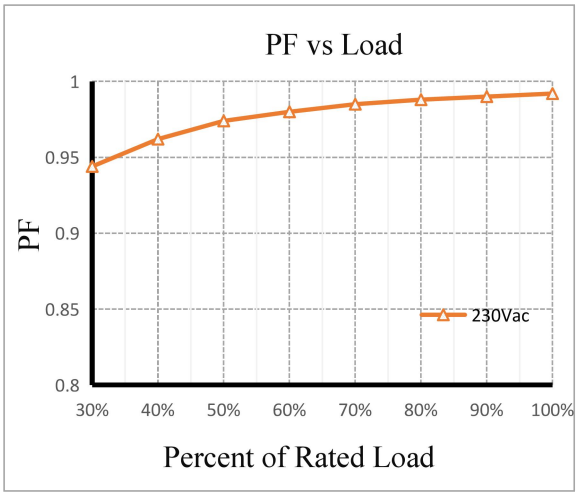
60W



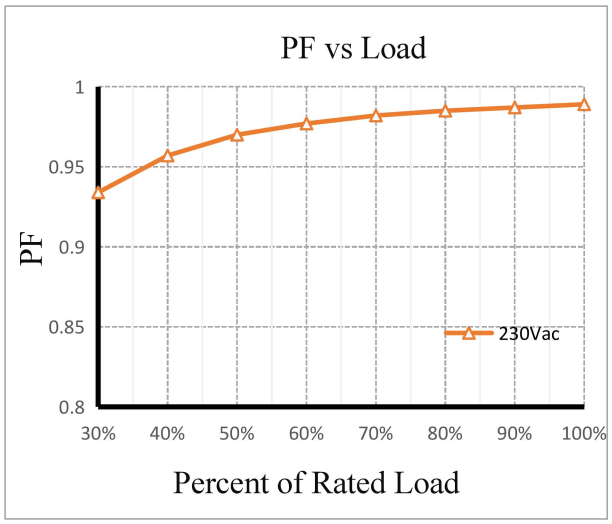
100W



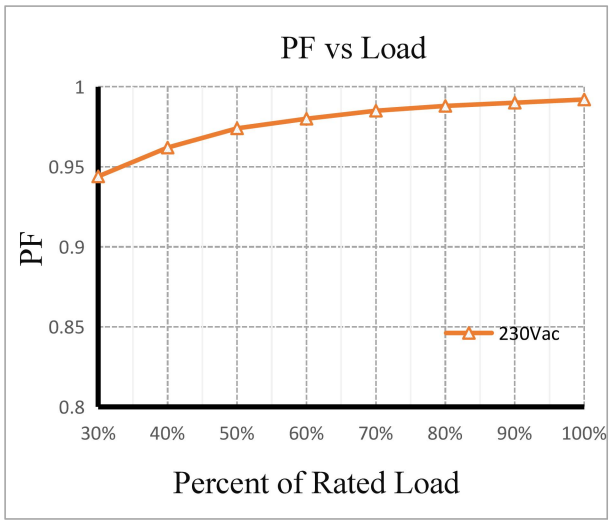
160W



240W



400W



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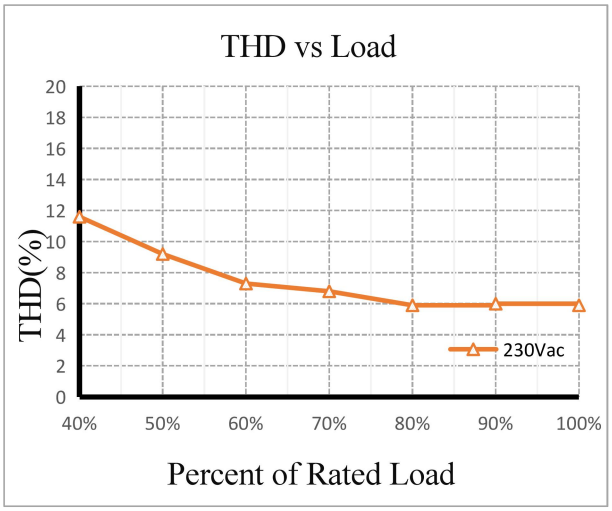
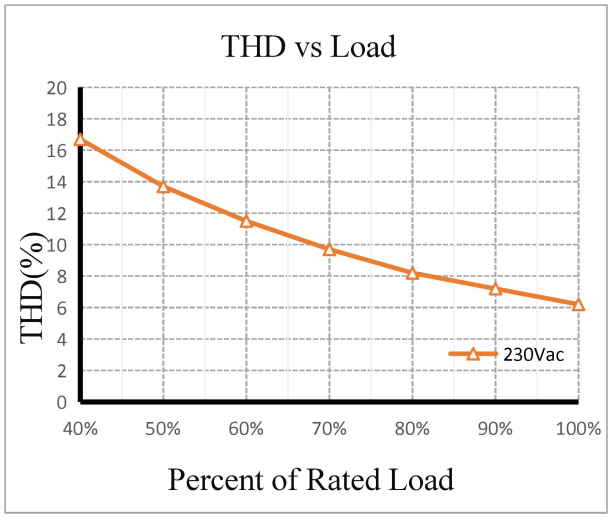
THD VS LOAD Curve

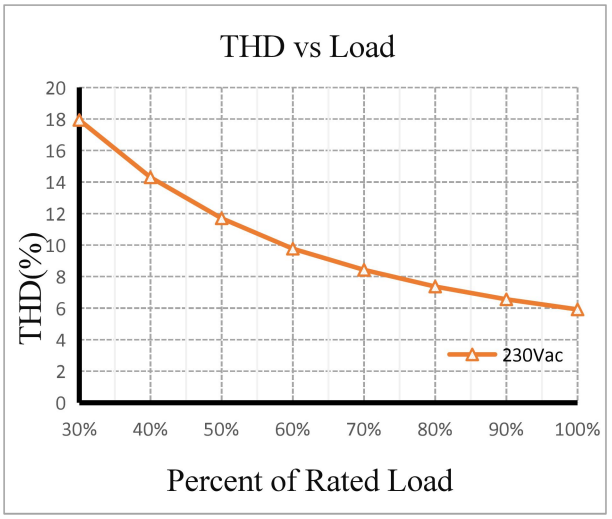
30W



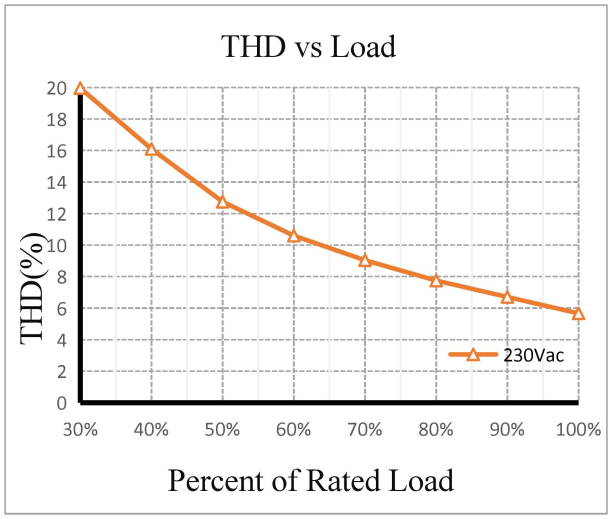
60W



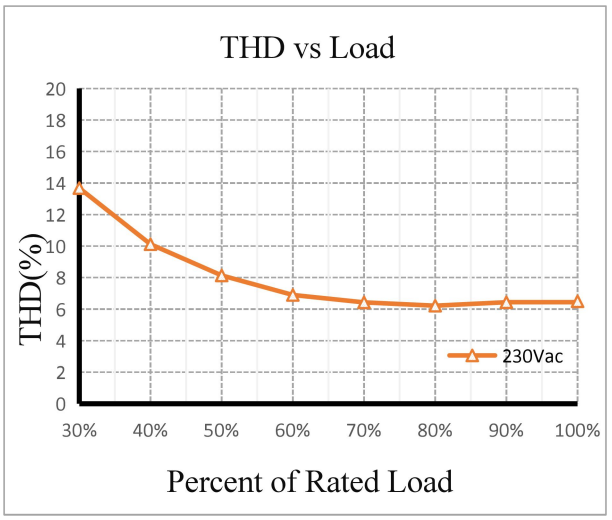
100W



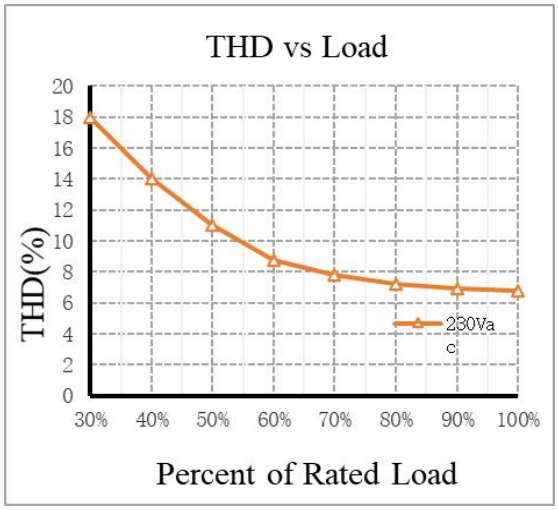
160W



240W



400W



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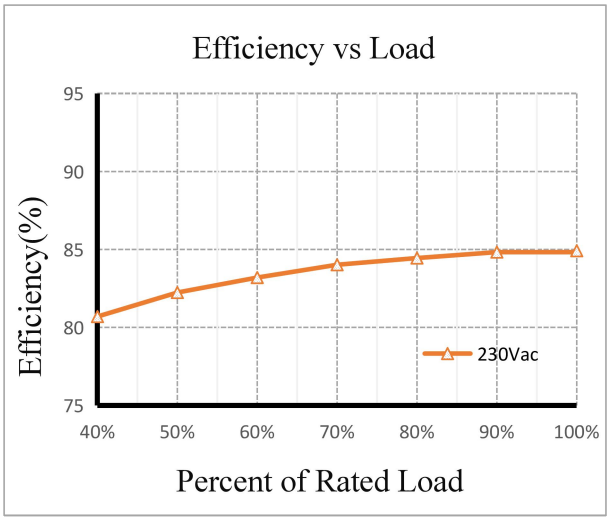
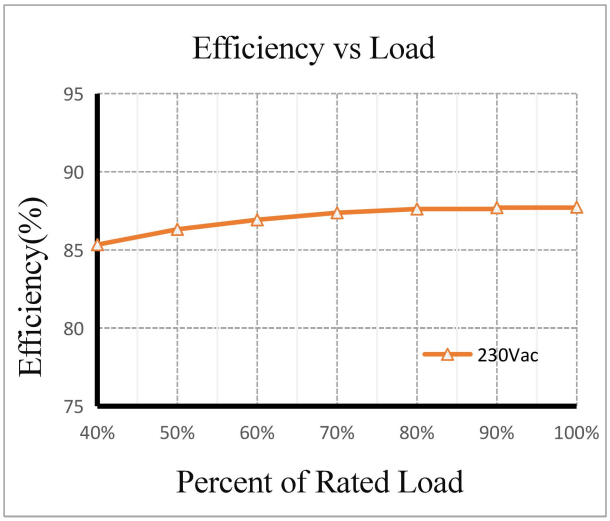
Efficiency VS LOAD Curve

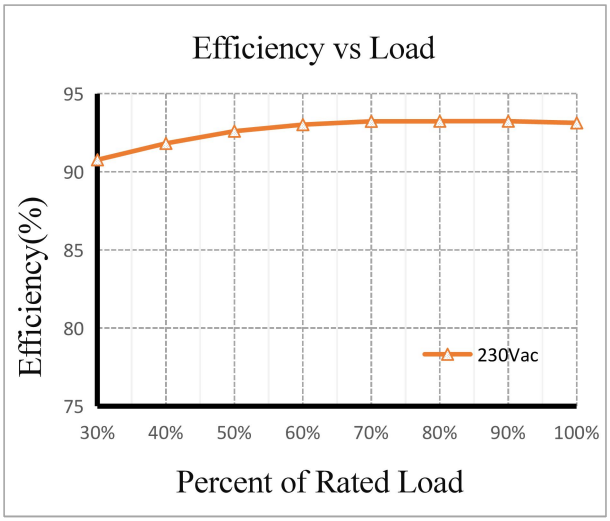
30W



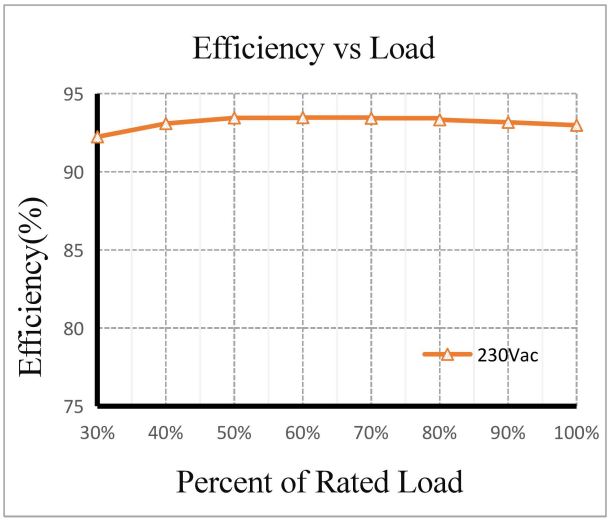
60W



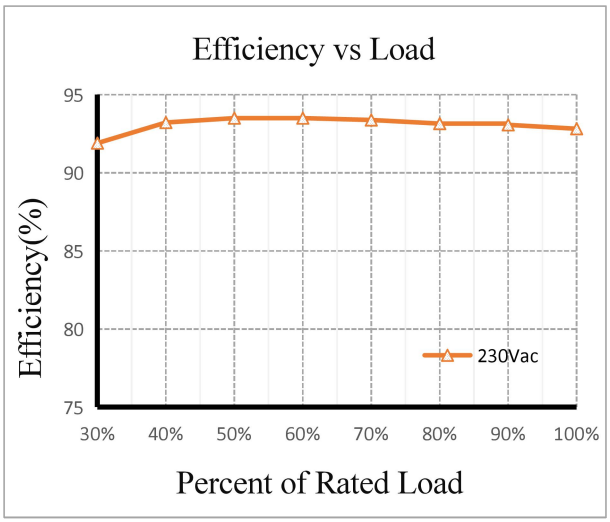
100W



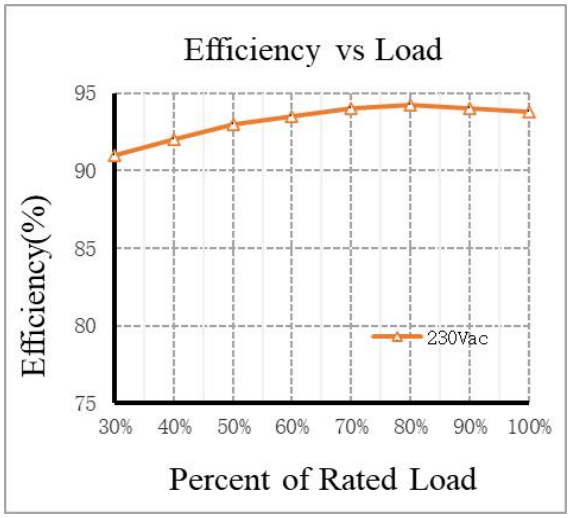
160W



240W



400W



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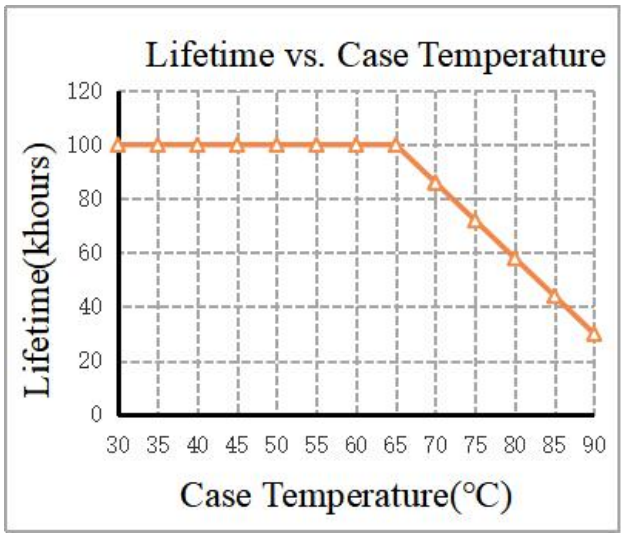
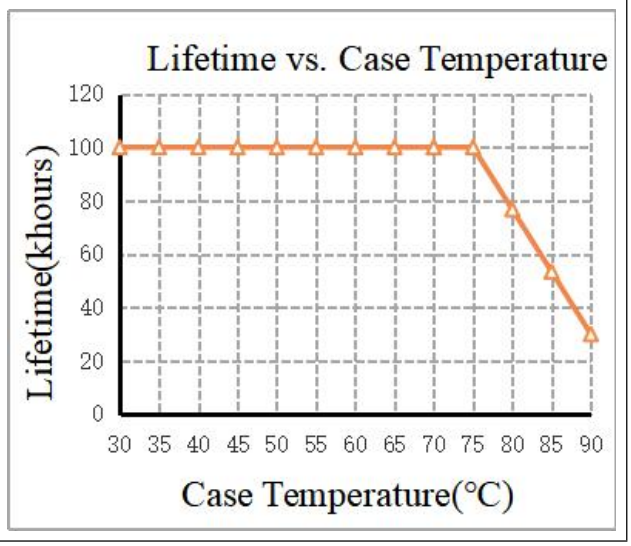
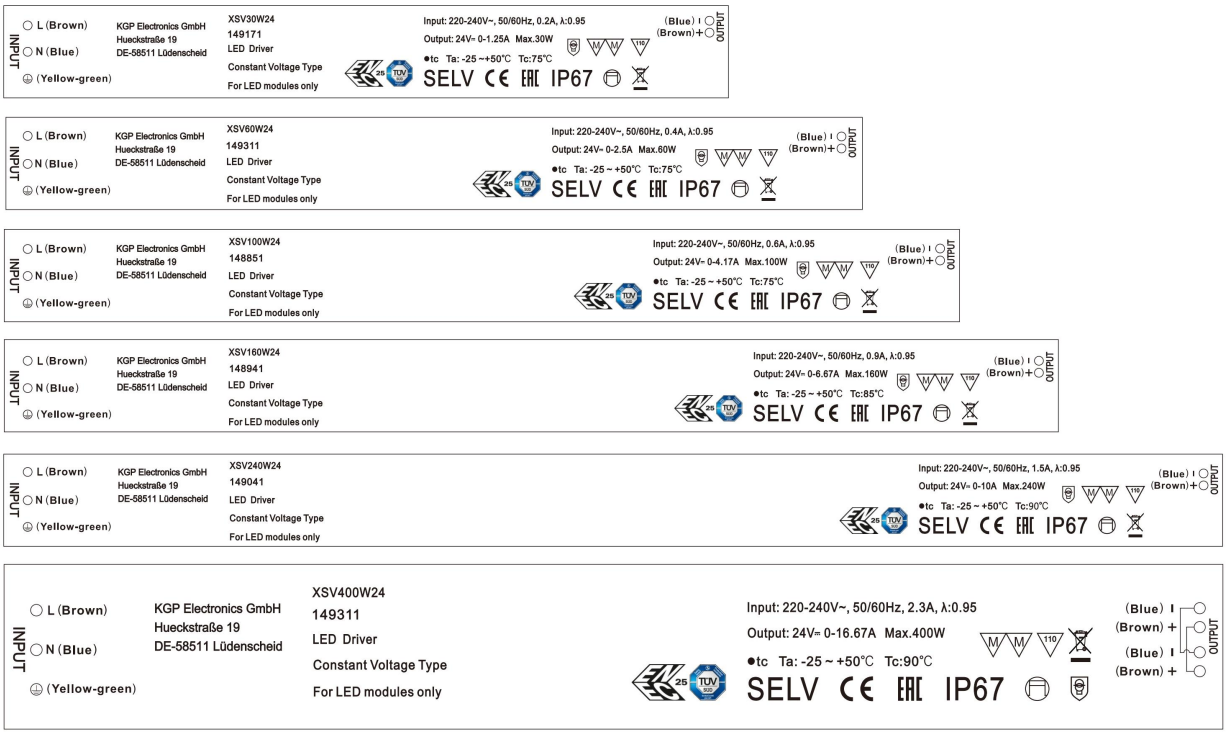
Lifetime vs. Case Temperature

30W/60W/100W/160W	240W/400W
	

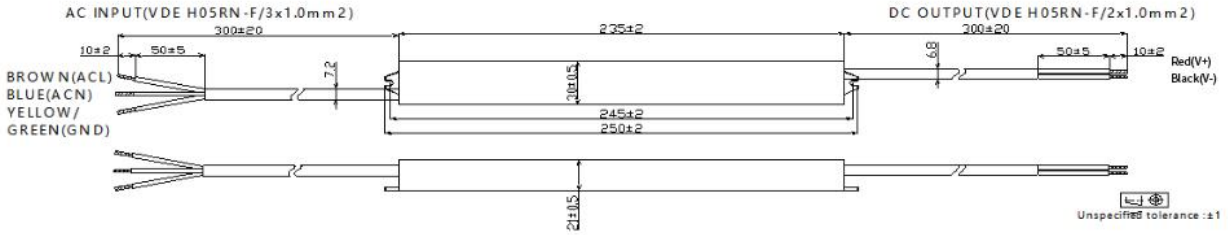
(End of Life: Maximum Failure Rate=10%)

3.Label

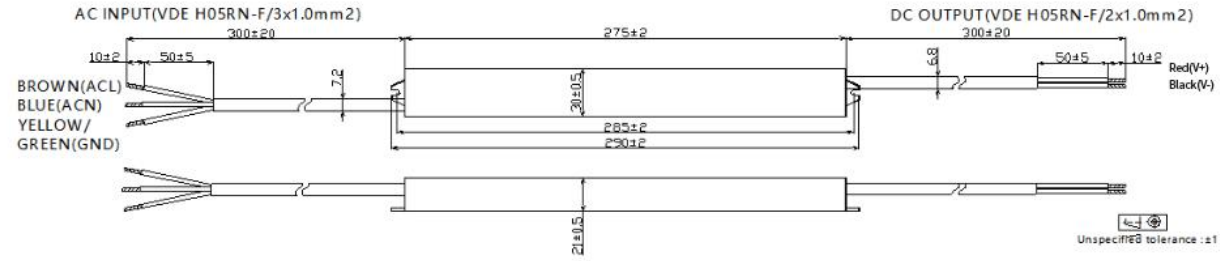


4.Dimension （Unit：mm）

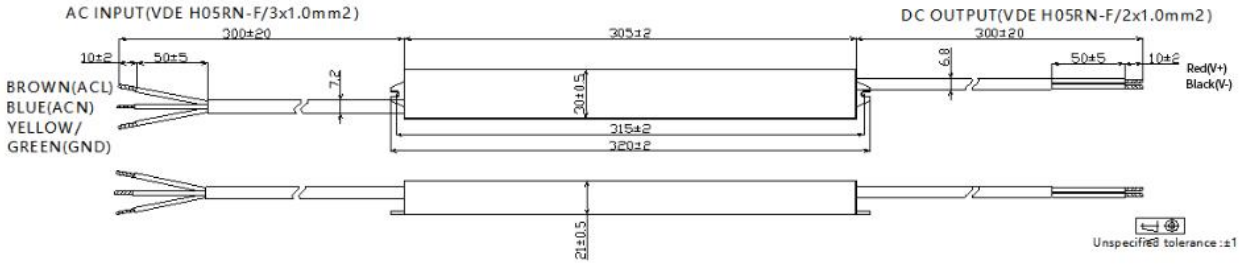
XSV30W24



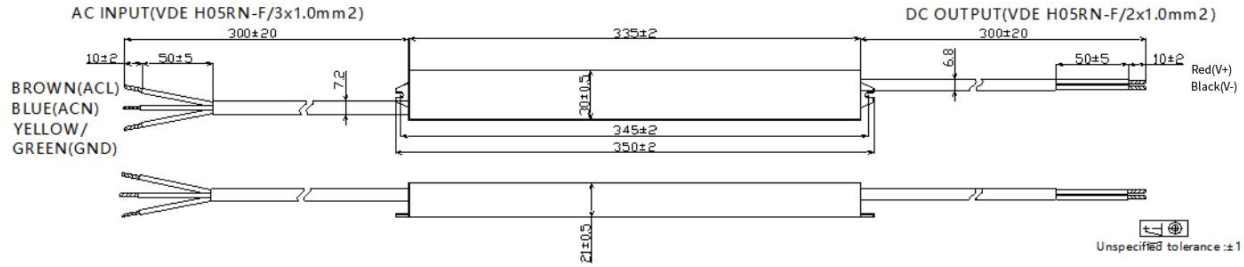
XSV60W24



XSV100W24



XSV160W24



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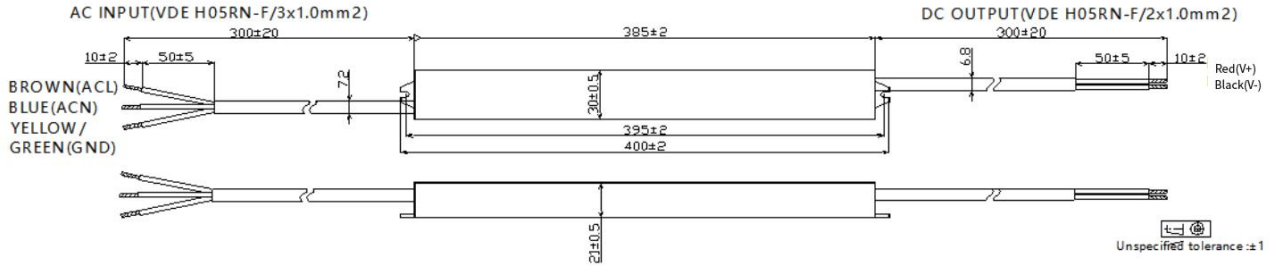
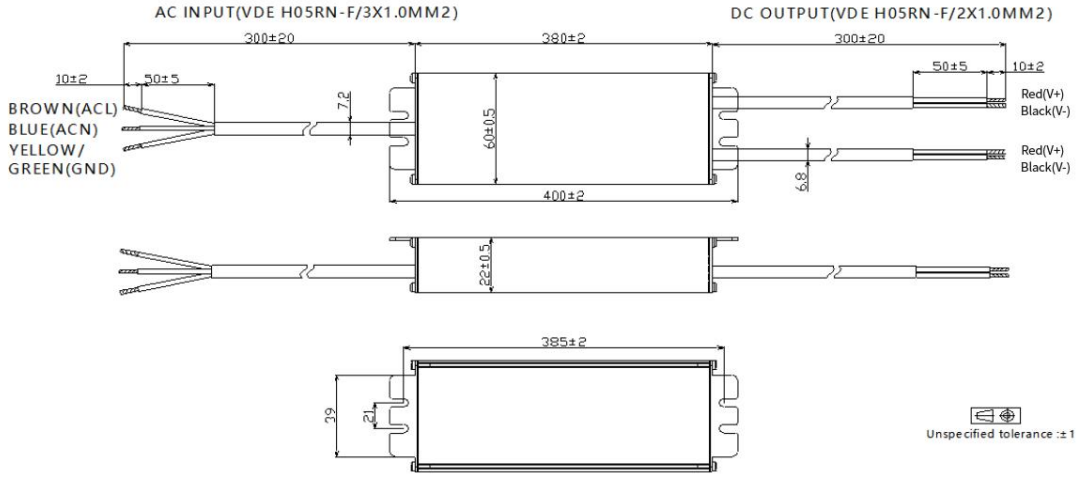
XSV240W24

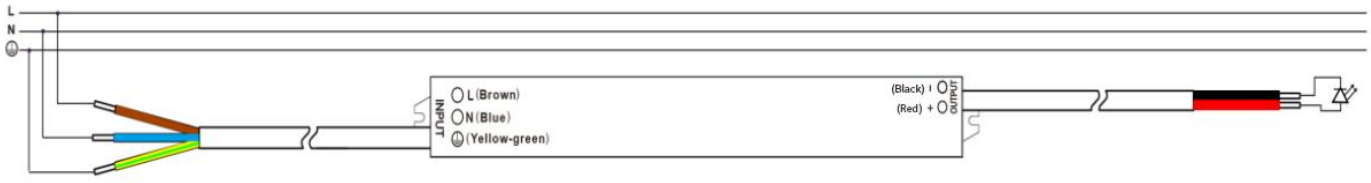


XSV400W24



Remark: Two output cables are in parallel inside the drive, and the current of each cable must not exceed 10A.

5.Wiring Diagram



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6.Packing information

Model	Carton L*W*H(cm)	Pcs/ Carton	Net weight/ Pcs(g)	Net weight/ Carton(kg)	Gross weight/ Carton(kg)
XSV30W24	34*29*20	30	340	10.2	11.8
XSV60W24	34*29*20	30	390	11.7	13.3
XSV100W24	39*29*20	30	420	12.6	14.3
XSV160W24	39*29*20	30	470	14.1	15.8
XSV240W24	44*29*14	20	530	10.6	11.9
XSV400W24	44*29*14	12	1050	12.6	13.6

7.Ordering data

Model No	Item code
XSV30W24	149171
XSV60W24	149311
XSV100W24	148851
XSV160W24	148941
XSV240W24	149041
XSV400W24	149221

8.REVISION HISTORY

Date	Revision	Remark
2021-12-06	A	Preliminary Edition
2022-3-06	B	Standard Edition
2024-05-17	C	Add ENEC certification mark
2024-08-12	D	Add life vs. Tc curve
2024-09-28	E	Update carton qty
2024-10-26	F	Output wire color change to red/black
2025-05-16	G	Updated cable using not of 400W
2025-08-05	H	Add item code

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