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
LUB105X-041C	105	20-41	30-41	2.56-3.50	2.80	90%
LUB105X-062C		38-62	42-62	1.69-2.50	2.10	91%
LUB105X-100C		50-100	75-100	1.05-1.40	1.40	92%
LUB105X-150C		75-150	100-150	0.70-1.05	1.05	92%

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	-	-	1.5	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, 50Hz	-	-	0.7	mA
Standby Power Consumption	M types	-	-	2	W
THD	100-240Vac input, 50-100% of full load	-	5	10	%
	277Vac input, 70-100% of full load	-	-	10	

Output Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Output Current Tolerance	Full load	-5	-	+5	%Iset
Output Current Set Point Range LUB105M-041C LUB105M-062C LUB105M-100C LUB105M-150C		 0.35 0.25 0.14 0.11	 - - - -	 3.50 2.50 1.40 1.05	A
Output Current Set Point Range LUB105V-041C LUB105V-062C LUB105V-100C LUB105V-150C		 1.75 1.25 0.70 0.50	 - - - -	 3.50 2.50 1.40 1.05	A
Output Current Set Point Range LUB105X-041C LUB105X-062C LUB105X-100C LUB105X-150C	Constant power	 2.56 1.69 1.05 0.70	 - - - -	 3.50 2.50 1.40 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 LUB105X-041C LUB105X-062C LUB105X-100C LUB105X-150C	No load	 - - - -	 - - - -	 50 70 120 170	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 LUB105X-041C Io = 2.56A Io = 3.50A LUB105X-062C Io = 1.69A Io = 2.50A LUB105X-100C Io = 1.05A Io = 1.40A LUB105X-150C Io = 0.70A Io = 1.05A	120Vac input, full load	 87 87 88 88 88 88 89 89	 89 89 90 90 90 90 90 90	 - - - - - - - -	%
Efficiency LUB105X-041C Io = 2.56A Io = 3.50A LUB105X-062C Io = 1.69A Io = 2.50A LUB105X-100C Io = 1.05A Io = 1.40A LUB105X-150C Io = 0.70A Io = 1.05A	230Vac input, full load	 88 88 89 89 90 90 90 90	 90 90 91 91 92 92 92 92	 - - - - - - - -	%
Efficiency LUB105X-041C Io = 2.56A Io = 3.50A LUB105X-062C Io = 1.69A Io = 2.50A	277Vac input, full load	 88 88 89 89	 90 90 91 91	 - - - -	%

LUB105X-100C					
Io = 1.05A		90	92	-	
Io = 1.40A		90	92	-	
LUB105X-150C					
Io = 0.70A		90	92	-	
Io = 1.05A		90	92	-	

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)	153.6 x 68.0 x 37.0 mm					
Weight	700±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		LUB105M-041C	0.35	-	3.50	A
		LUB105M-062C	0.25	-	2.50	
		LUB105M-100C	0.14	-	1.40	
		LUB105M-150C	0.10	-	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

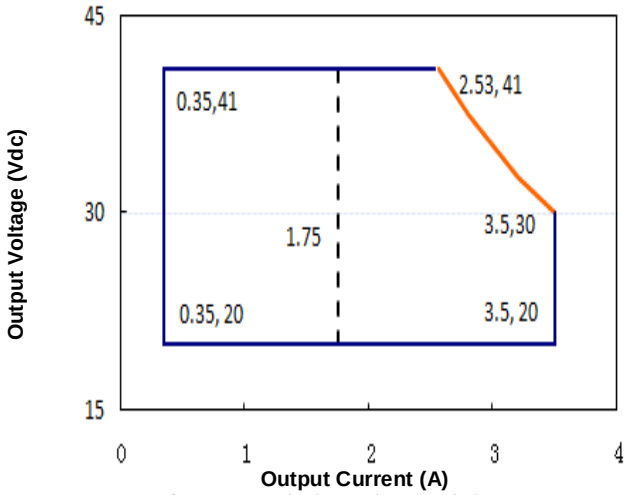


Figure 1: Typical V-I Characteristic Curve (LUB105X-041C)

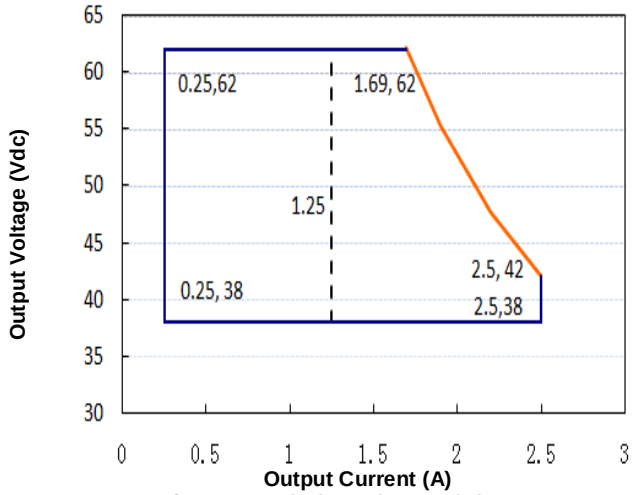


Figure 2: Typical V-I Characteristic Curve (LUB105X-062C)

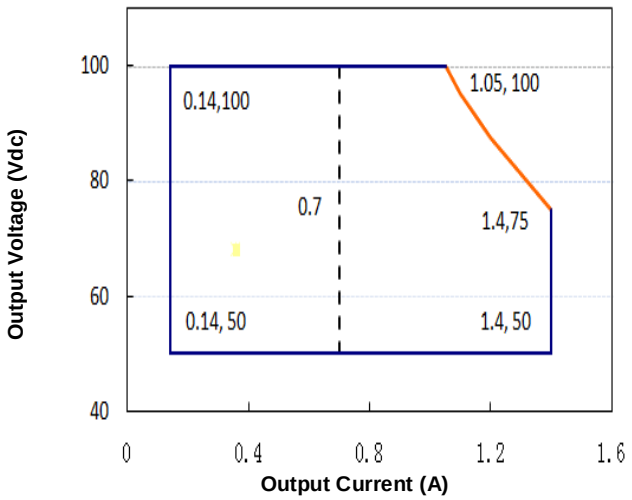


Figure 3: Typical V-I Characteristic Curve (LUB105X-100C)

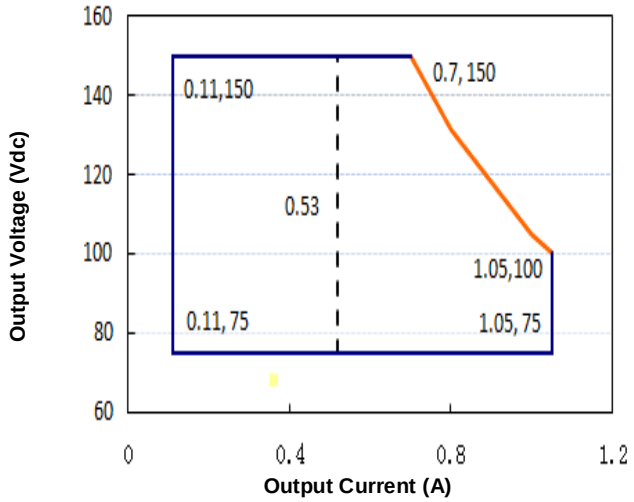


Figure 4: Typical V-I Characteristic Curve (LUB105X-150C)

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

Characteristic Curves

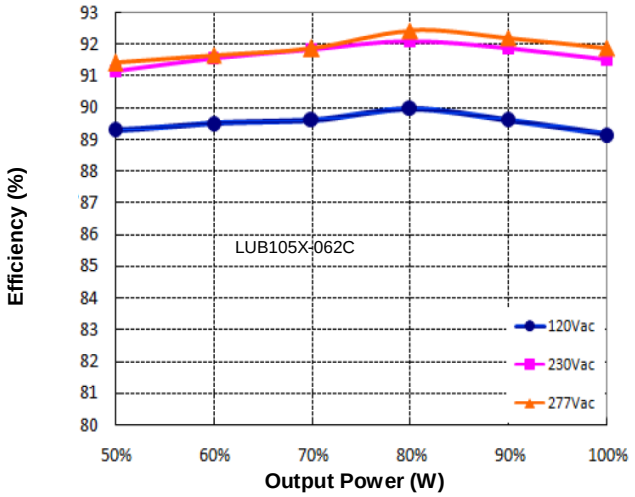


Figure 5: Efficiency vs. Output Power (Io=1.69A)

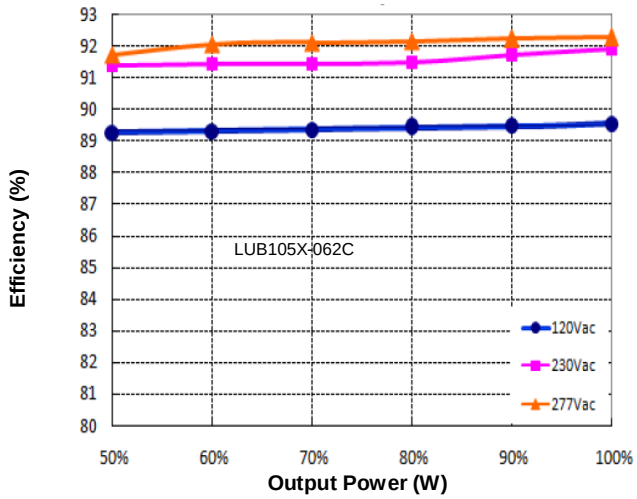


Figure 6: Efficiency vs. Output Power (Io=2.50A)

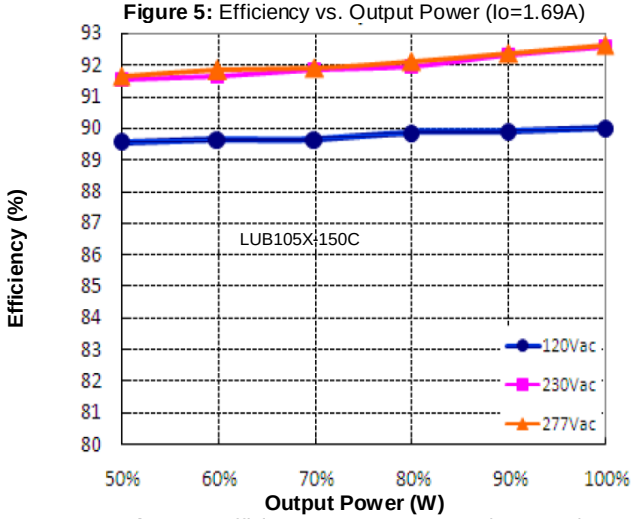


Figure 7: Efficiency vs. Output Power (Io=0.70A)

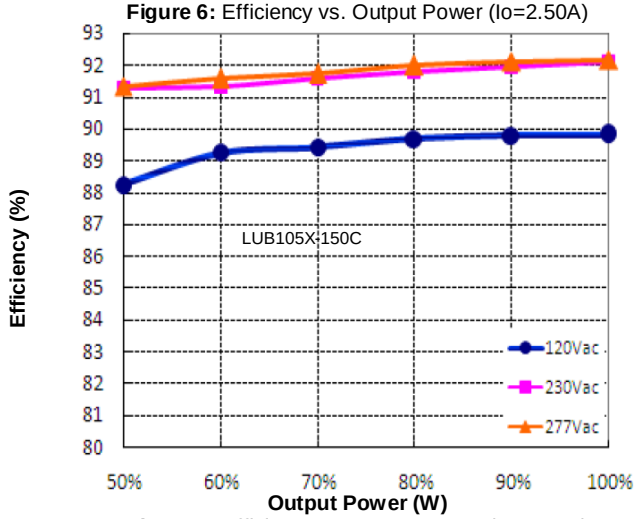


Figure 8: Efficiency vs. Output Power (Io=1.05A)

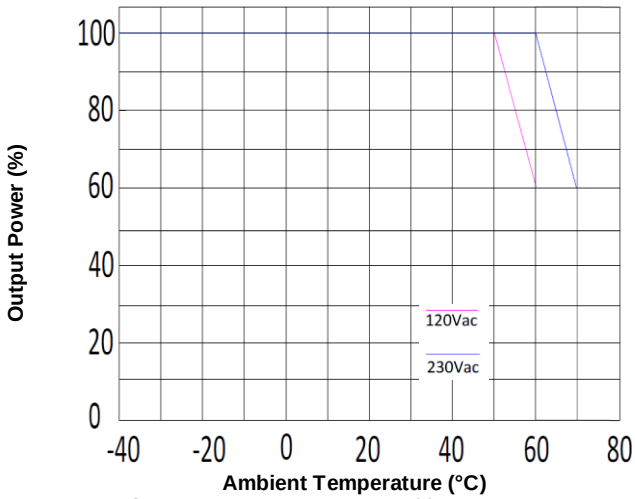


Figure 9: Output Power vs. Ambient Temperature

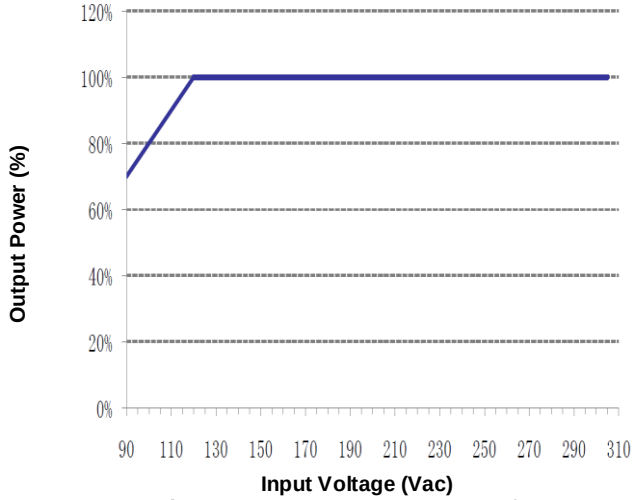


Figure 10: Output Power vs. Input Voltage

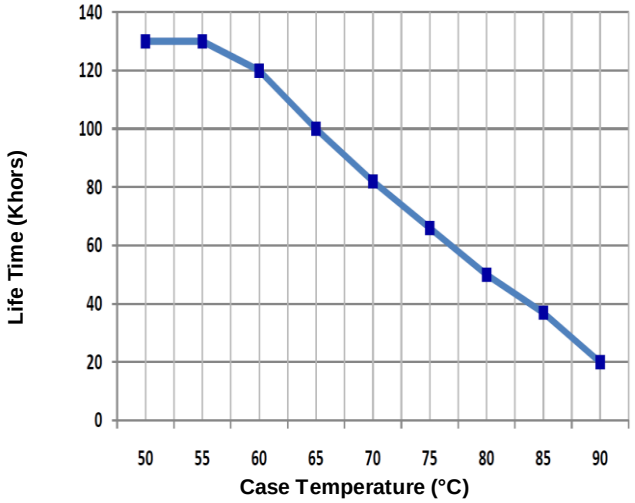


Figure 11: Life Time vs. Case Temperature

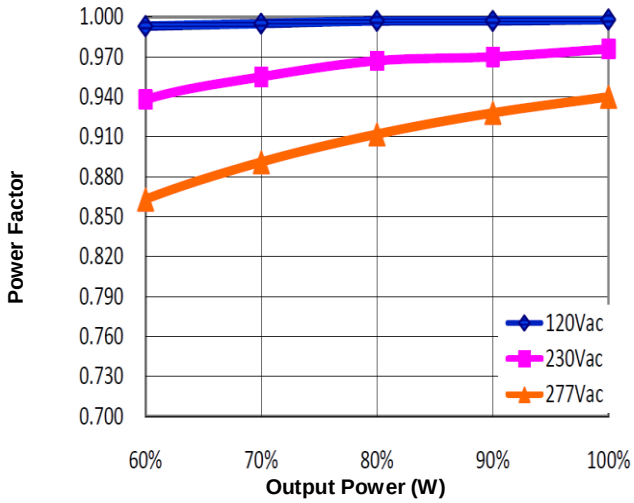


Figure 12: Power Factor vs. Output Power

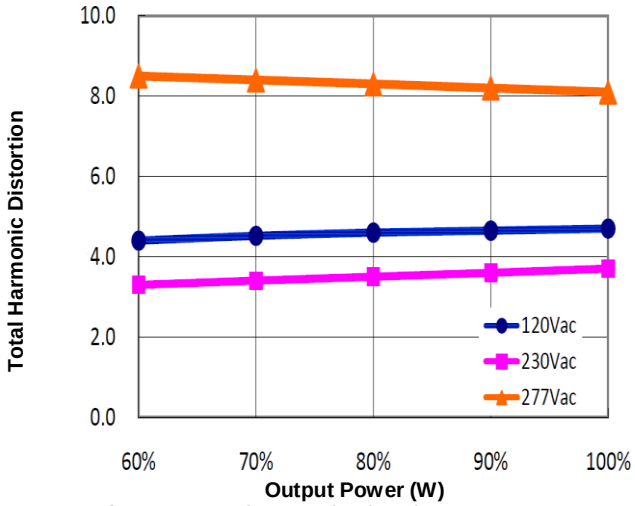


Figure 13: Total Harmonic Distortion vs. Output Power

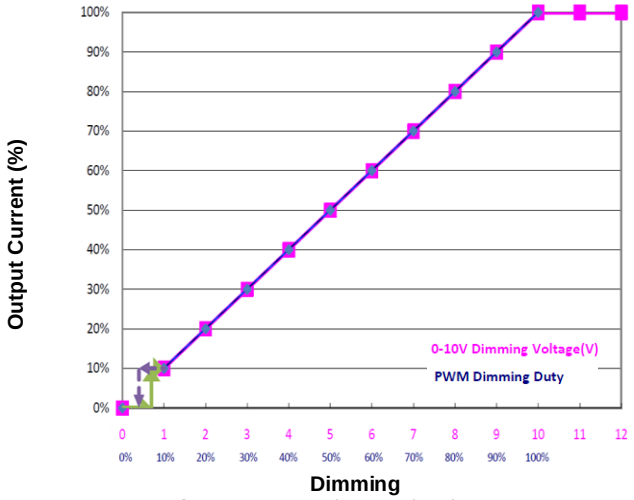
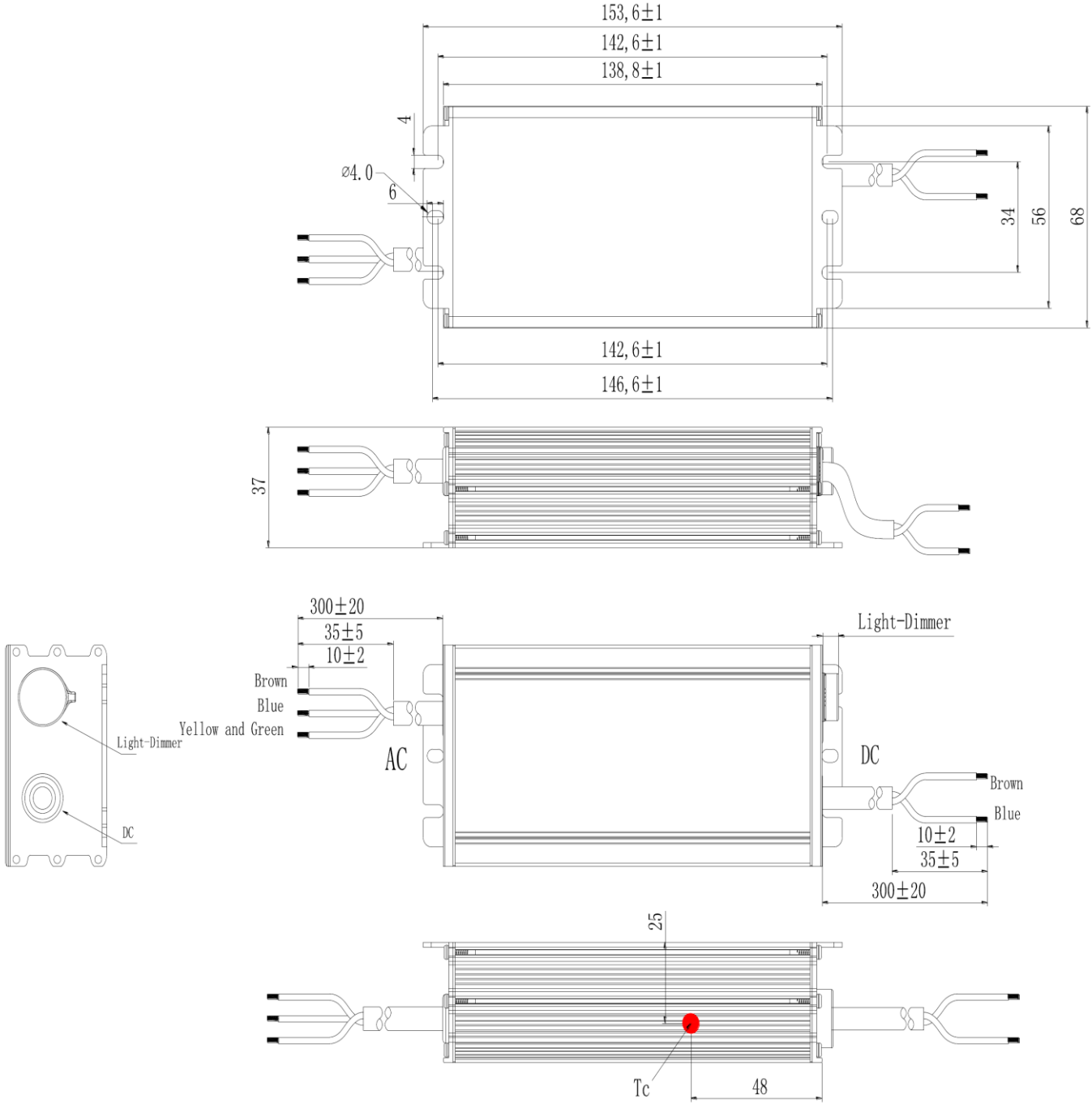


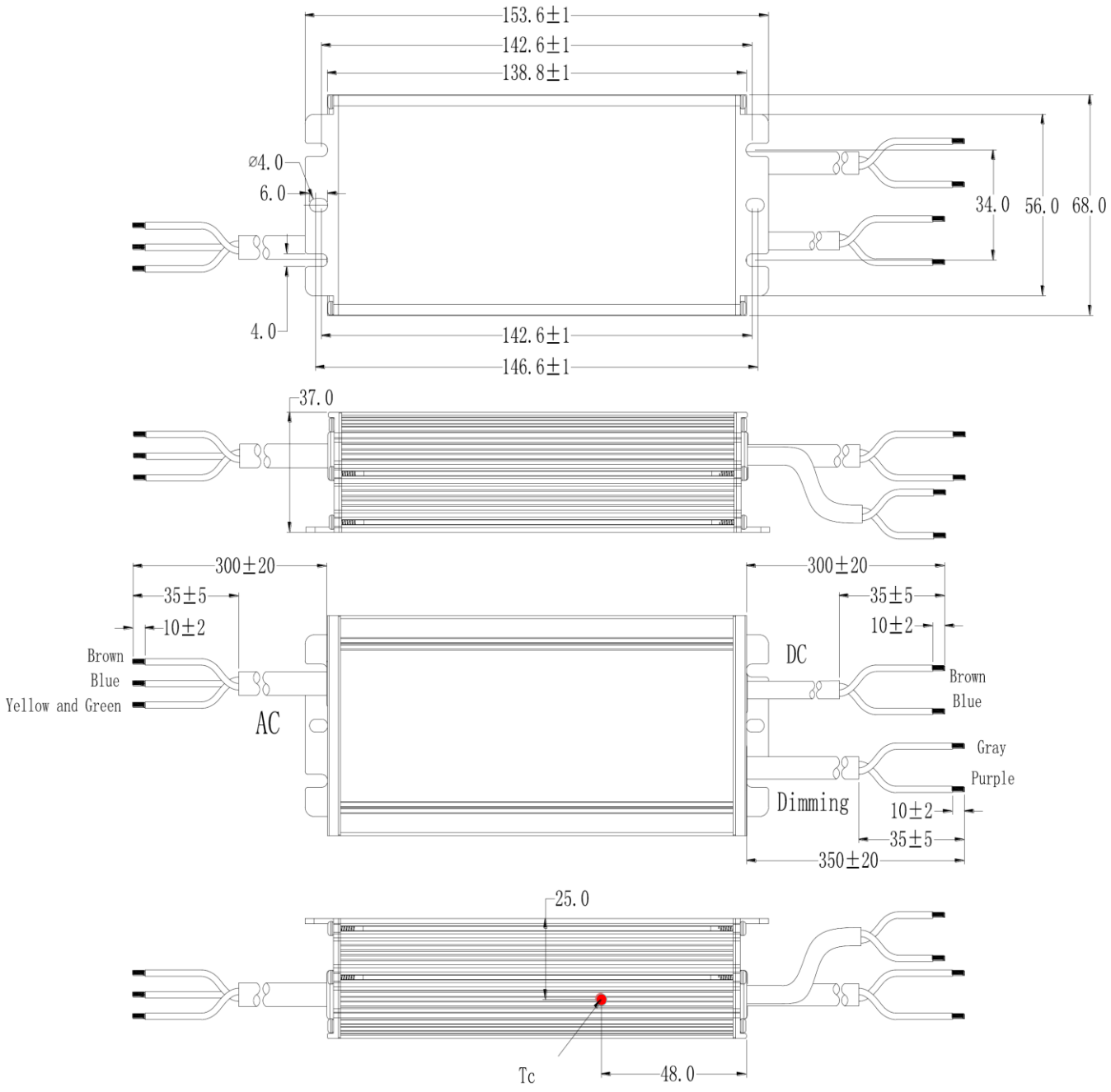
Figure 14: 0-10V/PWM Dimming Curve

Mechanical Drawing

LUB105V types (Unit: mm)



LUB105M 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