



Features

- Ultra high input range: 249-528Vac
- Constant power mode operation
- Infrared remote control
- 3-in-1 dimming function (0-10Vdc, PWM Signal, Timer)
- Surge protection: Line-Line 4KV / Line-Earth 6KV
- Output over-voltage, over-temperature and short-circuit protections
- IP67 enclosure for indoor and outdoor applications
- UL 8750 recognized

Applications

- Architecture lighting, industrial lighting, flood lighting and roadway lighting

Selection Guide

Part Number	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Full Power Current Adjustable Range (A)	Default Output Setting	Typical Efficiency
LHA200X-036C	200	18-36	0.66-6.60	5.55-6.60	18-36V/5.50A	91%
LHA200X-062C		20-62	0.50-5.00	3.22-5.00	20-47V/4.20A	91%
LHA200X-120C		60-120	0.28-2.80	1.67-2.80	60-72V/2.80A	91%
LHA200X-200C		120-200	0.14-1.40	1.00-1.40	120-143V/1.40A	91%
LHA200X-305C		190-305	0.10-1.00	0.66-1.00	190-285V/0.70A	91%

Note: X in the Part Number can be either M or R, M means 3-in-1 dimming function; R means timer dimmable.

Input Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Input Voltage Range	AC input	249	277-480	528	Vac
Input Frequency Range		47	50/60	63	Hz
Power Factor	277Vac input, full load	0.97	0.98	-	-
	347Vac input, full load	0.93	0.95	-	
	528Vac input, full load	0.90	0.93	-	
Input Current	277-480Vac input, full load	-	-	2.5	A
Inrush Current	480Vac input, full load, cold start	-	-	100	A
Leakage Current	480Vac input, 50Hz	-	-	0.75	mA
THD	277-528Vac input, 80% of full load	-	-	20	%

Output Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Output Current Tolerance	Full load	-5	-	+5	%Iset
Output Current Set Point Range LHA200X-036C LHA200X-062C LHA200X-120C LHA200X-200C LHA200X-305C		0.66 0.50 0.28 0.14 0.10	- - - - -	6.60 5.00 2.80 1.40 1.00	A
Output Current Set Point Range LHA200X-036C LHA200X-062C LHA200X-120C LHA200X-200C LHA200X-305C	Full power	5.55 3.22 1.67 1.00 0.66	- - - - -	6.60 5.00 2.80 1.40 1.00	A
Total Output Current Ripple	480Vac input, full LED load, peak-peak	-	-	10	%
Startup Overshoot Current	277-480Vac input, full LED load	-	-	10	%Iset
Output Voltage LHA200X-036C LHA200X-062C LHA200X-120C LHA200X-200C LHA200X-305C	No load	- - - - -	- - - - -	45 70 130 220 315	V
Line Regulation	277-480Vac input	-	-	1	%
Load Regulation	480Vac input, 50-100% of full load	-	-	3	%
Turn-on Delay	480Vac input, full load	-	-	3	s
Efficiency LHA200X-036C I _o = 5.56A I _o = 6.60A LHA200X-062C I _o = 3.23A I _o = 5.00A LHA200X-120C I _o = 1.67A I _o = 2.80A LHA200X-200C I _o = 1.00A I _o = 1.40A LHA200X-305C I _o = 0.66A I _o = 1.00A	277Vac input, full load	88 88 88 88 88 88 88 88	90 90 90 90 90 90 90 90	- - - - - - - -	%
Efficiency LHA200X-036C I _o = 5.56A I _o = 6.60A LHA200X-062C I _o = 3.23A I _o = 5.00A LHA200X-120C I _o = 1.67A I _o = 2.80A LHA200X-200C I _o = 1.00A I _o = 1.40A LHA200X-305C I _o = 0.66A I _o = 1.00A	347Vac input, full load	88 88 88 88 88 88 88 88	90 90 90 90 90 90 90 90	- - - - - - - -	%
Efficiency LHA200X-036C I _o = 5.56A I _o = 6.60A LHA200X-062C	480Vac input, full load	89 89	91 91	- -	%

Io = 3.23A	89	91	-	
Io = 5.00A	89	91	-	
LHA200X-120C				
Io = 1.67A	89	91	-	
Io = 2.80A	89	91	-	
LHA200X-200C				
Io = 1.00A	89	91	-	
Io = 1.40A	89	91	-	
LHA200X-305C				
Io = 0.66A	89	91	-	
Io = 1.00A	89	91	-	

Note: Unless otherwise specified, data in this datasheet should be tested under the conditions of 480Vac input, rated load and Ta=25°C.

Protection Specifications

Parameter	Notes
Over Voltage Protection	The driver will enter protection mode and will resume normal operation when the fault condition is cleared.
Over Temperature Protection	The output current will decrease up to 30% of its set point, and will return to its set point when the over temperature condition is cleared.
Short-circuit Protection	The driver will enter constant current/auto recovery mode. No damage will occur when the output is shorted. The output current will return to its set point when the fault condition is cleared.

Environmental and Other Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Operating Case Temperature	Tc	-40	-	+85	°C
Storage Temperature		-40	-	+85	°C
Storage Relative Humidity		10	-	95	%RH
Isolation Voltage	Input-Output	-	3,750	-	Vac
	Input-PE	-	1,650	-	
	Output-PE	-	1,650	-	
Insulation Resistance	Input-Output/Input-PE/Output-PE, 500Vdc/60s /70%RH	50	-	-	MΩ
Grounding Resistance	25A/60s	-	-	0.1	Ω
Life Time	480Vac, full load, 70°C case temperature	-	50	-	10 ³ hrs
MTBF(MIL-HDBK-217F)	480Vac input, 80% of full load	-	200	-	10 ³ hrs
Dimensions (L*W*H)	257.0 x 68.0 x 43.5 mm				
Weight	1300±50g				

Dimming Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Absolute Maximum Voltage	0-5V/0-10V on the DIM +	-	5/10	-	V
Source Current	0-5V/0-10V on the DIM +	-	-	2	mA
Dimming Output Range	LHA200X-036C	0.66	-	6.60	A
	LHA200X-062C	0.50	-	5.00	
	LHA200X-120C	0.28	-	2.80	
	LHA200X-200C	0.14	-	1.40	
	LHA200X-305C	0.10	-	1.00	

Dimming Range		0-5V	0	-	5	V
		0-10V	0	-	10	
PWM	High Level	Default 0-10V / 10V PWM Dimming	9.7	-	10.3	V
	Low Level		0	-	0.3	V
	Frequency Range		250	-	1,000	Hz
	Duty Cycle		1	-	99	%

EMC Specifications

Parameter	Standards
EMI	EN55015
	EN 61000-3-2, 3
EMS	EN61547
	EN61000-4-2, 3, 4, 5, 6, 8, 11



Typical V-I Characteristic Curves

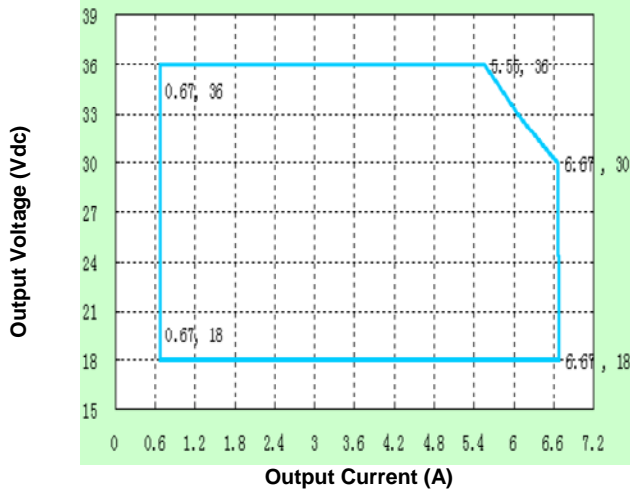


Figure 1: Typical V-I Characteristic Curve (LHA200X-036C)

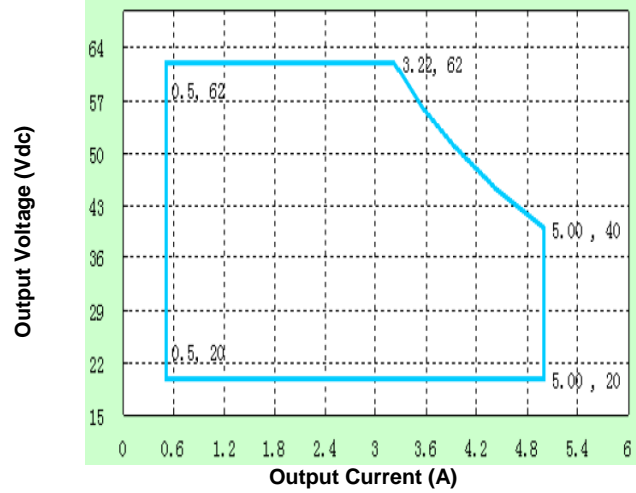


Figure 2: Typical V-I Characteristic Curve (LHA200X-062C)

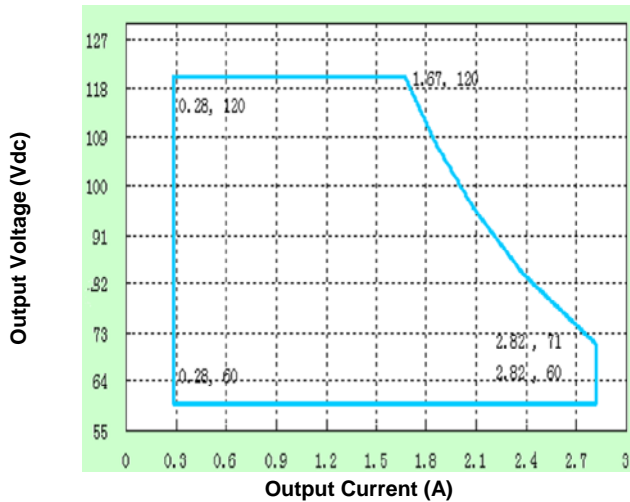


Figure 3: Typical V-I Characteristic Curve (LHA200X-120C)

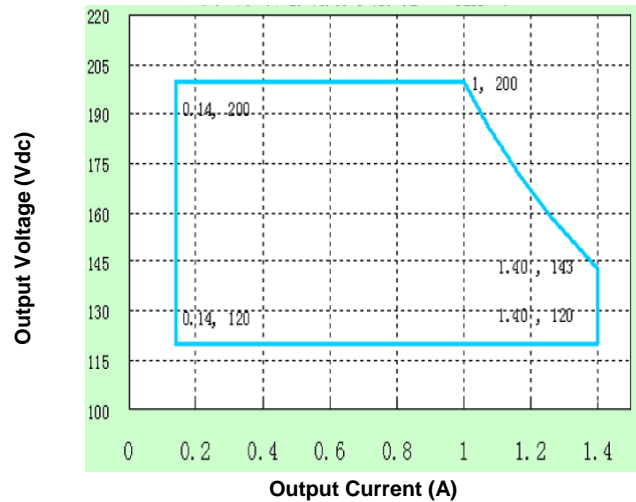


Figure 4: Typical V-I Characteristic Curve (LHA200X-200C)

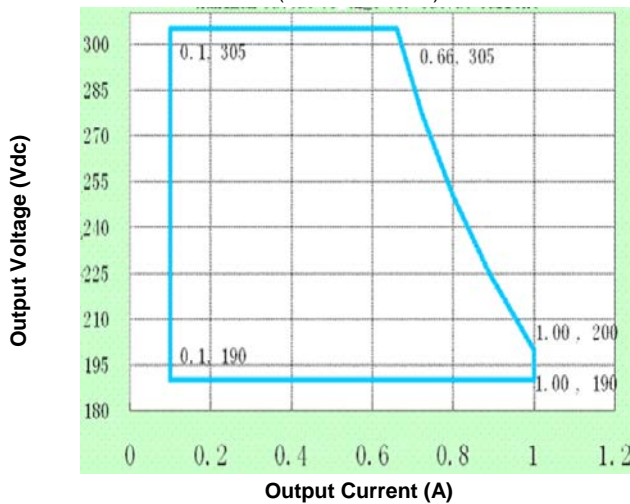


Figure 5: Typical V-I Characteristic Curve (LHA200X-305C)

Characteristic Curves

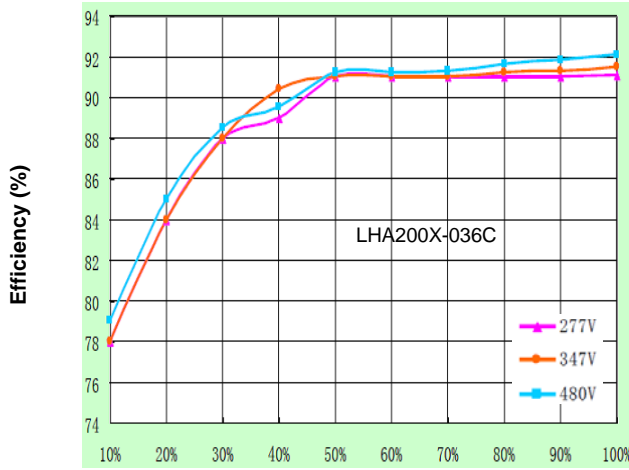


Figure 6: Efficiency vs. Output Power

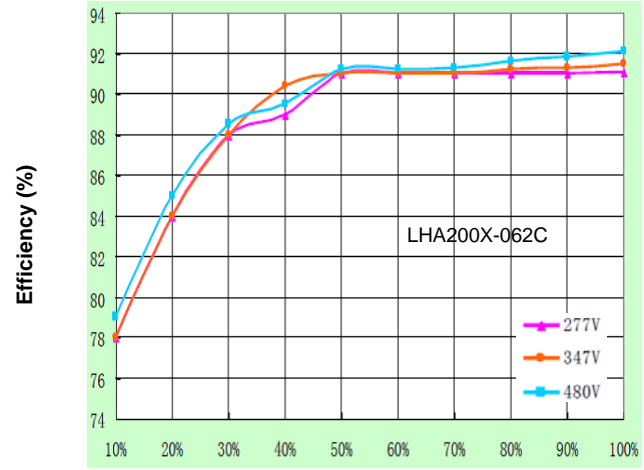


Figure 7: Efficiency vs. Output Power

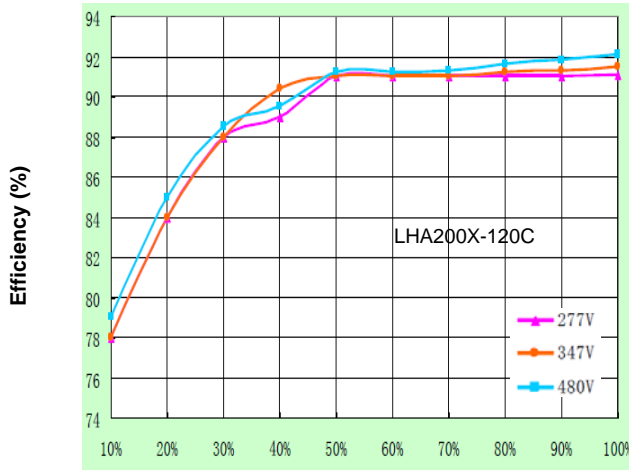


Figure 8: Efficiency vs. Output Power

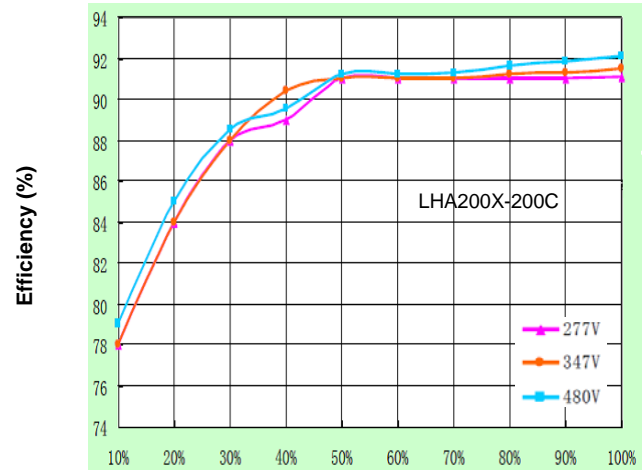


Figure 9: Efficiency vs. Output Power

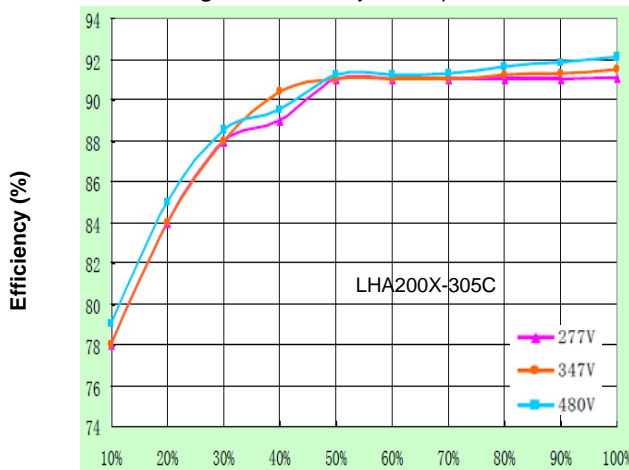


Figure 10: Efficiency vs. Output Power

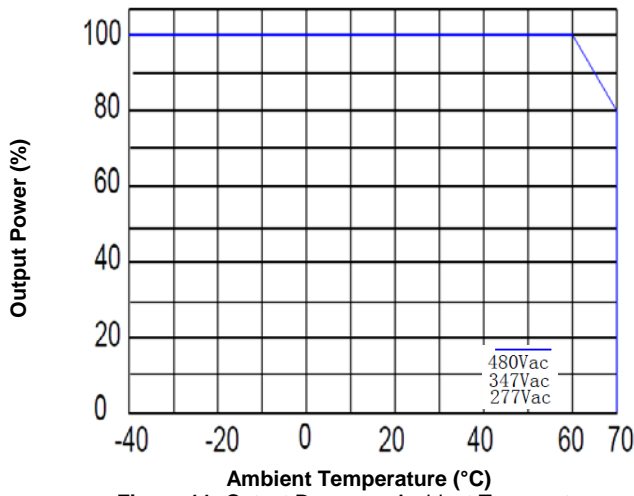


Figure 11: Output Power vs. Ambient Temperature

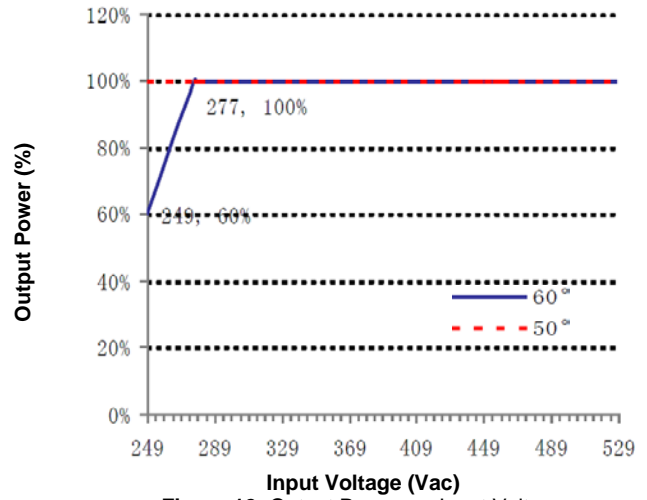


Figure 12: Output Power vs. Input Voltage

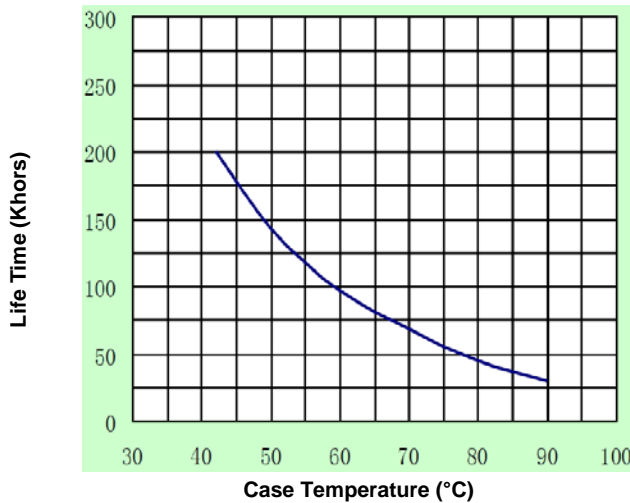


Figure 13: Life Time vs. Case Temperature

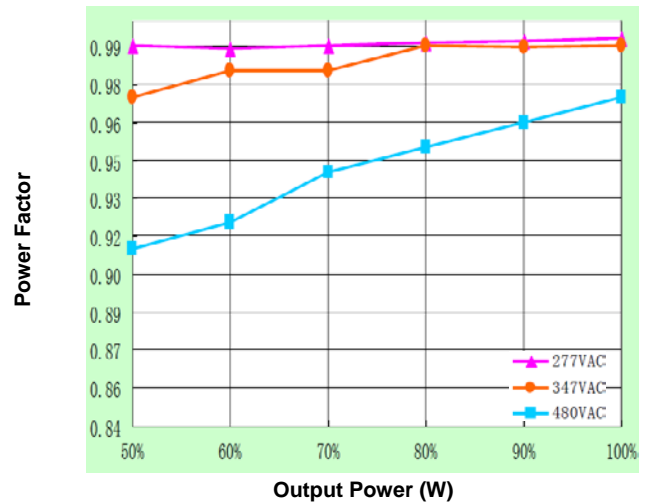


Figure 14: Power Factor vs. Output Power

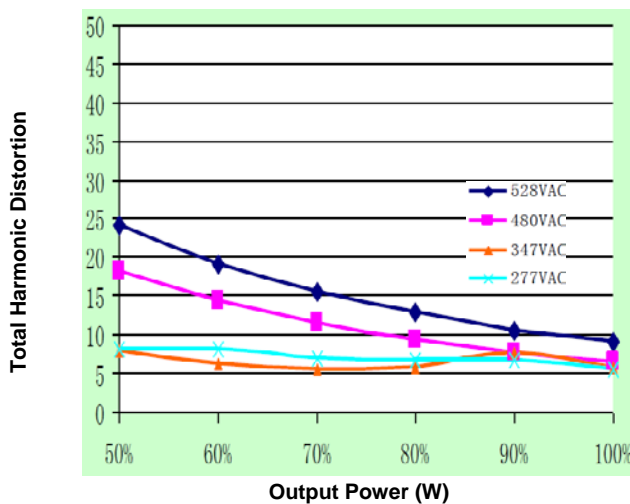


Figure 15: Total Harmonic Distortion vs. Output Power

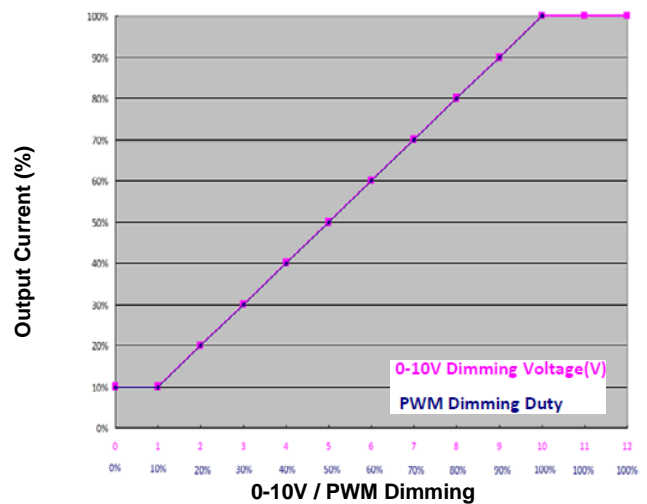
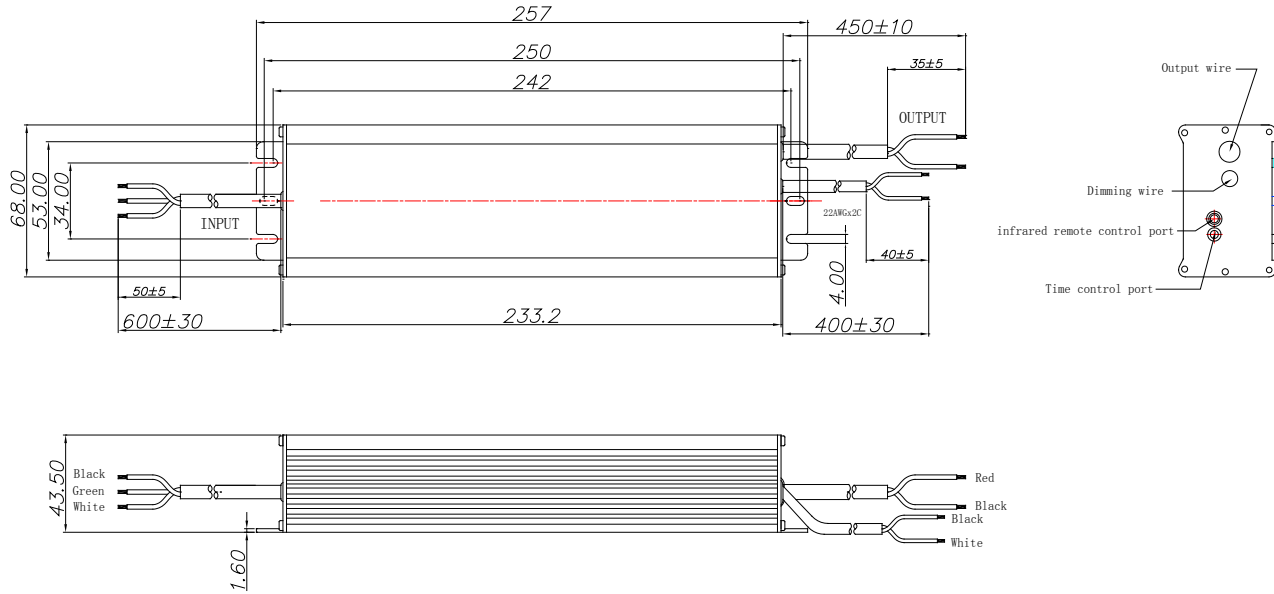


Figure 16: 0-10V/PWM Dimming Curve

Mechanical Drawing

Unit: mm



Wire	Specification
Input	STW 18AWG*3C
Output	SJOW 16AWG*2C
Dimming (M types)	22AWG*2C