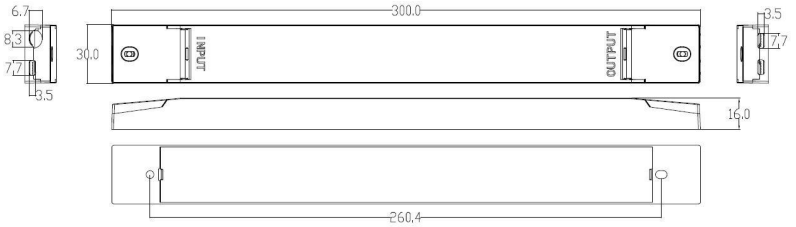
SVL

SVS-240(30-250)VG2-DA



Constant Voltage Driver

Model:SVS-240(30-250)VG2-DA

Model	Rated Input Voltage	Input Power	Input Current	PF	Output Power Range	Output Voltage	Output Current	Efficiency (typ.)	Cementig product
SVS-24030VG2-DA	220-240VAC	≤38W	≤0.19A	≥0.95	12-30W	24V	0.5-1.25A	86%	N
SVS-24060VG2-DA		≤72W	≤0.35A		24-60W		1-2.5A	87%	N
SVS-24100VG2-DA		≤115W	≤0.6A		30-100W		1.25-4.17A	92%	Y
SVS-24150VG2-DA		≤168W	≤0.9A		45-150W		1.875-6.25A	92%	Y
SVS-24250VG2-DA		≤275W	≤1.5A		75-250W		3.12-10.42A	92%	Y

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

1. Parameters

Category	Item	Technical Norm		
Features	Output Type	Constant Voltage		
	Dimming Type	DALI-2		
	Output Features	Isolation SELV		
	IP Grade	IP20		
	Insulation Class	Class II		
Input	Rated Input Voltage	220-240VAC		
	Range of AC Input Voltage	198-264VAC		
	Range of DC Input Voltage	198-280VDC（EMI not evaluated）		
	Frequency	Rate:50/60Hz, Range:47~63Hz		
	Power Factor	⩾0.95, 220-240VAC, Rated Load, see graphs		
	THD	30W/60W	⩽10%	230VAC，Rated Load, see graphs
		100W/150W/250W	⩽7%	230VAC，Rated Load, see graphs
	Standby Power Consumption	⩽0.5W, @230VAC,Dim to OFF		
Output	Output Voltage	24VDC+5%		
	No load Voltage	24VDC+5%		
	Output Voltage Ripple	<240mVPK-PK (0.5%)		
	Line Regulation	±1%		
	Load Regulation	±2%		
	Overshoot	<105%Vo		
	Start-up Time	Start-up time <0.5s @ power switch on without DALI control. Start-up time <1s @ DALI system on.		

	Hold-up time & Turn off time	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 90%
		30W	30	72.3	
		60W	22.8	62.8	
		100W	9.2	69.6	
		150W	10	384	
		250W	16.2	676	
	Efficiency	30W	≥85%	86% typ.	230VAC, Rated Load, at output terminals, see graphs
		60W	≥86%	87% typ.	
		100W	≥91%	92% typ.	
		150W	≥91%	92% typ.	
		250W	≥91%	92% 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 < 250 μA			
Control Method	PUSH dimming	PUSH dimming (Max. lead wire length：20m,same port of DALI）			
	PUSH-button	Max parallel connnections qty for Push-dim 15			
	DALI function	DALI dimming (Max. lead wire length： 300m ） logarithm or linear dimming curve selectable DALI-2 certified incl. Parts 251, 252, 253, CLO			
	Dimming range	DALI dimming: 1%-100% (1KHz)			
Environment	Ta/Operation Temperature	-25….+45℃			
	Ts/Storage Temperature	-40….+85℃			
	Tc/Enclosure Temperature For	30W		80℃	
	Safety	60W/100W/150W/250W		90℃	
	Humidity	5%85%RH			
	Atmosphere	86-108KPa			
Construction	Connection Method	Terminal			
	Cable Terminals	Input		1 terminal block	
		Output		2 terminals block	
		Dimming		1terminals block	
	Installation	Independent			
	Input Wire Cross Section	30W/60W/100W/150W		0.5mm² -1.5 mm²	
		250W		0.75mm² -1.5 mm²	
	Output Wire Cross Section	2*0.75mm² -1.5 mm²			
	Dimming Wire Cross Section	0.5mm² -1.5 mm²			
	Output Cable Length	Max. 3M			

	Cable diameters range	Input& Dimming	2.2-4mm	
		Output	2.2-4mm or 9.5-10.5mm	
	Dimension	30W	300*30*16mm (L*W*H)	
		60W/100W/150W	350*30*18mm (L*W*H)	
		250W	400*40*22mm (L*W*H)	
Standards	Certification	ENEC,CE,SAA,UKCA		
	Safety Standards	EN 61347-1:2015/A1:2021,EN 61347-2-13:2014/A1:2017,EN IEC 62384:2020,EN 62493:2015,AS61347.2.13:2018, AS/NZS 61347.1:2016 Inc A1,BS EN 61347-1:2015/A1:2021, BS EN 61347-2-13:2014/A1:2017,BS EN 62493:2015, BS EN IEC 62384:2020		
	EMC Standards	EN IEC 55015:2019,EN IEC 55015:2019/A11:2020, EN IEC 61000-3-2:2019/A1:2021,EN 61000-3-3:2013/A2:2021 EN 61547:2009,EMC for UKCA,BS EN IEC 55015:2019, BS EN IEC 55015:2019+A11:2020,BS EN 61547:2009, BS EN IEC 61000-3-2:2019/A1:2021, BS EN 61000-3-3:2013+A2:2021		
	Performance	EN62384;IEC 62386-101 Edition2.0 2014-11; BS EN 62386-102:2014 ; BS EN 62386-207:2009 DALI Part -251,-252 and -253		
	Surge	L-N:2KV		
Others	RoHS	2011/65/EU		
	MTBF	≥250KHours,Ta=25℃(MIL-HDBK-217F)		
	Audible Noise	30W/60W	<28dB @ 15cm distance, 18dB background	
		100W/150W/250W	<28dB @ 15cm distance, 18dB background	
	Life Time(@Ta max)	30W	≥80K Hrs	@230VAC , full oad, End of Life: Failure Rate<10%
		60W	≥60K Hrs	
		100W	≥60K Hrs	
		150W	≥55K Hrs	
		250W	≥52K Hrs	
	Warranty	5years, End of Life: Maximum Failure Rate=10%		

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. Connected quantities of different current Breaker

TYPE	DALI Connected quantities of different current Breaker						Input Voltage	Inrush Current <25A	Time
	current（A）	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		27	35	44	55	68	@230VAC	22	200us
TYPE C		44	57	70	87	109			
TYPE D		70	91	112	140	175			

TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current <30A	Time
	current（A）	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		23	30	37	46	58	@230VAC	26	220us
TYPE C		37	48	59	74	92			
TYPE D		59	77	95	118	148			

TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current <50A	Time
	current（A）	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		13	17	21	27	33	@230VAC	45	250us
TYPE C		21	28	34	43	53			
TYPE D		34	44	55	68	85			

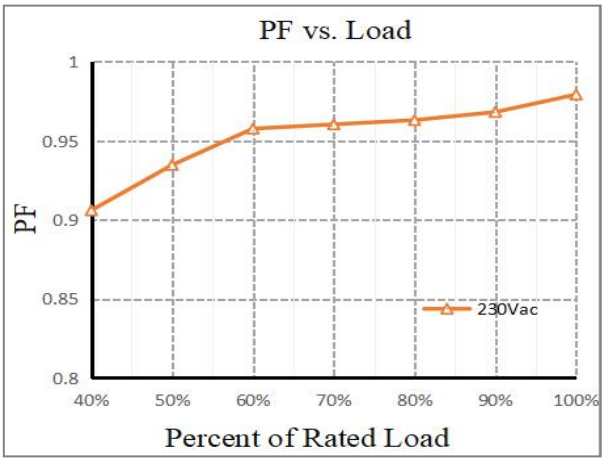
TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current <60A	Time
	current（A）	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		11	14	17	21	27	@230VAC	56	185us
TYPE C		17	22	27	34	43			
TYPE D		27	36	44	55	69			

TYPE	Connected quantities of different current Breaker						Input Voltage	Inrush Current <80A	Time
	current（A）	10	13	16	20	25			
	Installation wire diameter	1.5mm²	2.5mm²	2.5mm²	4mm²	4mm²			
TYPE B		8	10	13	16	20	@230VAC	76	310us
TYPE C		13	16	20	25	32			
TYPE D		20	26	32	40	51			

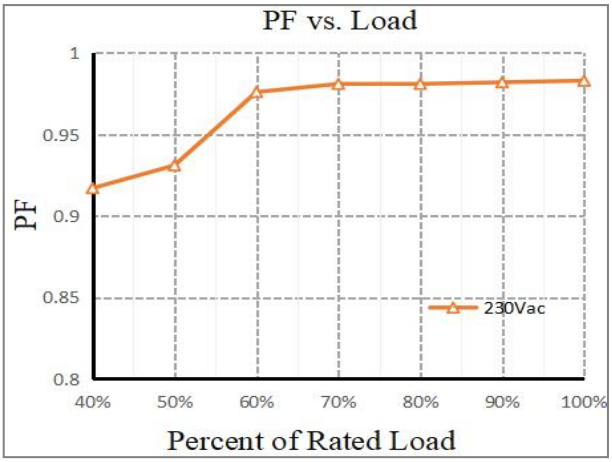
3. Graph

PF VS LOAD Curve

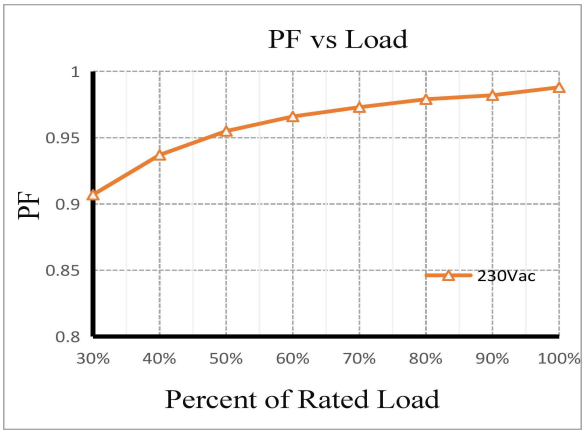
30W



60W



100W



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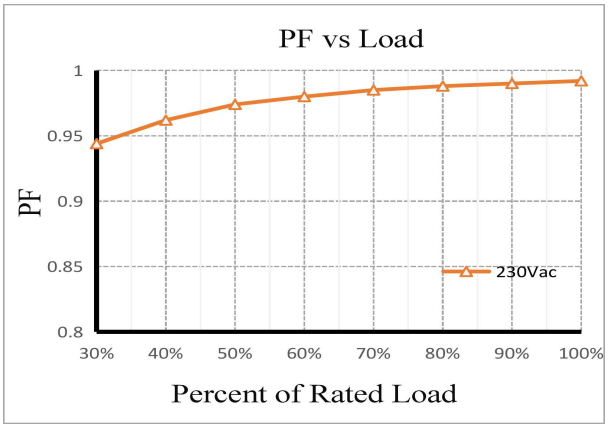

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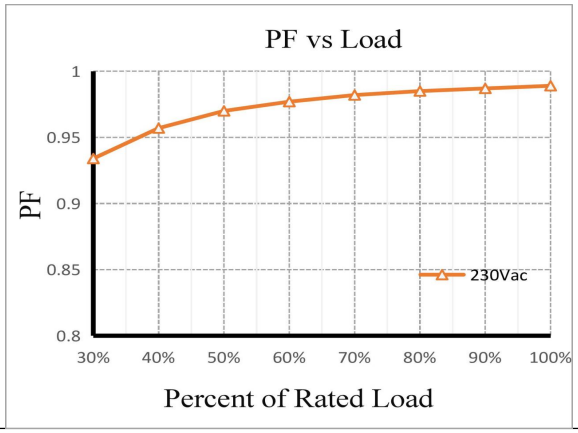
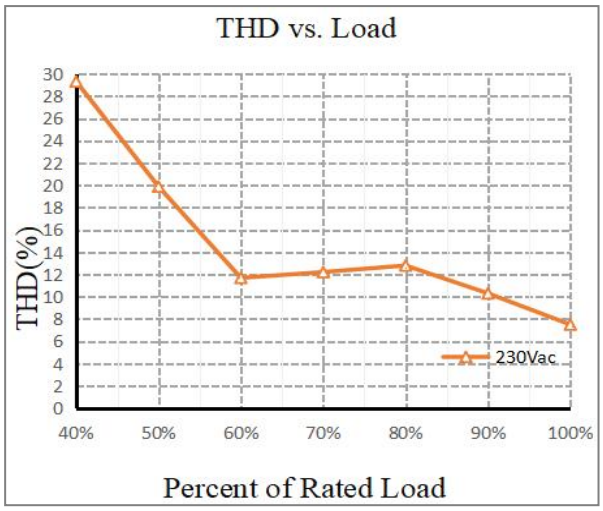


THD VS LOAD Curve

30W



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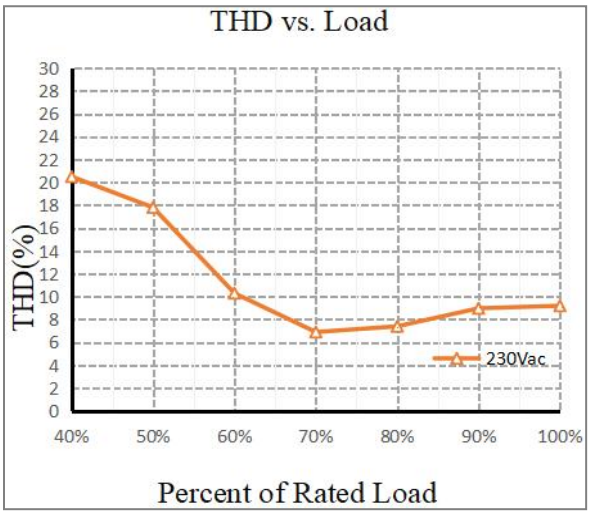

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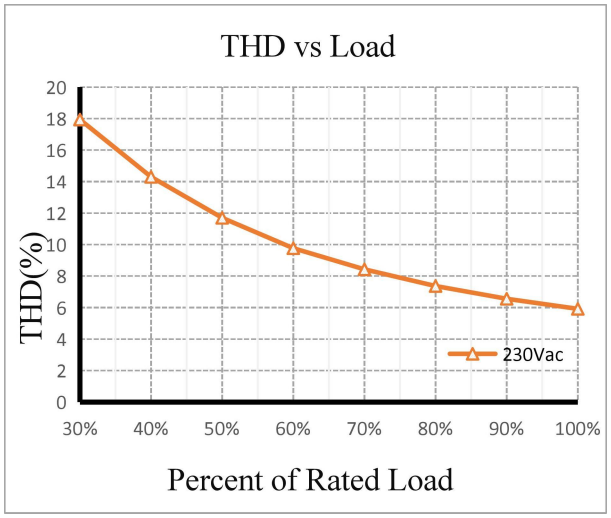

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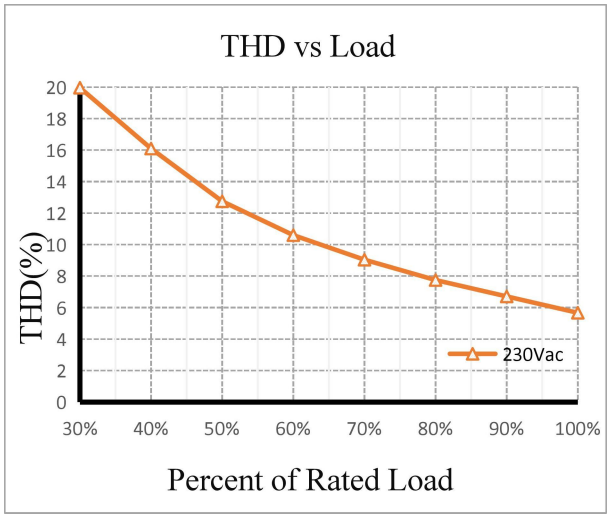

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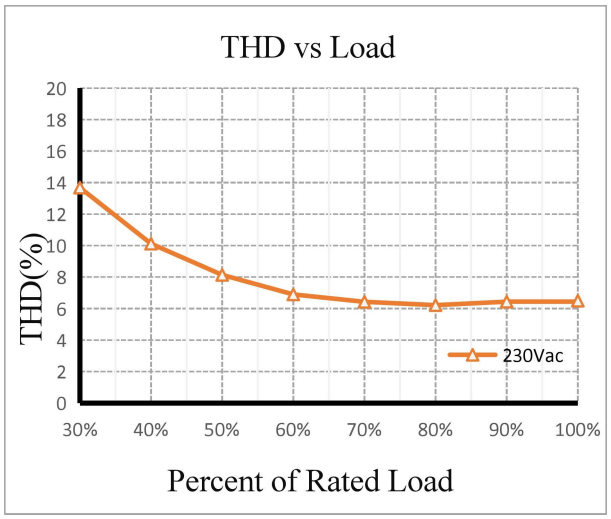
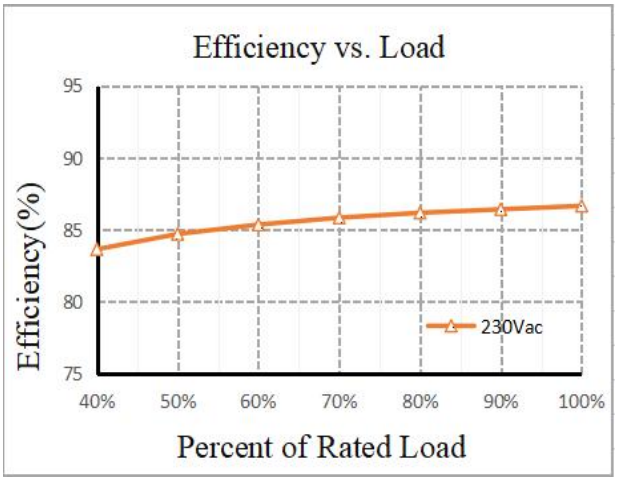


Efficiency VS LOAD Curve

30W



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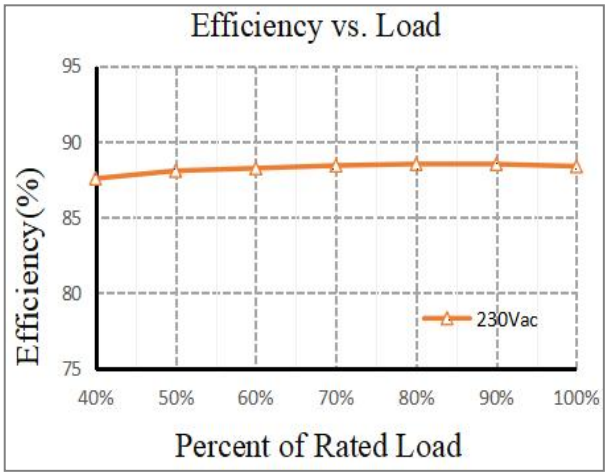
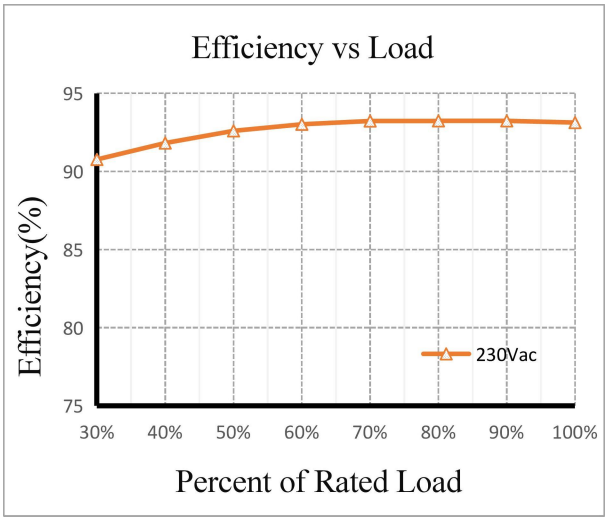


100W



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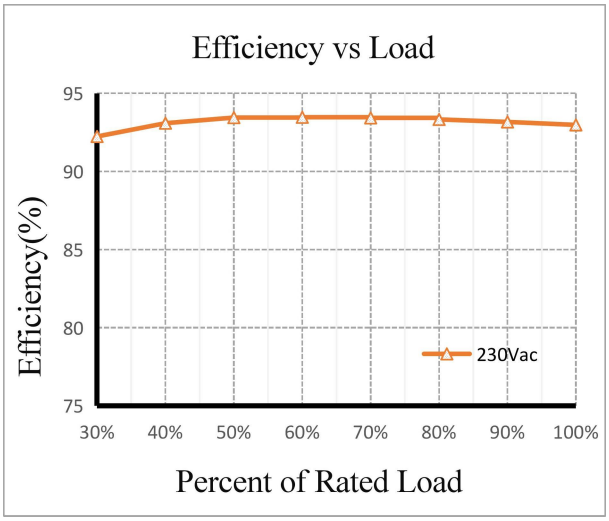
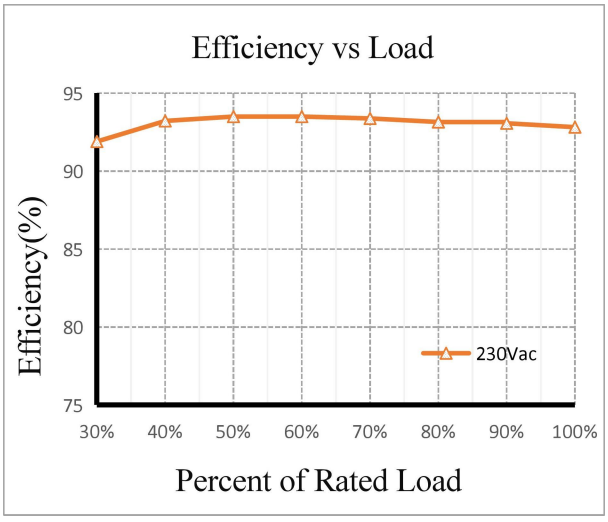


250W



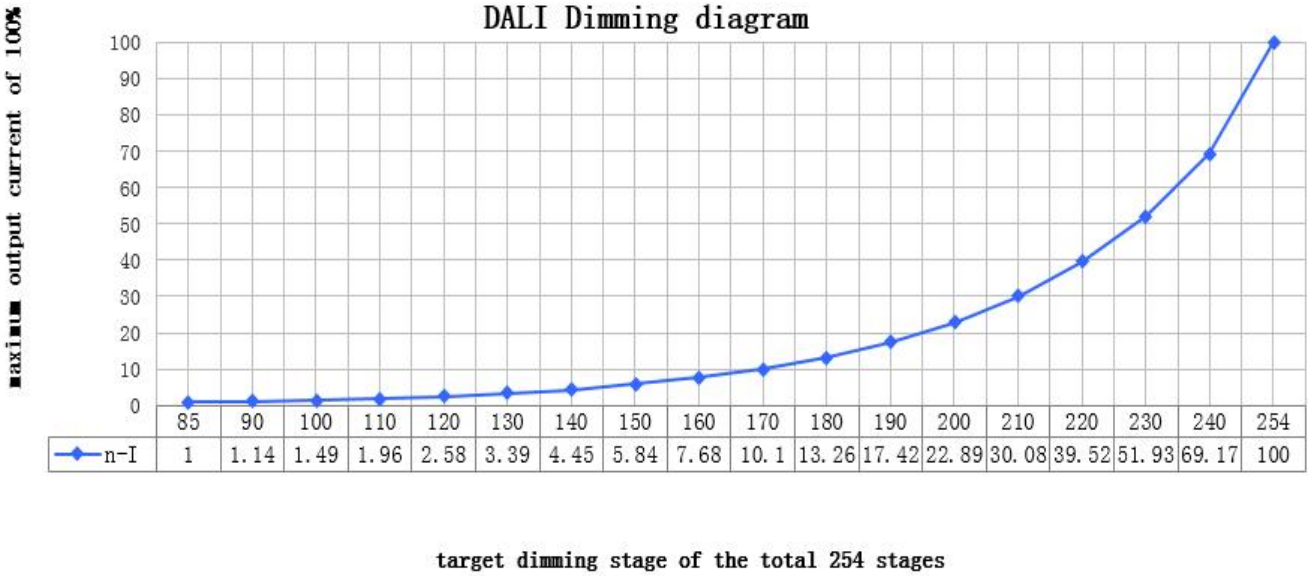
4. DALI dimming curve

5.1 formula for DALI dimming.

X(n)=10^{[(n-1)/(253/3)]-1},

Here,n means the target dimming stage of the total 254 stages.

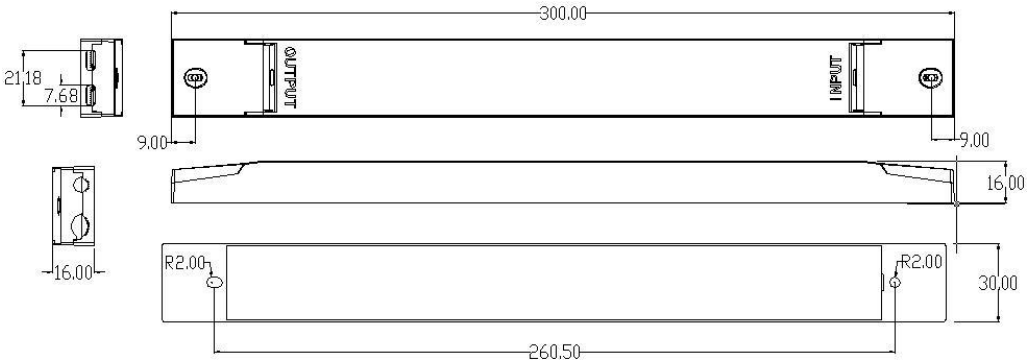
X(n) means the percent of the maximum output curr



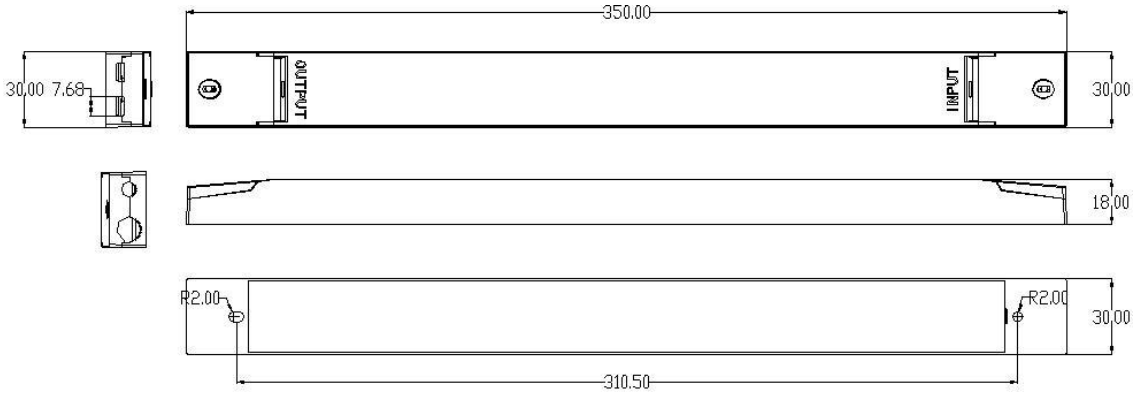
	85	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	254
n-I	1	1.14	1.49	1.96	2.58	3.39	4.45	5.84	7.68	10.1	13.26	17.42	22.89	30.08	39.52	51.93	69.17	100

5. Dimension （Unit：mm）

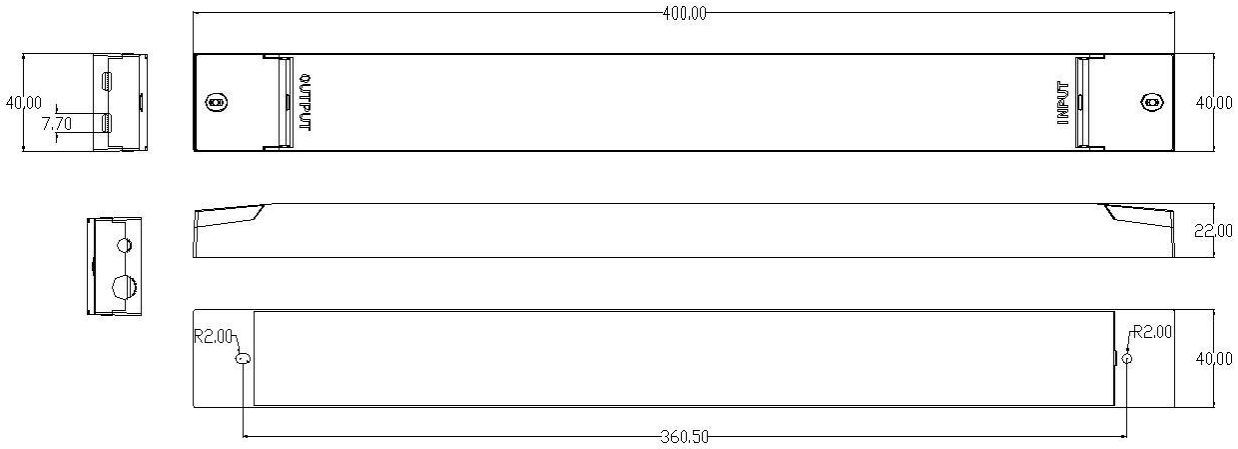
SVS-24030VG2-DA :



SVS-24060VG2-DA &SVS-240100VG2-DA & SVS-240150VG2-DA :



SVS-240250VG2-DA :



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	SVS-24030VG2-DA	320*230*195	50	0.143	7.15	7.78
	SVS-24060VG2-DA	375*235*195	50	0.23	11.5	12.2
	SVS-240100VG2-DA			0.27	13.5	14.3
	SVS-240150VG2-DA			0.29	14.5	15.3
	SVS-240250VG2-DA	420*230*160	25	0.53	13.25	13.94
Without white box and manual	SVS-24030VG2-DA	440*345*155	60	0.125	7.5	8.12
	SVS-24060VG2-DA	440*345*155	40	0.25	10	10.7
	SVS-240100VG2-DA			0.27	10.8	11.5
	SVS-240150VG2-DA			0.28	11.2	11.9
	SVS-240250VG2-DA	440*300*155	25	0.5	12.5	13.84

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	REV.	REMARK
	V1.0	Initial release.
	V1.1	Update the screen printing, packaging information