



Features

- Wide input range: 90-305Vac
- Constant voltage mode operation
- Infrared remote control
- Surge protection: Line-Line 5KV / Line-Earth 10KV
- Built-in with active PFC function
- Output over-current, over-voltage, over-temperature and short-circuit protections
- IP67 enclosure for indoor and outdoor applications
- UL 8750 recognized

Applications

- Landscape lighting, strip lighting, decorative lighting, architecture lighting

Selection Guide

Part Number	Max. Output Power (W)	Output Voltage (Vdc)	Output Current Adjustable Range (A)	Output Mode	Typical Efficiency
LSA100B-012C	100	12	0-8.33	CV	91%
LSA100B-024C		24	0-4.17	CV	91%
LSA100B-036C		36	0-2.78	CV+CC	92%
LSA100B-048C		48	0-2.08	CV+CC	92%

Input Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Input Voltage Range	AC input	90	100-277	305	Vac
Input Frequency Range		47	50/60	63	Hz
Power Factor	230Vac input, full load	0.95	0.96	-	-
Input Current	100-277Vac input, full load	-	-	1.5	A
Inrush Current	230Vac input, full load, cold start	-	-	75	A
Leakage Current	277Vac input, 50Hz	-	-	0.75	mA
THD	230Vac input, 70-100% of full load	-	-	15	%

Output Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Output Current Tolerance	Full load	-5	-	+5	%Iset
Output Voltage Ripple		-	-	2	%
Output Overshoot		-	-	10	%
Line Regulation	90-305Vac input, full load	-	-	3	%
Load Regulation	230Vac input, 50-100% of full load	-	-	3	%
Turn-on Delay	115Vac input, full load	-	-	1	s
	230Vac input, full load	-	-	0.5	s
Efficiency LSA100B-012C LSA100B-024C LSA100B-036C LSA100B-048C	115Vac input, full load	88 88 88 88	89 89 89 89	- - - -	%
Efficiency LSA100B-012C LSA100B-024C LSA100B-036C LSA100B-048C	230Vac input, full load	90 90 90 91	91 91 92 92	- - - -	%
Efficiency LSA100B-012C LSA100B-024C LSA100B-036C LSA100B-048C	277Vac input, full load	90 90 90 91	91 91 92 92	- - - -	%

Note:

1. Unless otherwise specified, data in this datasheet should be tested under the conditions of 230Vac input, rated load and $T_a=25^{\circ}\text{C}$.
2. Ripple is measured at 20MHz bandwidth by using a 0.1 μF & 10 μF parallel capacitor.

Protection Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Over Current Protection	Hiccup mode, auto-recovery	110	-	200	%
Over Voltage Protection	Auto-recovery	110	-	130	%
Over Temperature Protection	Auto-recovery	90	-	-	$^{\circ}\text{C}$
Short-circuit Protection	Hiccup mode, auto-recovery				

Environmental and Other Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Ambient Temperature	T_a	-40	-	+60	$^{\circ}\text{C}$
Operating Case Temperature	T_c	-40	-	+85	$^{\circ}\text{C}$
Storage Temperature		-40	-	+85	$^{\circ}\text{C}$
Storage Relative Humidity		20	-	95	%RH
Isolation Voltage	Input-Output	-	3,750	-	Vac
	Input-PE	-	1,600	-	
	Output-PE	-	1,600	-	
Insulation Resistance	Input-Output/Input-PE/Output-PE, 500Vdc/60s /70%RH	100	-	-	M Ω
Grounding Resistance	25A/60s	-	-	0.1	Ω
Life Time	230Vac, full load, 60 $^{\circ}\text{C}$ case temperature	-	50	-	10^3 hrs
MTBF(MIL-HDBK-217F)	230Vac input, 80% of full load	-	200	-	10^3 hrs
Dimensions (L*W*H)	178.0 x 68.0 x 39.0 mm				
Weight	775 $\pm$ 50g				

EMC Specifications

Parameter	Standards
EMI	EN55015
	EN61000-3-2,3
EMS	EN61547
	EN61000-4-2, 3, 4, 5, 6, 8, 11

Characteristic Curves

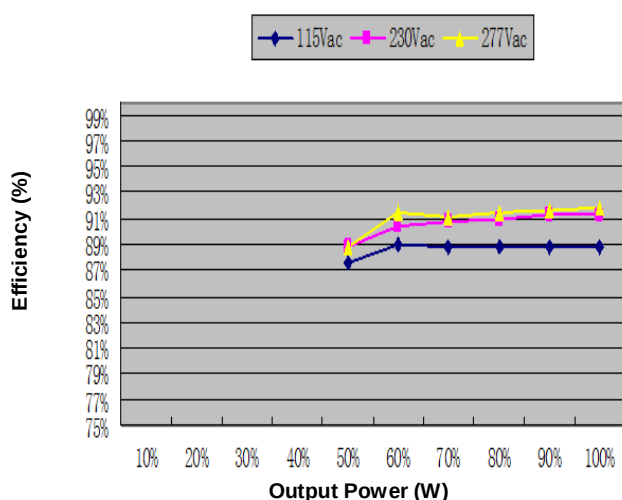


Figure 1: Efficiency vs. Output Power (Vo=12V)

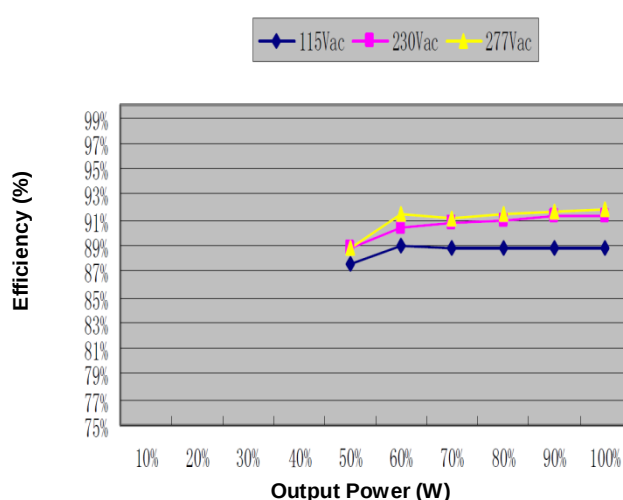


Figure 2: Efficiency vs. Output Power (Vo=24V)

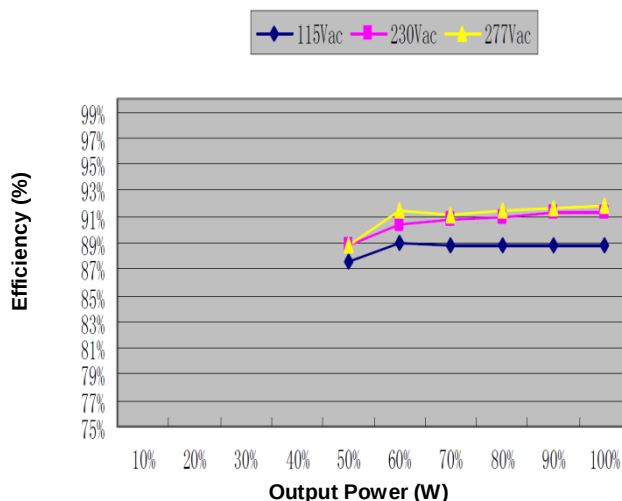


Figure 3: Efficiency vs. Output Power (Vo=36V)

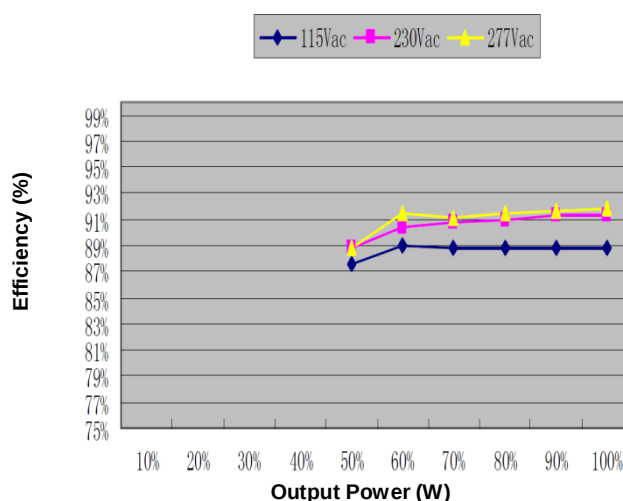


Figure 4: Efficiency vs. Output Power (Vo=48V)

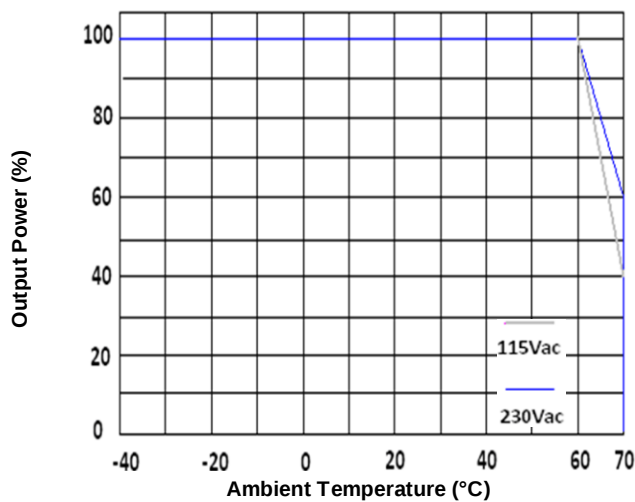


Figure 5: Output Power vs. Ambient Temperature

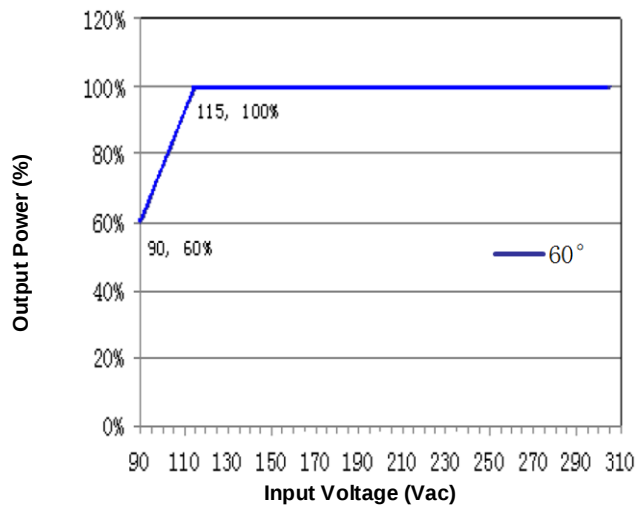


Figure 6: Output Power vs. Input Voltage

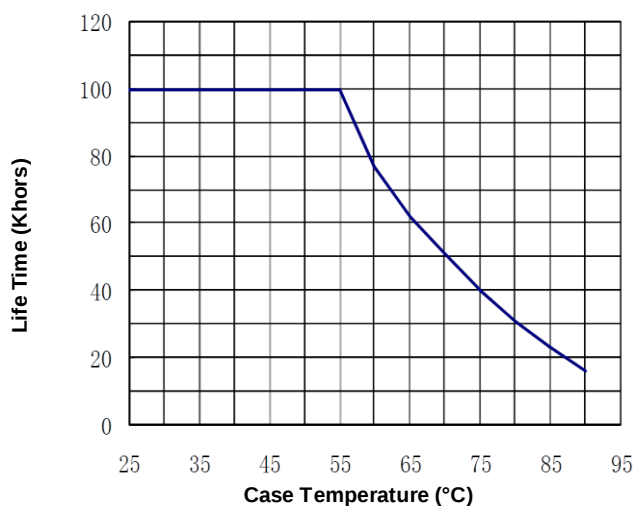


Figure 7: Life Time vs. Case Temperature

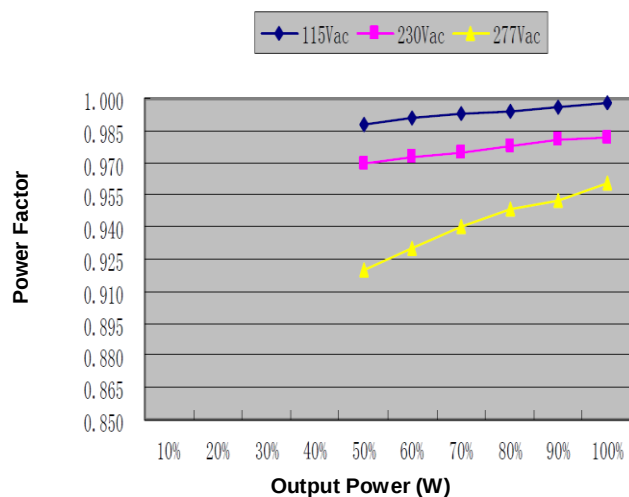


Figure 8: Power Factor vs. Output Power

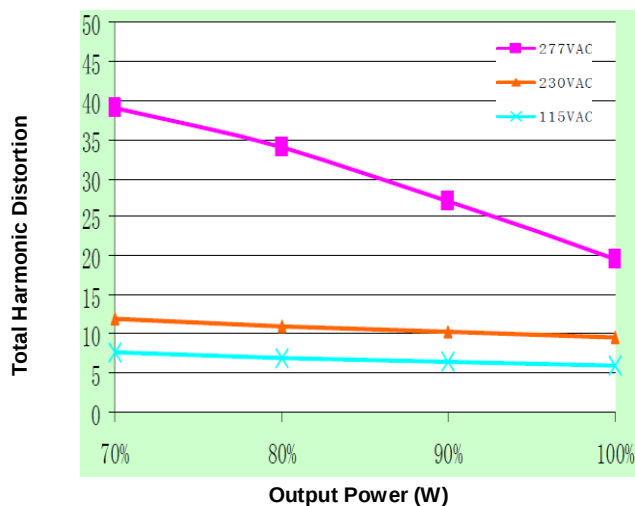
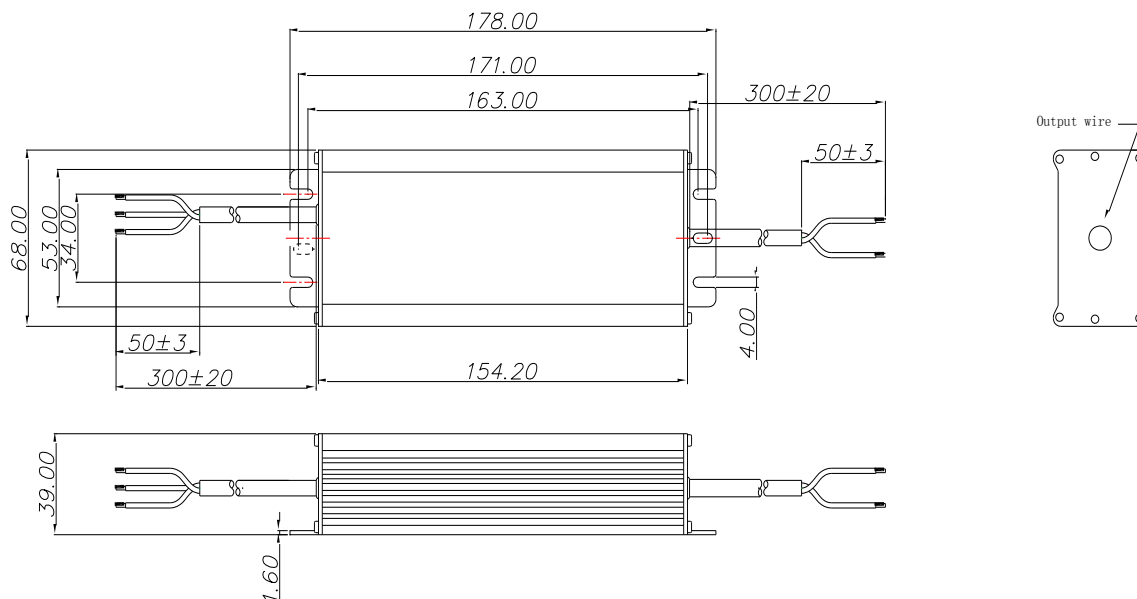


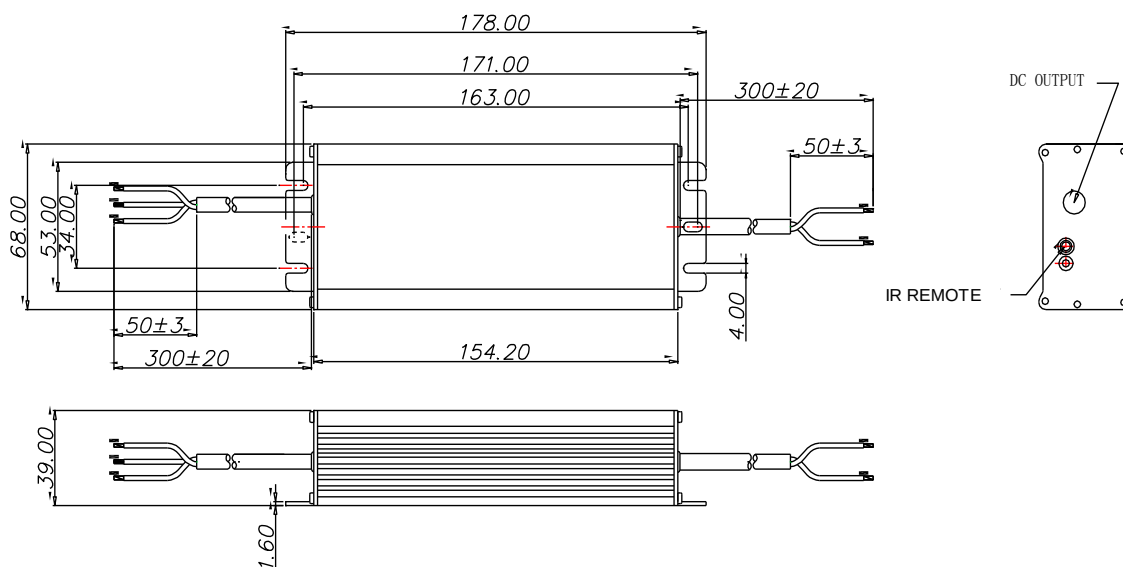
Figure 9: Total Harmonic Distortion vs. Output Power

Mechanical Drawing

LSA100B-012C & LSA100B-024C



LSA100B-036C & LSA100B-048C



Wire	Specification
Input	SJOW 18AWG*3C
Output	SJOW 16AWG*2C (for 12V/24V output)
	SJOW 18AWG*2C (for 36V/48V output)