UL LISTED **Class P**

Features

- Wide input range: 90-305Vac
- Constant power mode operation
- Constant lumen output
- 3-in-1 dimming function (0-10Vdc, PWM Signal, Timer), dim-to-off
- Surge protection: Line-Line 5KV / Line-Earth 10KV
- Output and dimming signal isolated
- Output over-voltage, over-temperature and short-circuit protections
- IP67 enclosure for indoor and outdoor applications
- UL 8750 listed

Applications

- Roadway lighting, industrial lighting, plant lighting and landscape lighting

Selection Guide

Part Number	Max. Output Power (W)	Output Voltage Range (Vdc)	Full Power Output Voltage Range (Vdc)	Full Power Current Adjustable Range (A)	Default Output Current (A)	Typical Efficiency
LUB240X-041CP	240	20-41	32-41	5.86-7.50	6.70	92%
LUB240X-062CP		38-62	42-62	3.88-5.71	5.00	92%
LUB240X-086CP		43-86	57-86	2.80-4.20	4.20	92.5%
LUB240X-171CP		85-171	114-171	1.40-2.10	1.40	93%
LUB240X-229CP		114-229	160-229	1.05-1.50	1.05	93%
LUB240X-343CP		171-343	228-343	0.70-1.05	0.70	93.5%

Note: X in the Part Number can be either M or V, M means 3-in-1 dimming function and offline programmable; V means non-dimmable and output current adjustable via built-in potentiometer.

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
Input Current	100-277Vac input, full load	-	-	3.3	A
Power Factor	120Vac input, full load	0.97	0.99	-	-
	230Vac input, full load	0.95	0.97	-	
	277Vac input, full load	0.92	0.95	-	
Inrush Current	230Vac input, full load, cold start	-	-	75	A
Leakage Current	277Vac input, 60Hz	-	-	0.7	mA

Standby Power Consumption	M types (dim-to-off)	-	-	2	W
THD	100-240Vac input, 50-100% of full load	-	5	10	%
	277Vac 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 Current Set Point Range LUB240M-041CP LUB240M-062CP LUB240M-086CP LUB240M-171CP LUB240M-229CP LUB240M-343CP		 0.75 0.57 0.42 0.21 0.15 0.11	 - - - - - -	 7.50 5.71 4.20 2.10 1.50 1.05	A
Output Current Set Point Range LUB240V-041CP LUB240V-062CP LUB240V-086CP LUB240V-171CP LUB240V-229CP LUB240V-343CP		 3.75 2.85 2.10 1.05 0.75 0.525	 - - - - - -	 7.50 5.71 4.20 2.10 1.50 1.05	A
Output Current Set Point Range LUB240X-041CP LUB240X-062CP LUB240X-086CP LUB240X-171CP LUB240X-229CP LUB240X-343CP	Constant power	 5.86 3.88 2.80 1.40 1.05 0.70	 - - - - - -	 7.50 5.71 4.20 2.10 1.50 1.05	A
Total Output Current Ripple	230Vac input, full load & LED load, peak-peak	-	5	10	%
Startup Overshoot Current	120-277Vac input, full load & LED load	-	-	10	%Iset
Output Voltage LUB240X-041CP LUB240X-062CP LUB240X-086CP LUB240X-171CP LUB240X-229CP LUB240X-343CP	No load	 - - - - - -	 - - - - - -	 50 70 110 190 250 360	V
Line Regulation	100-277Vac input	-1	-	+1	%
Load Regulation	230Vac input, 60-100% of full load, Ta=25°C±10°C	-3	-	+3	%
Turn-on Delay	120Vac input, full load	-	1	2	s
	230Vac input, full load	-	-	0.5	
Efficiency LUB240X-041CP Io = 5.86A Io = 7.50A LUB240X-062CP Io = 3.88A Io = 5.71A LUB240X-086CP Io = 2.80A Io = 4.20A LUB240X-171CP Io = 1.40A Io = 2.10A LUB240X-229CP Io = 1.05A Io = 1.50A	120Vac input, full load	 88 88 88 88 88.5 88.5 89 89 89 89	 90 90 90 90 90.5 90.5 91 91 90 91	 - - - - - - - - - -	%

LUB240X-343CP					
Io = 0.70A		89	91	-	
Io = 1.05A		89	91	-	
Efficiency					
LUB240X-041CP					
Io = 5.86A		90	92	-	
Io = 7.50A		90	92	-	
LUB240X-062CP					
Io = 3.88A		91	92	-	
Io = 5.71A		91	92	-	
LUB240X-086CP					
Io = 2.80A		90.5	92.5	-	
Io = 4.20A	230Vac input, full load	90.5	92.5	-	%
LUB240X-171CP					
Io = 1.40A		91	93	-	
Io = 2.10A		91	93	-	
LUB240X-229CP					
Io = 1.05A		91.5	93	-	
Io = 1.50A		91.5	93	-	
LUB240X-343CP					
Io = 0.70A		91.5	93.5	-	
Io = 1.05A		91.5	93.5	-	
Efficiency					
LUB240X-041CP					
Io = 5.86A		90.5	92.5	-	
Io = 7.50A		90.5	92.5	-	
LUB240X-062CP					
Io = 3.88A		92	93	-	
Io = 5.71A		92	93	-	
LUB240X-086CP					
Io = 2.80A		91	93	-	
Io = 4.20A	277Vac input, full load	91	93	-	%
LUB240X-171CP					
Io = 1.40A		92	93.5	-	
Io = 2.10A		92	94	-	
LUB240X-229CP					
Io = 1.05A		92	93.5	-	
Io = 1.50A		92	94	-	
LUB240X-343CP					
Io = 0.70A		92	94	-	
Io = 1.05A		92	94	-	

Note: Unless otherwise specified, data in this datasheet should be tested under the conditions of 230Vac 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, 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	Vin	Typical	Vax	Unit
Ambient Temperature	Ta	-40	-	+60	°C
Operating Case Temperature	Tc	-40	-	+90	°C
Storage Temperature		-40	-	+85	°C
Storage Relative Humidity		5	-	100	%RH

Isolation Voltage	Input-Output	leakage current less than 5VA, 60s	-	3,750	-	Vac
	Input-PE		-	1,600	-	
	Output-PE		-	1,600	-	
Insulation Resistance	Input-Output/Input-PE/Output-PE, 500Vdc/60s /70%RH		50	-	-	MΩ
Grounding Resistance	25A/60s		-	-	0.1	Ω
Life Time	230Vac,full load, 75°C case temperature		-	50	-	10^3 hrs
VTBF(VIL-HDBK-217F)	230Vac input, 80% of full load		-	200	-	10^3 hrs
Dimensions (L*W*H)	208.6 x 68.0 x 39.0 mm					
Weight	1100±100g					

Dimming Specifications

Parameter		Notes & Conditions	Vin	Typical	Vax	Unit
Absolute Maximum Voltage		0-10V on the DIV +	-	10	-	V
Source Current		0-10V on the DIV +	-	0.2	0.4	mA
Dimming Output Range		LUB240M-041CP	0.75	-	7.50	A
		LUB240M-062CP	0.57	-	5.71	
		LUB240M-086CP	0.42	-	4.20	
		LUB240M-171CP	0.21	-	2.10	
		LUB240M-229CP	0.15	-	1.50	
		LUB240M-343CP	0.105	-	1.05	
Dimming Range			0	-	10	V
PWM	High Level	Default 0-10V / PWM Dimming	9.7	-	10.3	V
	Low Level		0	-	0.3	V
	Frequency Range		300	-	2,000	Hz
	Duty Cycle		1	-	99	%

EMC Specifications

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

Typical V-I Characteristic Curves

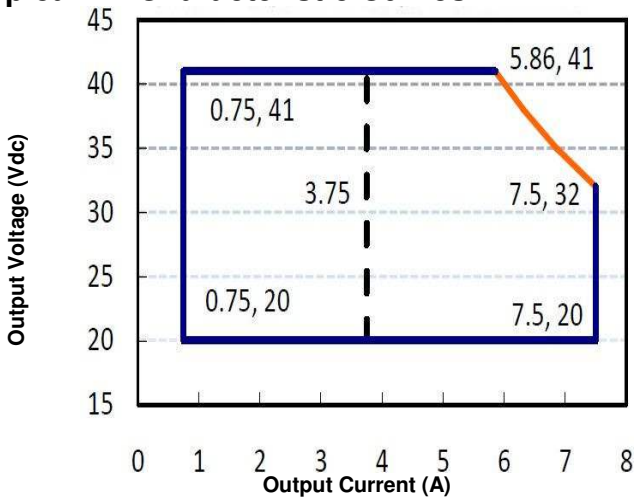


Figure 1: Typical V-I Characteristic Curve (LUB240X-041CP)

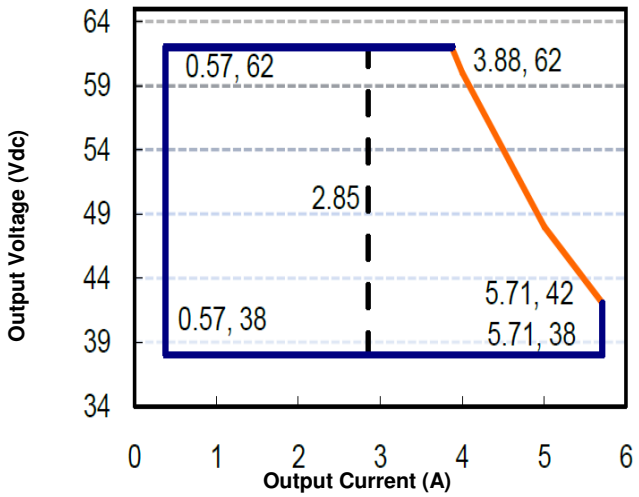


Figure 2: Typical V-I Characteristic Curve (LUB240X-062CP)

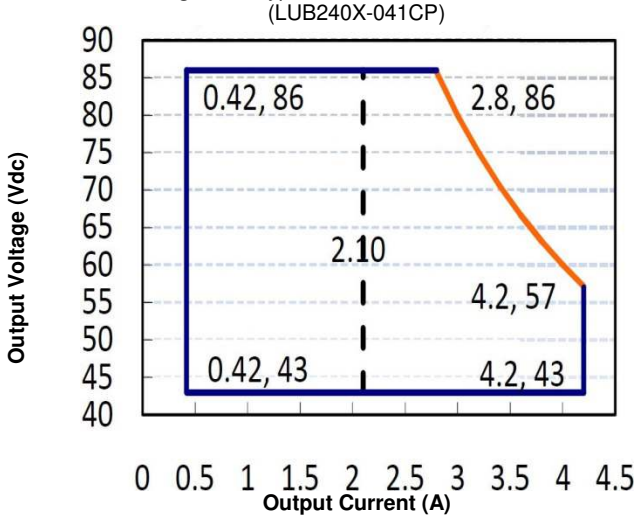


Figure 3: Typical V-I Characteristic Curve (LUB240X-086CP)

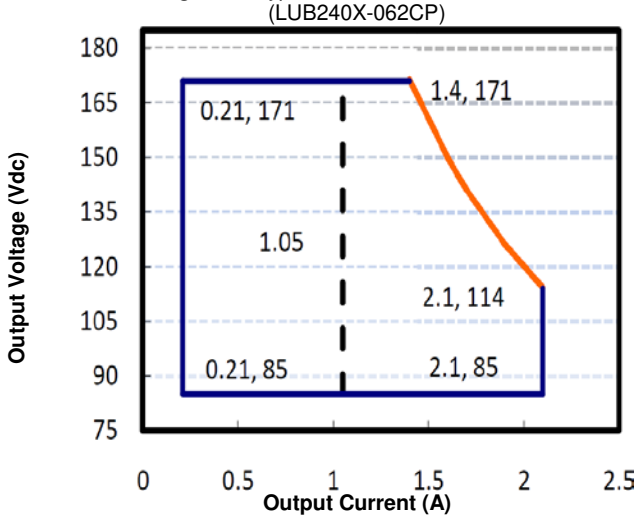


Figure 4: Typical V-I Characteristic Curve (LUB240X-171CP)

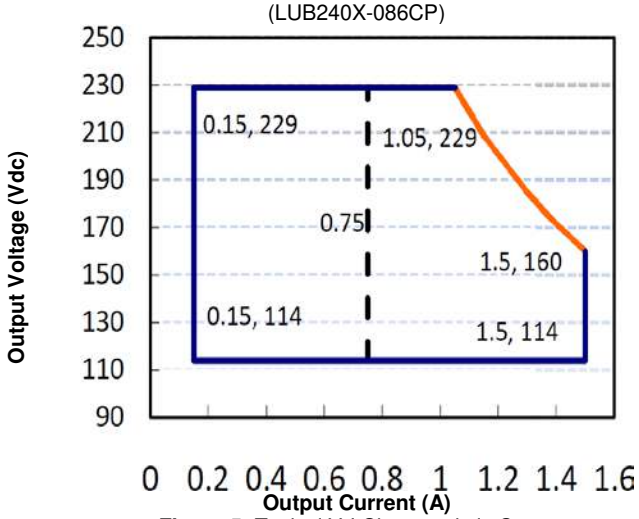


Figure 5: Typical V-I Characteristic Curve (LUB240X-229CP)

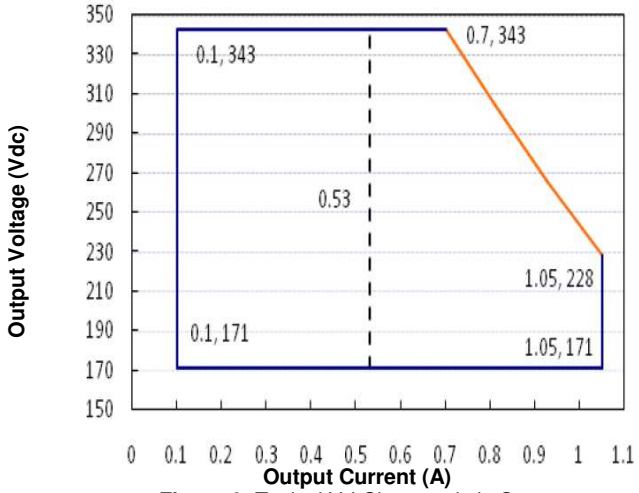


Figure 6: Typical V-I Characteristic Curve (LUB240X-343CP)

Note: X=V is suitable for the right area of dotted line, X=V is suitable for the solid line contained area.

Characteristic Curves

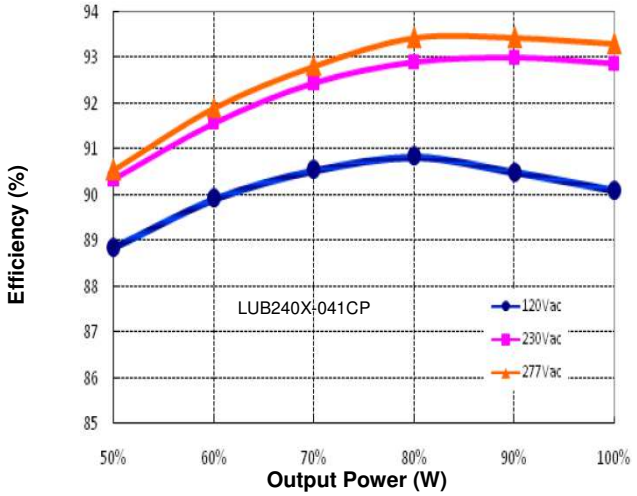


Figure 7: Efficiency vs. Output Power (Io=5.86A)

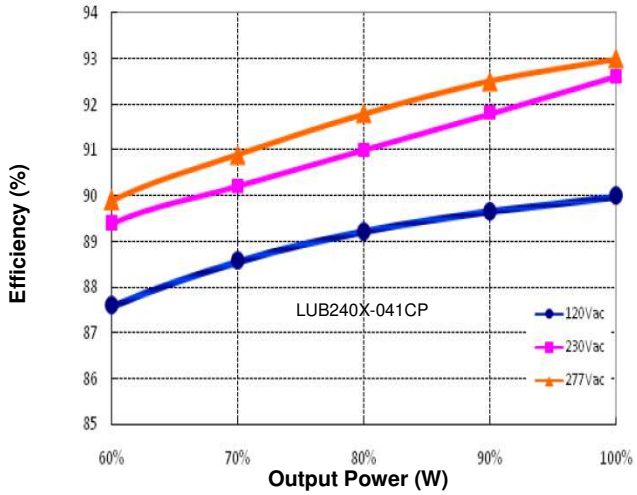


Figure 8: Efficiency vs. Output Power (Io=7.50A)

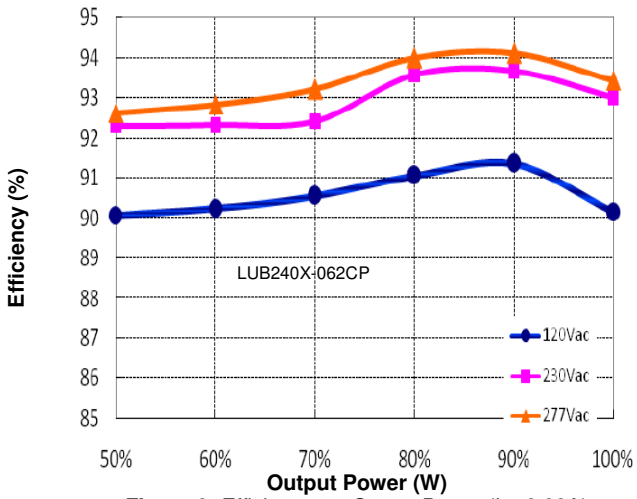


Figure 9: Efficiency vs. Output Power (Io=3.88A)

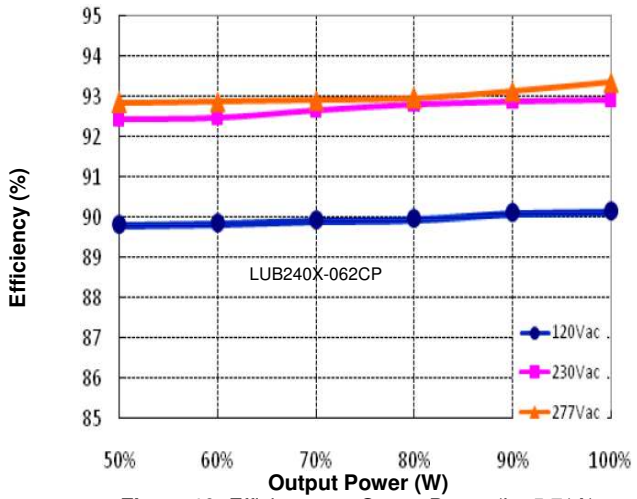


Figure 10: Efficiency vs. Output Power (Io=5.71A)

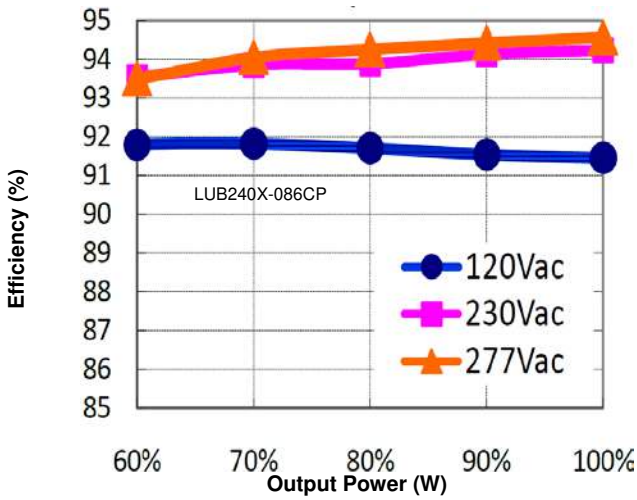


Figure 11: Efficiency vs. Output Power (Io=2.80A)

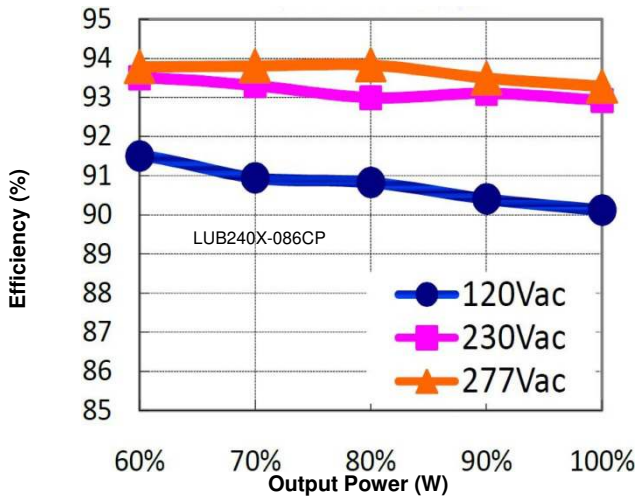


Figure 12: Efficiency vs. Output Power (Io=4.20A)

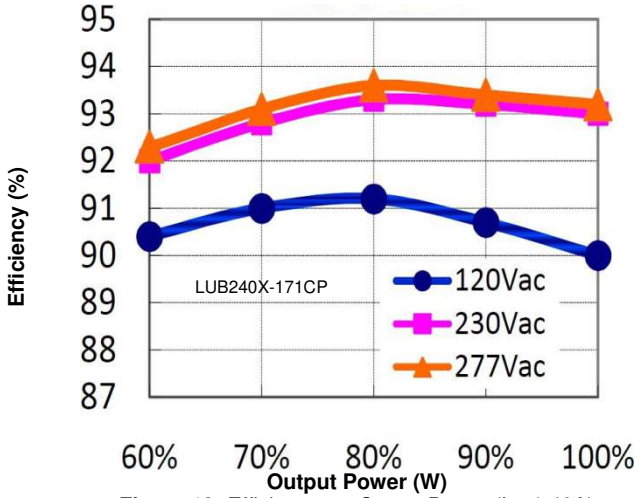


Figure 13: Efficiency vs. Output Power (Io=1.40A)

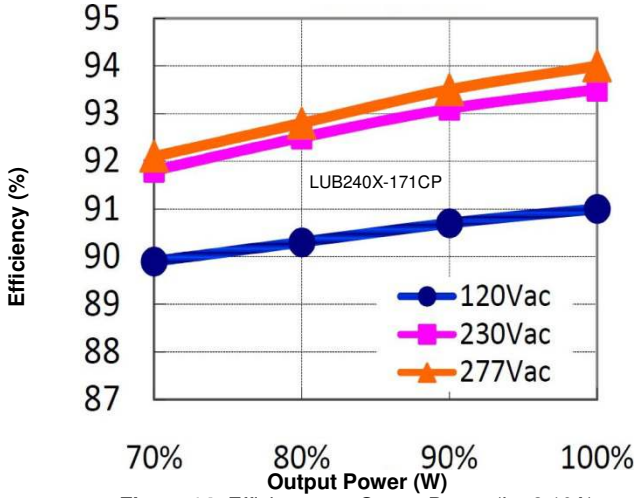


Figure 14: Efficiency vs. Output Power (Io=2.10A)

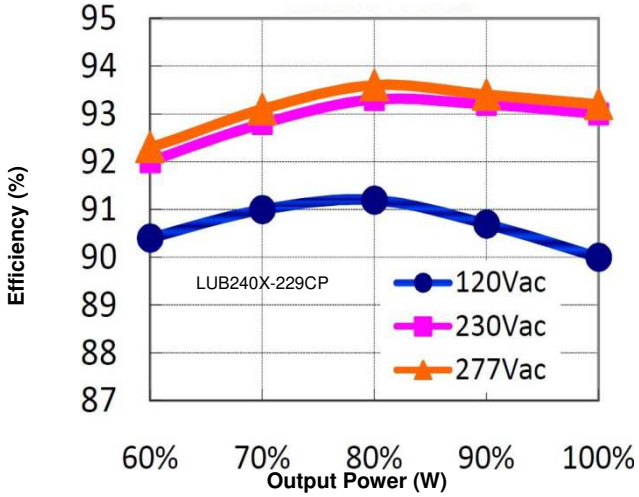


Figure 15: Efficiency vs. Output Power (Io=1.05A)

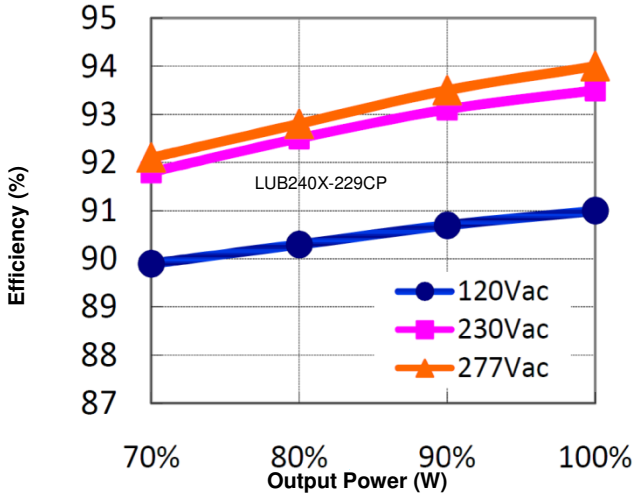


Figure 16: Efficiency vs. Output Power (Io=1.50A)

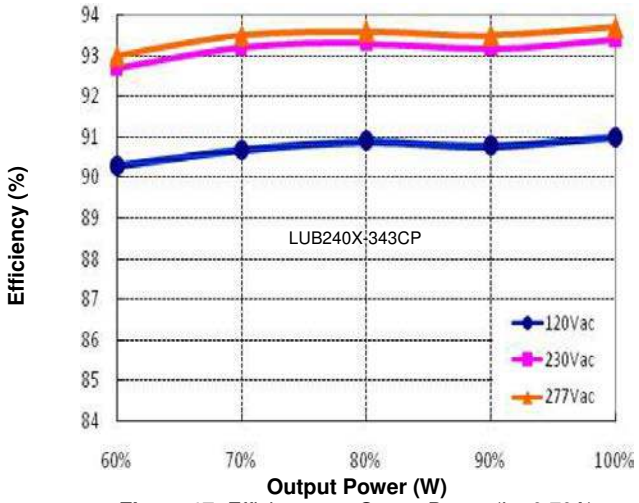


Figure 17: Efficiency vs. Output Power (Io=0.70A)

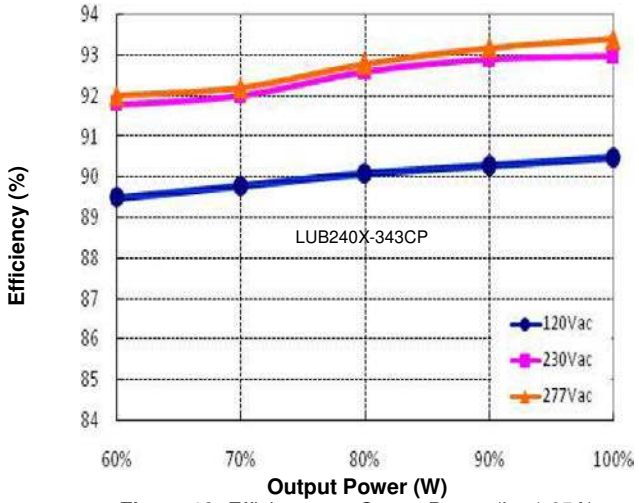


Figure 18: Efficiency vs. Output Power (Io=1.05A)

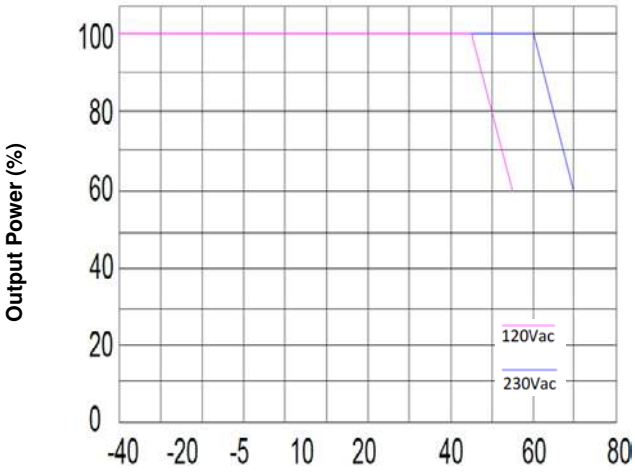


Figure 19: Output Power vs. Ambient Temperature

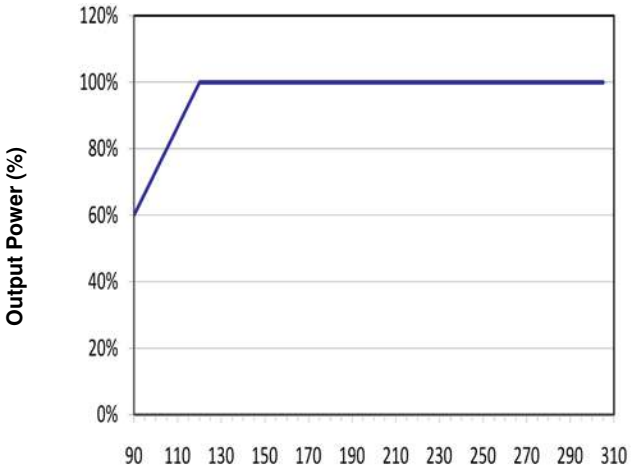


Figure 20: Output Power vs. Input Voltage

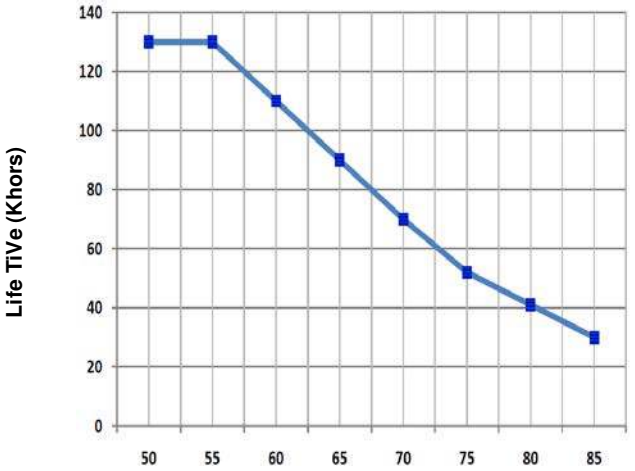


Figure 21: Life Time vs. Case Temperature

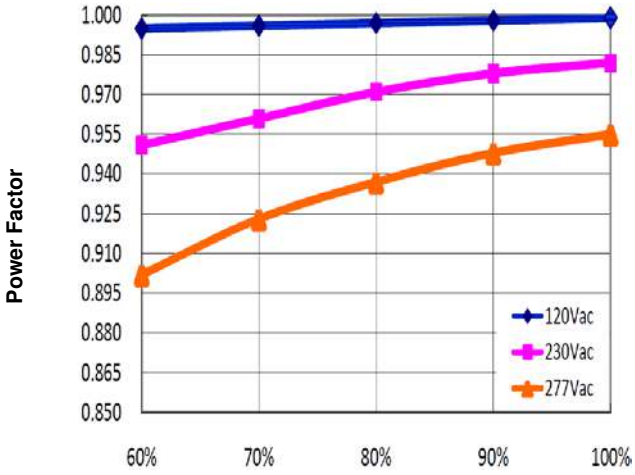


Figure 22: Power Factor vs. Output Power

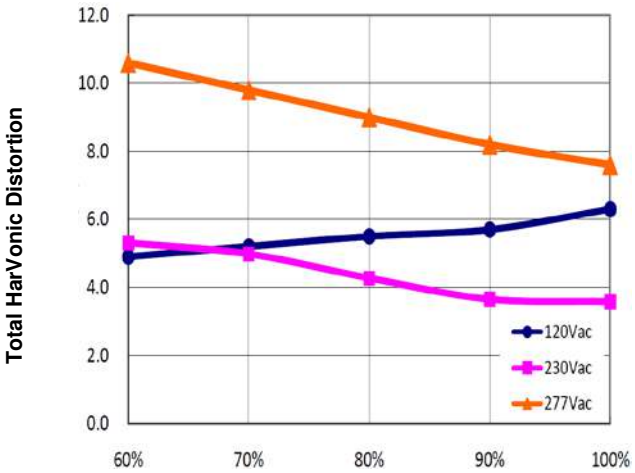


Figure 23: Total Harmonic Distortion vs. Output Power

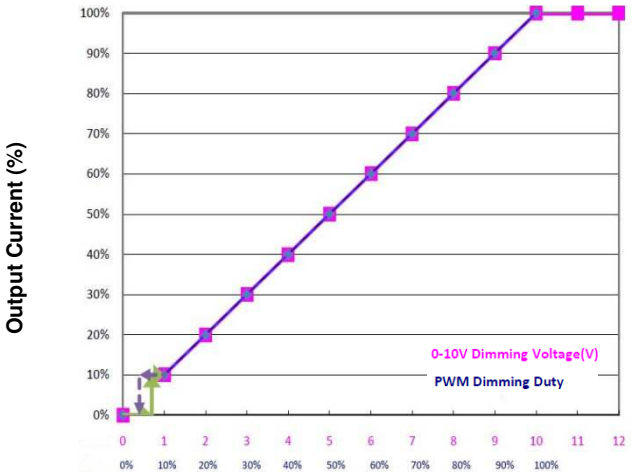
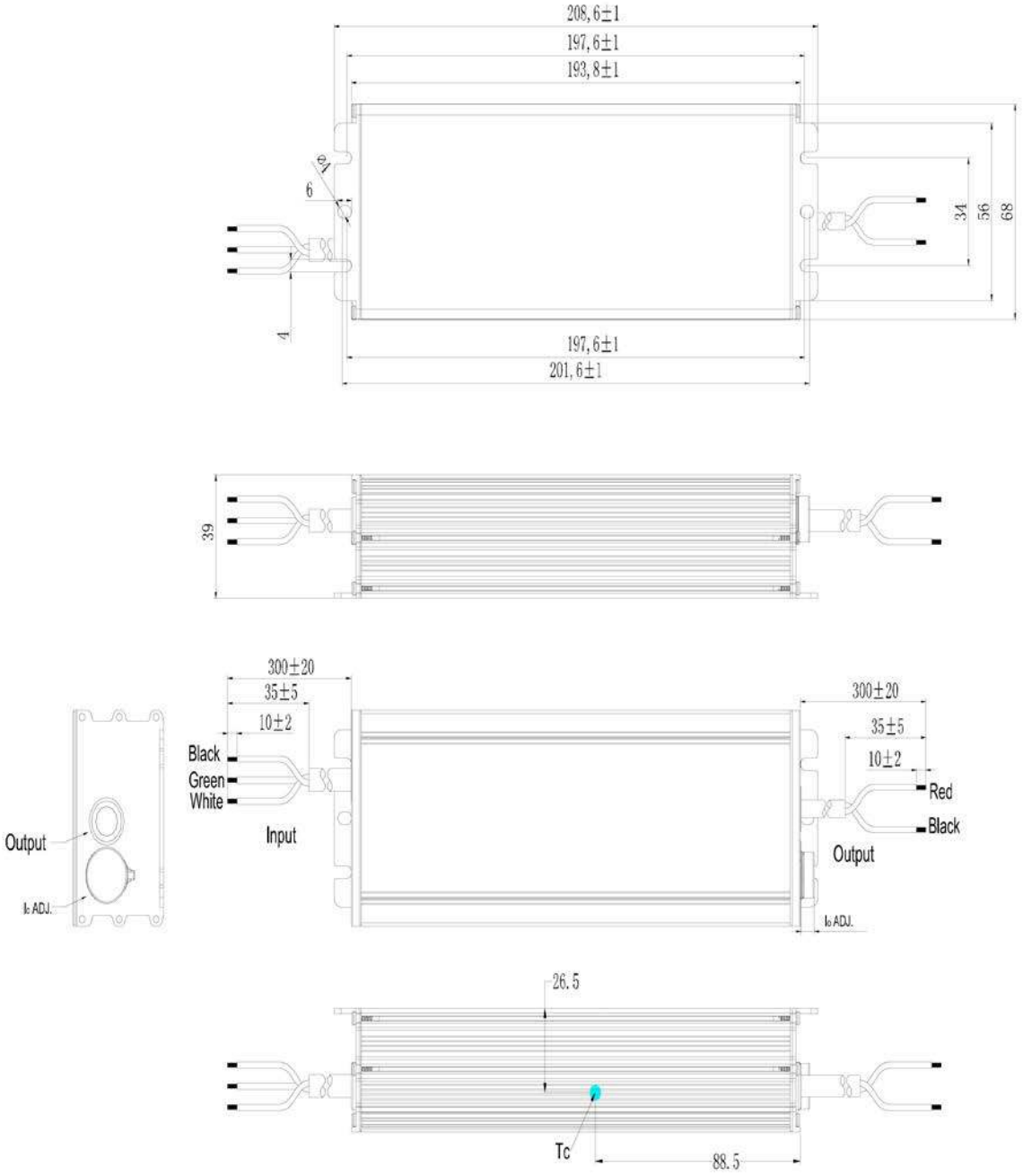


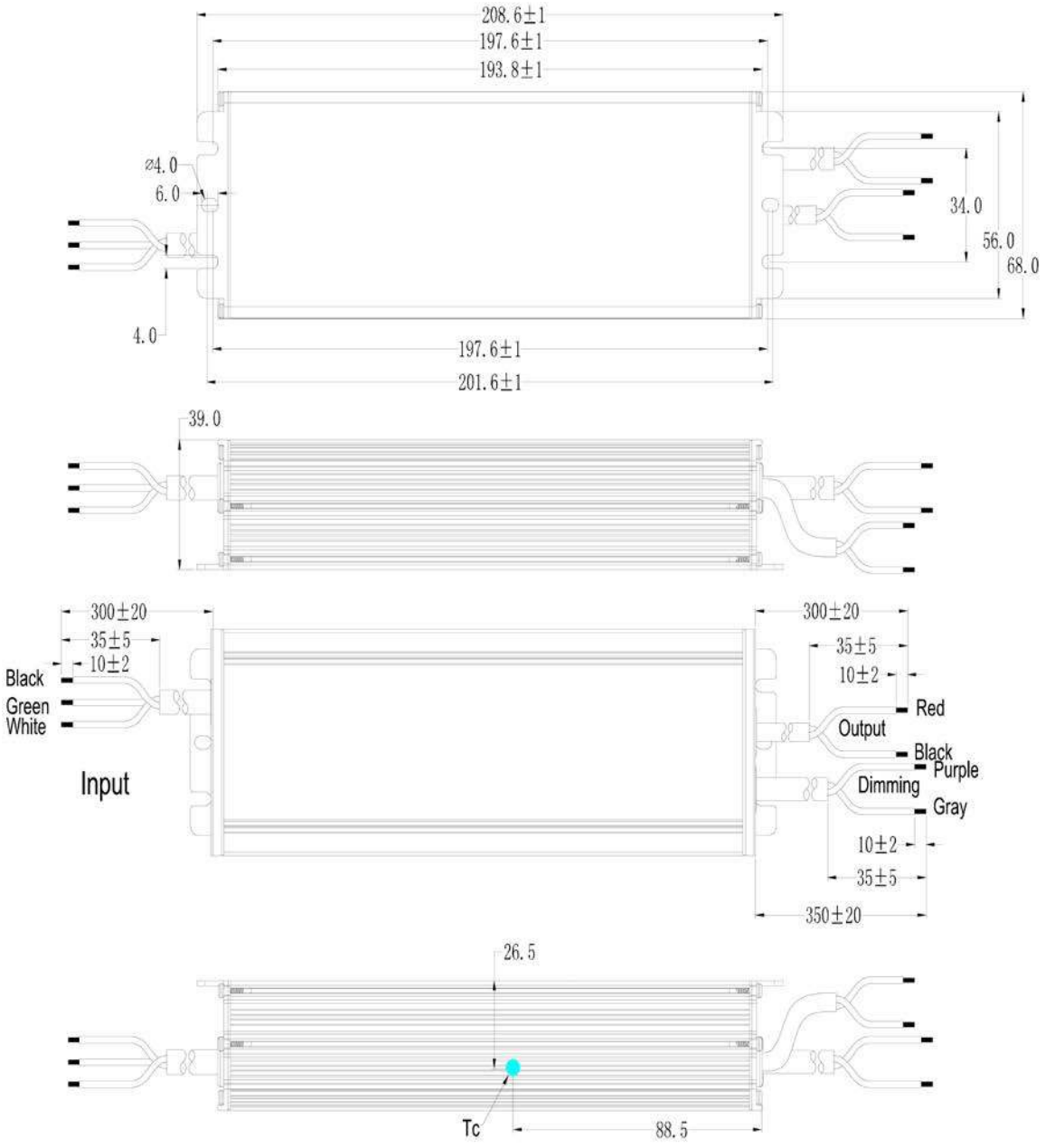
Figure 24: 0-10V/PWM Dimming Curve

Mechanical Drawing

LUB240V types (Unit: mm)



LUB240M types (Unit: mm)



Wire	Specification
Input	SJOW 18AWG*3C, 7.8mm external diameter
Output	SJOW 18AWG*2C, 7.3mm external diameter
Dimming (M types)	UL2733 22AWG*2C, 5.45mm external diameter