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 recognized

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
LUB200X-041C	200	20-41	30-41	4.88-6.67	5.56	91%
LUB200X-062C		38-62	40-62	3.23-5.00	4.90	92%
LUB200X-096C		48-96	67-96	2.10-3.00	2.80	93%
LUB200X-143C		70-143	95-143	1.40-2.10	1.40	93%
LUB200X-191C		96-191	133-191	1.05-1.50	1.05	93.5%
LUB200X-286C		143-286	191-286	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	-	-	2.8	A
Power Factor	115Vac 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	-	-	3	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 LUB200M-041C LUB200M-062C LUB200M-096C LUB200M-143C LUB200M-191C LUB200M-286C		 0.67 0.50 0.30 0.21 0.15 0.11	 - - - - - -	 6.67 5.00 3.00 2.10 1.50 1.05	A
Output Current Set Point Range LUB200V-041C LUB200V-062C LUB200V-096C LUB200V-143C LUB200V-191C LUB200V-286C		 3.30 2.50 1.50 1.05 0.75 0.53	 - - - - - -	 6.67 5.00 3.00 2.10 1.50 1.05	A
Output Current Set Point Range LUB200X-041C LUB200X-062C LUB200X-096C LUB200X-143C LUB200X-191C LUB200X-286C	Constant power	 4.88 3.23 2.10 1.40 1.05 0.70	 - - - - - -	 6.67 5.00 3.00 2.10 1.50 1.05	A
Total Output Current Ripple	230Vac input, full LED load, peak-peak	-	5	10	%
Startup Overshoot Current	100-277Vac input, full LED load	-	-	10	%Iset
Output Voltage LUB200X-041C LUB200X-062C LUB200X-096C LUB200X-143C LUB200X-191C LUB200X-286C	No load	 - - - - - -	 - - - - - -	 50 70 110 170 200 310	V
Line Regulation	100-277Vac input	-1	-	+1	%
Load Regulation	230Vac input, 60-100% of full load	-3	-	+3	%
Turn-on Delay	115Vac input, full load	-	1	2	s
	230Vac input, full load	-	-	0.5	
Efficiency LUB200X-041C Io = 4.88A Io = 6.67A LUB200X-062C Io = 3.23A Io = 5.00A LUB200X-096C Io = 2.10A Io = 3.00A LUB200X-143C Io = 0.70A Io = 1.05A LUB200X-191C Io = 1.05A Io = 1.50A LUB200X-286C Io = 0.70A Io = 1.05A	120Vac input, full load	 88 88 88 88 88 88 89 89 89 89 89 89	 90 90 90 90 90 90 90 90 91 91 91 91	 - - - - - - - - - - - -	%
Efficiency LUB200X-041C Io = 4.88A Io = 6.67A LUB200X-062C Io = 3.23A	230Vac input, full load	 90 90 91	 92 92 93	 - - -	%

Io = 5.00A		91	93	-	
LUB200X-096C					
Io = 2.10A		91	93	-	
Io = 3.00A		91	93	-	
LUB200X-143C					
Io = 0.70A		91	93	-	
Io = 1.05A		91	93	-	
LUB200X-191C					
Io = 1.05A		91	93	-	
Io = 1.50A		91	93	-	
LUB200X-286C					
Io = 0.70A		91	93	-	
Io = 1.05A		91	93	-	
Efficiency					
LUB200X-041C					
Io = 4.88A		90.5	92.5	-	
Io = 6.67A		90.5	92.5	-	
LUB200X-062C					
Io = 3.23A		91.5	93.5	-	
Io = 5.00A		91.5	93.5	-	
LUB200X-096C					
Io = 2.10A		91.5	93.5	-	
Io = 3.00A	277Vac input, full load	91.5	93.5	-	%
LUB200X-143C					
Io = 0.70A		91.5	93.5	-	
Io = 1.05A		91.5	93.5	-	
LUB200X-191C					
Io = 1.05A		91.5	93.5	-	
Io = 1.50A		91.5	93.5	-	
LUB200X-286C					
Io = 0.70A		91.5	93.5	-	
Io = 1.05A		91.5	93.5	-	

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 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
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 5mA, 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

MTBF(MIL-HDBK-217F)	230Vac input, 80% of full load	-	200	-	10^3 hrs
Dimensions (L*W*H)	193.6 x 68.0 x 39.0 mm				
Weight	1200±100g				

Dimming Specifications

Parameter		Notes & Conditions	Min	Typical	Max	Unit
Absolute Maximum Voltage		0-10V on the DIM +	-	10	-	V
Source Current		0-10V on the DIM +	-	0.1	0.2	mA
Dimming Output Range		LUB200M-041C	0.67	-	6.67	A
		LUB200M-062C	0.50	-	5.00	
		LUB200M-096C	0.30	-	3.00	
		LUB200M-143C	0.21	-	2.10	
		LUB200M-191C	0.15	-	1.50	
		LUB200M-286C	0.11	-	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		200	-	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

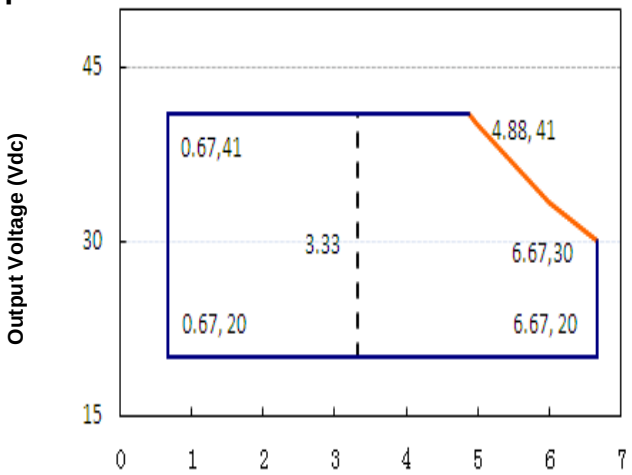


Figure 1: Typical V-I Characteristic Curve (LUB200X-041C)

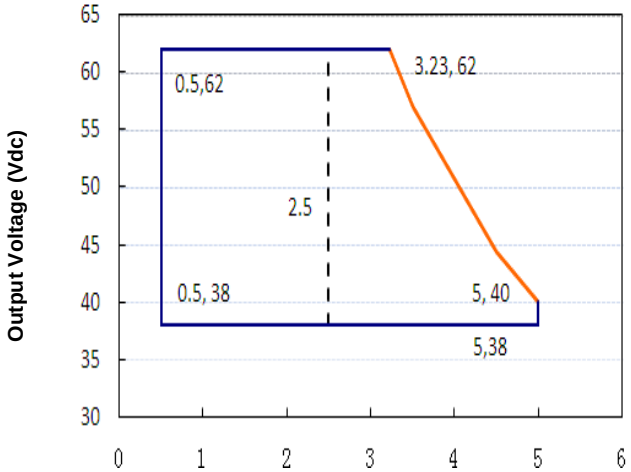


Figure 2: Typical V-I Characteristic Curve (LUB200X-062C)

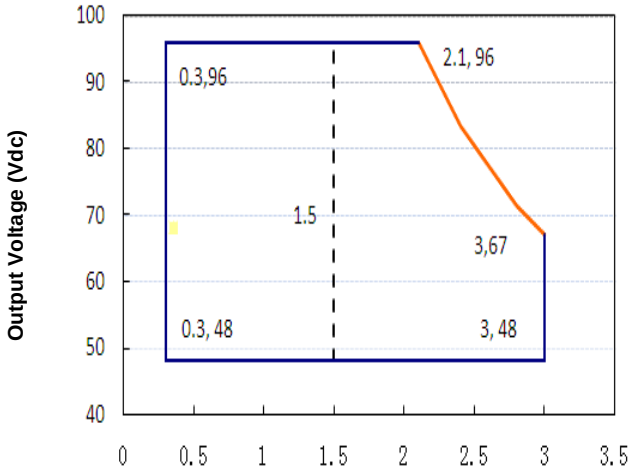


Figure 3: Typical V-I Characteristic Curve (LUB200X-096C)

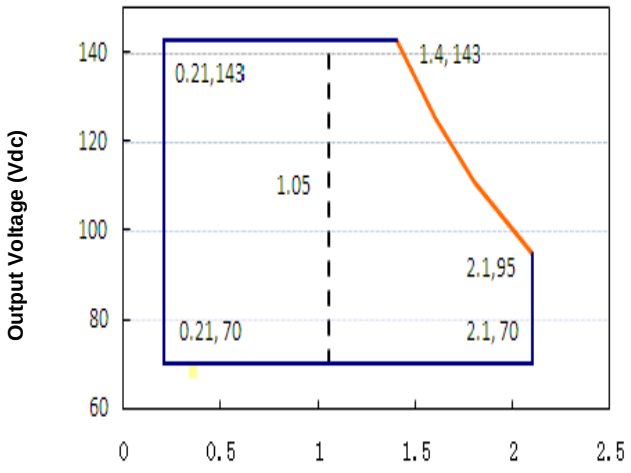


Figure 4: Typical V-I Characteristic Curve (LUB200X-143C)

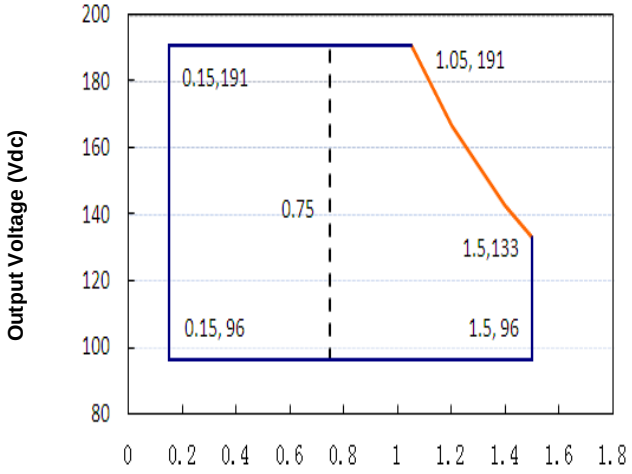


Figure 5: Typical V-I Characteristic Curve (LUB200X-191C)

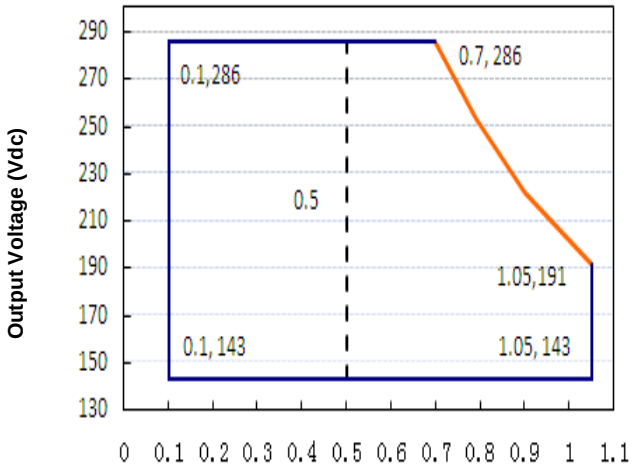


Figure 6: Typical V-I Characteristic Curve (LUB200X-286C)

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

Characteristic Curves

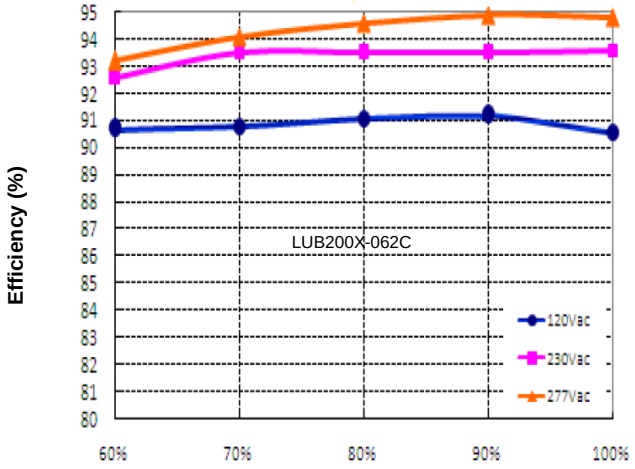


Figure 7: Efficiency vs. Output Power (Io=3.23A)

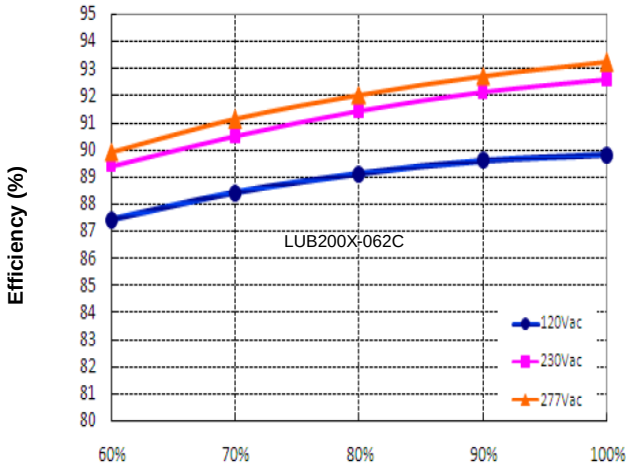


Figure 8: Efficiency vs. Output Power (Io=5.00A)

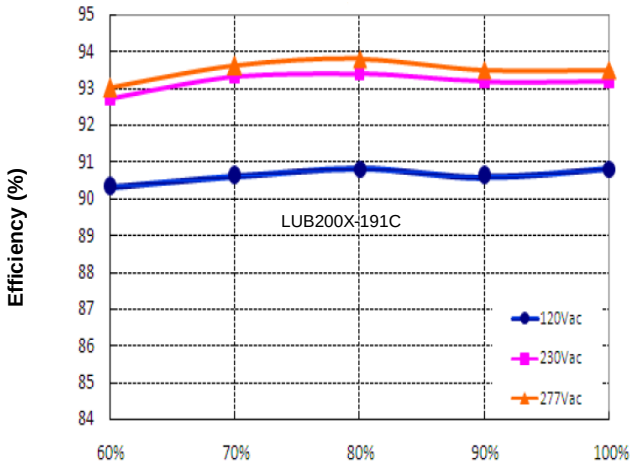


Figure 9: Efficiency vs. Output Power (Io=0.70A)

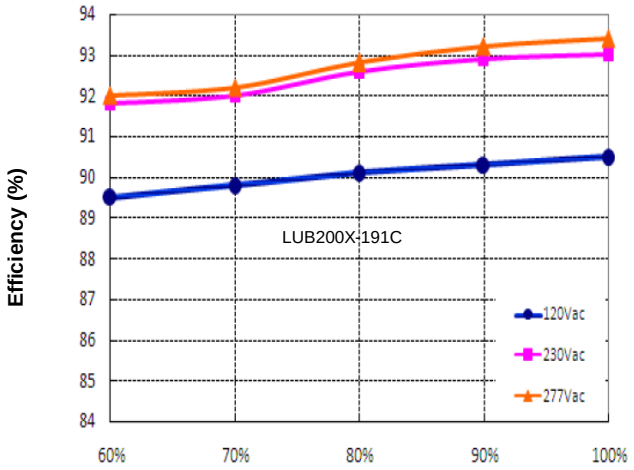


Figure 10: Efficiency vs. Output Power (Io=1.05A)

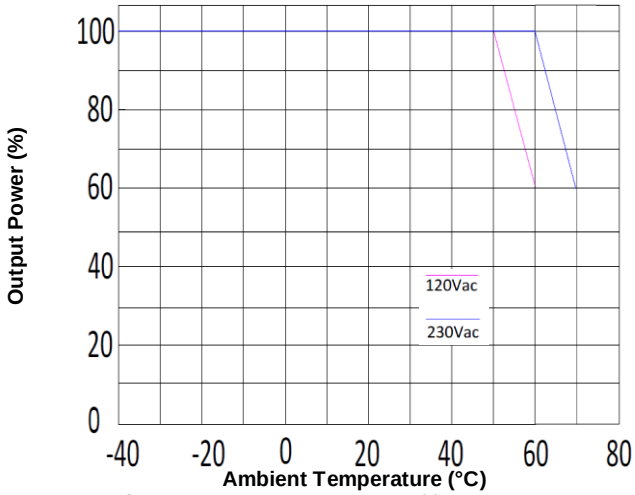


Figure 11: Output Power vs. Ambient Temperature

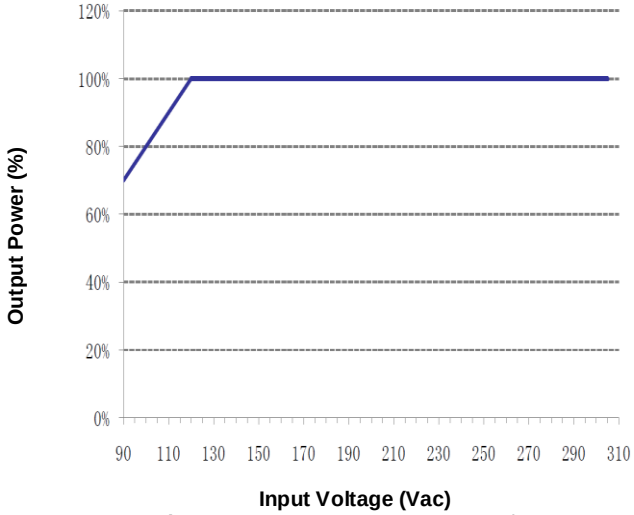


Figure 12: Output Power vs. Input Voltage

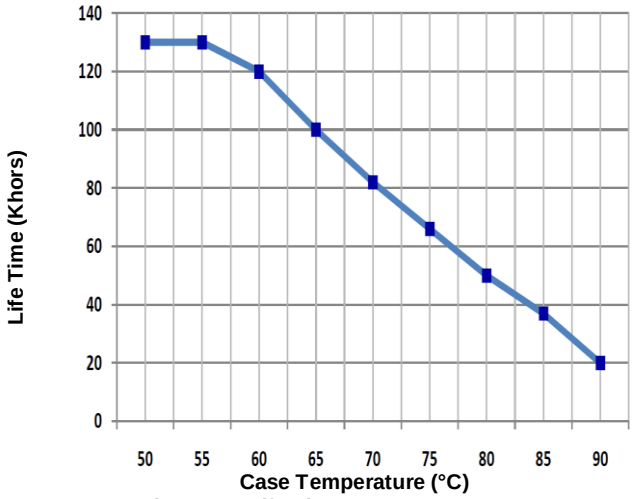


Figure 13: Life Time vs. Case Temperature

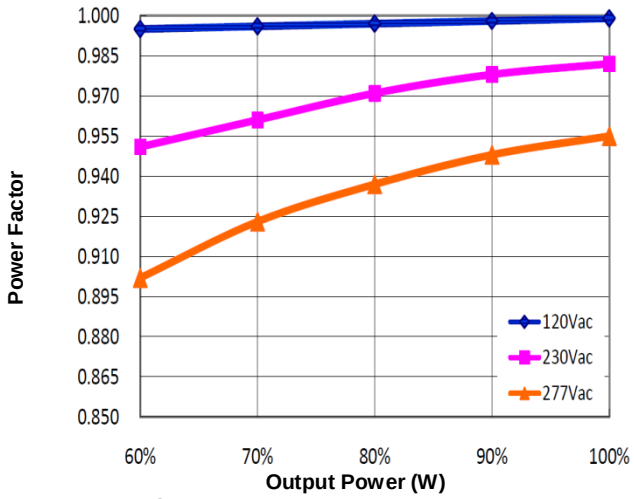


Figure 14: Power Factor vs. Output Power

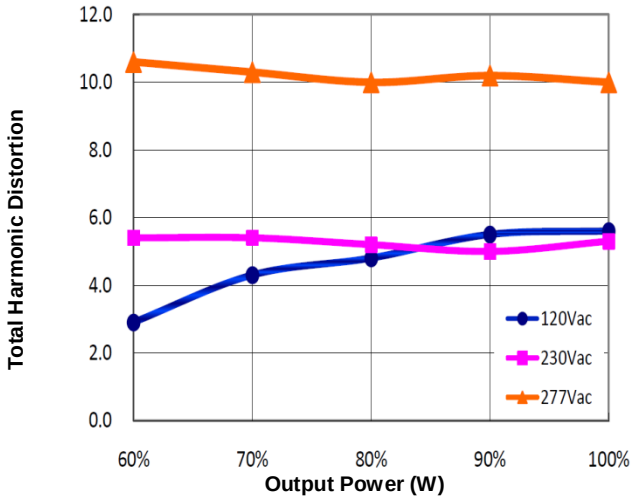


Figure 15: Total Harmonic Distortion vs. Output Power

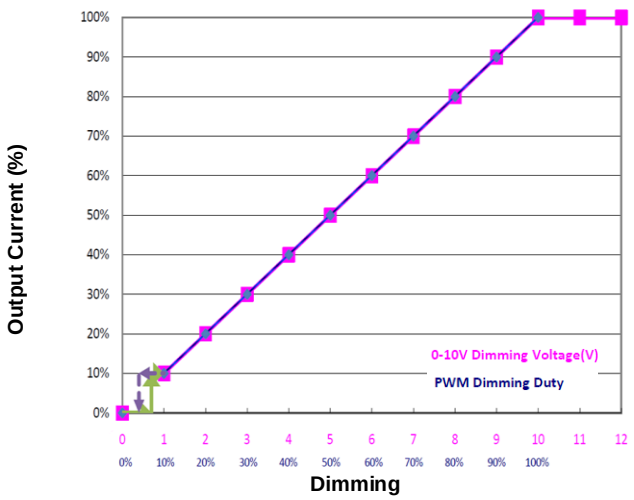
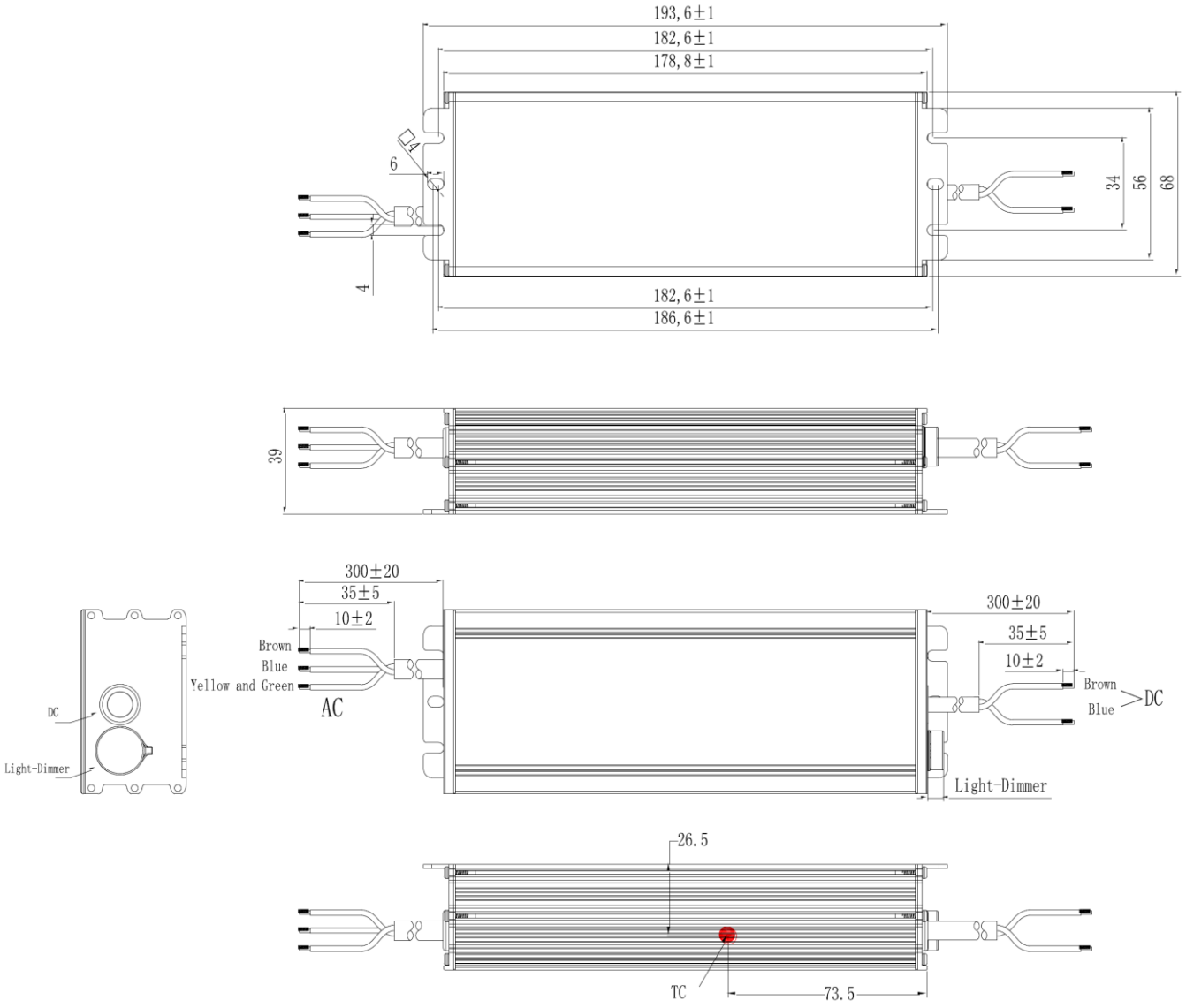


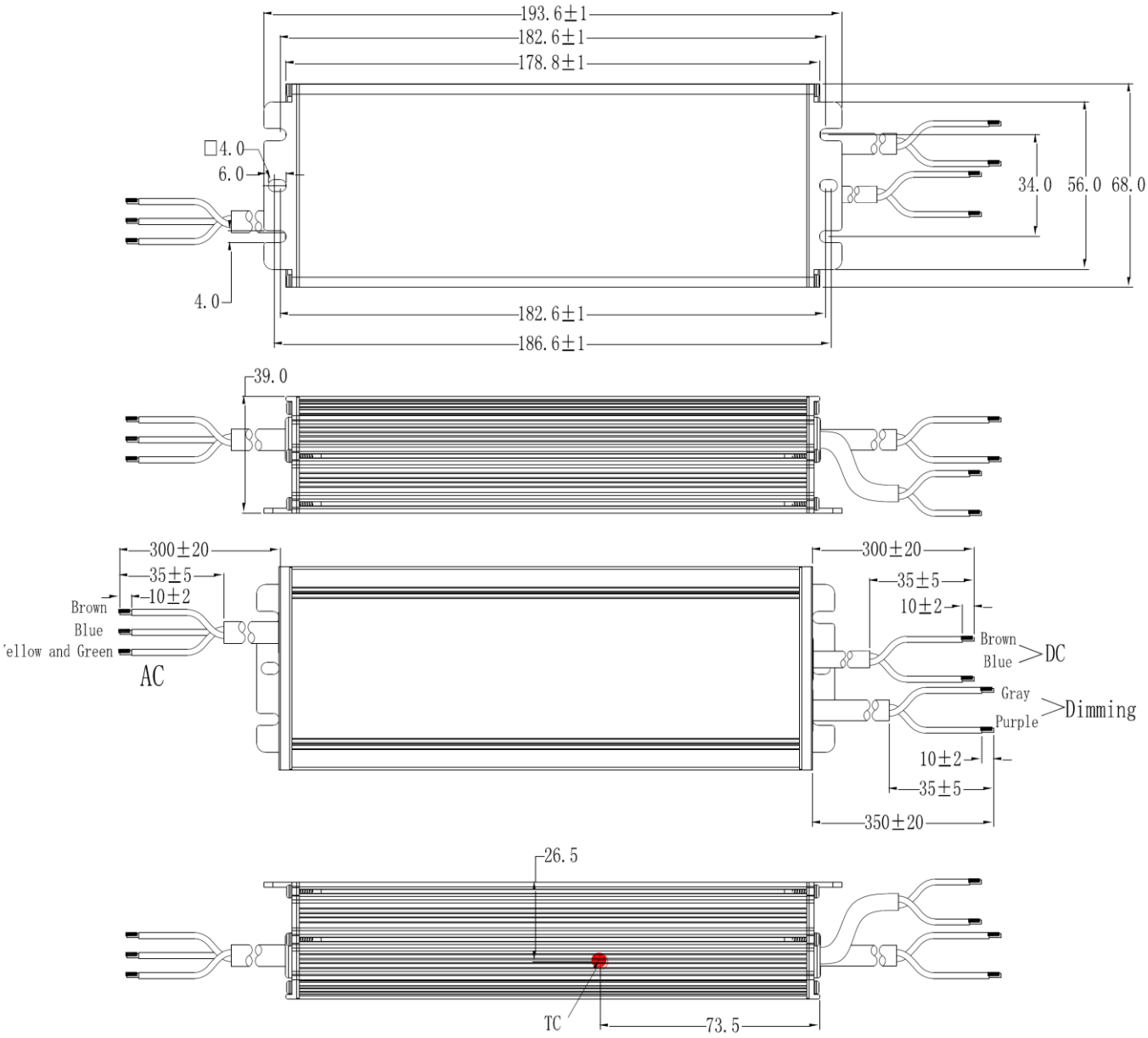
Figure 16: 0-10V/PWM Dimming Curve

Mechanical Drawing

LUB200V types (Unit: mm)



LUB200M types (Unit: mm)



Wire	Specification
Input	SJOW 17AWG*3C, 8.3mm external diameter
Output	SJOW 17AWG*2C, 7.7mm external diameter
Dimming (M types)	UL2733 22AWG*2C, 5.45mm external diameter