



Features

- Universal input voltage: 90~305Vac;
- Constant power design, programmable output;
- 2-in-1 dimmable: 0~10Vdc / PWM dimming / Dim-to-off ;
- (M types) Offline programming through dimming wire, (V types) Setting current with a built-in variable resistor;
- Surge protection: 4KV line-line, 6KV line-earth;
- Over-voltage, over-temperature, short-circuit protections;
- IP65 design for indoor and outdoor applications.

Application

- Suitable for industrial lighting.

Selection Guide

Part Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Full Power Current Adjustable Range (A)	Default Output Setting	Typical Efficiency [2]	Power Factor	
							120Vac	230Vac
LTA200X-38C	200	24~38	3.70~6.25	5.27~6.25	24~32V/6.25A	91%	0.99	0.98
LTA200X-54C		27~54	2.60~4.80	3.70~4.80	27~42V/4.80A	91%	0.99	0.98
LTA200X-68C		40~68	2.00~3.60	2.95~3.60	40~56V/3.60A	92%	0.99	0.98

Notes:

[1]. "X" in the Part Number can be either "M" or "V", M means programming through dimming wire, V means output current adjustable through potentiometer;

[2]. All specifications are measured at 230Vac input, full load and 25°C ambient temperature, if not otherwise noted.

Input Specifications

Parameter	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	230Vac input, full load	0.96	0.98	-	
Inrush current	230Vac input, full load			75	A
Leakage current	277Vac input, 50Hz	-	-	0.7	mA
THD	120-230Vac, 80%-100% load		5	10	%
	277Vac, 70%-100% load		-	20	%

Output Specifications

Parameter	Conditions	Min	Typical	Max	Unit
Output current tolerance	Full load	-5%	-	5%	Iset
Output current set point range (Iset) LTA200X-38C LTA200X-54C LTA200X-68C	(M types) Output current setting range: 10%~100%Imax	3.70 2.60 2.00	-	6.25 4.80 3.60	A
Output current set point range under full power LTA200X-38C LTA200X-54C LTA200X-68C		5.27 3.70 2.95	-	6.25 4.80 3.60	A
Total output current ripple (pk-pk)	20MHz BW, full LED load.	-	5	10	%
Startup overshoot current	120-277Vac, full LED load	-	-	10%	Iset
No load output voltage LTA200X-38C LTA200X-54C LTA200X-68C		-	-	50 70 80	V
Line regulation	25°C±10°C ambient temperature, full load, 115Vac - 277Vac input.	-	-	1	%
Load regulation	25°C±10°C ambient temperature, full load, 230Vac input, 60% - 100% of maximum output voltage.	-	-	3	%
Turn-on delay from input	120Vac input, full load	-		3	s
	230Vac input, full load	-	0.5	1	

General Specifications

Parameter	Conditions	Min	Typical	Max	Unit
Efficiency LTA200X-38C Io = 5.27A Io = 6.25A LTA200X-54C Io = 2.60A Io = 4.80A LTA200X-68C Io = 2.95A Io = 3.60A	120Vac input, full load, 25°C ambient temperature	86 86 87 87 88 88	88 88 89 89 90 90	-	%
Efficiency LTA200X-38C Io = 5.27A Io = 6.25A LTA200X-54C Io = 2.60A Io = 4.80A LTA200X-68C Io = 2.95A Io = 3.60A	230Vac input, full load, 25°C ambient temperature	89 88 90 89 90 90	91 90 92 91 92 92	-	%
Efficiency LTA200X-38C Io = 5.27A Io = 6.25A LTA200X-54C Io = 2.60A Io = 4.80A LTA200X-68C Io = 2.95A Io = 3.60A	277Vac input, full load, 25°C ambient temperature	89 89 90 90 90 90	91 91 92 92 92 92	-	%

Dimming Specifications

Parameter	Min.	Typ.	Max.	Unit	Remarks
0~10V absolute maximum voltage on the Vdim (+) Pin	-	10	-	V	
0~10V source current on Vdim(+)Pin	-	1	2	mA	
Dimming output range LTA200X-38C LTA200X-54C LTA200X-68C	0.62 0.48 0.36	-	6.20 4.80 3.60	A	
Recommended dimming range for 0-10V	0	-	10	V	Default 0-10V/PWM Dimming

LTA200X Series 90-305VAC Input Indoor/Outdoor Programmable LED Driver

PWM_in high level	9.7	-	10.3	V	
PWM_in low level	0	-	0.3	V	
PWM_in frequency range	200		2000	Hz	
PWM_in duty cycle	10	-	100	%	

Environment Requirements and Other Specifications

Parameter	Min.	Typ.	Max.	Unit	Remarks
Operating case temperature for safety Tc_s	-40	-	+90	°C	Full load
Operating case temperature for warranty Tc_w	-40	-	+70	°C	Full load
Storage temperature	-40	-	+85	°C	
Storage relative humidity	5	-	100	%	
Isolation leakage current	-	-	10	mA	Input-Output: 3.75KVac, 60s
	-	-	10	mA	Input -PE: 1.6KVac, 60s
	-	-	10	mA	Output -PE: 1.6KVac, 60s
Insulation resistance	50M	-	-	ohms	Input-Output, Input-PE, Output-PE, 500Vdc/60s/25°C /70%RH
Grounding resistance	-	-	0.1	ohms	25A/60s
MTBF (MIL-HDBK-217F)	-	200,000	-	hours	230Vac, 80% load
Lifetime	-	50,000	-	hours	230Vac, full load, 70°C case temperature, refer to lifetime VS Tc curve for details
Dimensions (D×H)mm	Φ146 x 74.1			mm	
Net weight	1250±100/PCS			g	
Package	L460 x W390 x H200mm; 8pcs/Ctn.				

Safety Specifications

Safety Category	Country / Territory	Standards
CE	Europe	EN61347-1, EN61347-2-13, EN62493
UL	USA	UL 8750
cUL	Canada	CSA C22.2 No.250.13

EMC Compliance Specifications

EMC Category	Country / Territory	Standards
CE	Europe	EN 55015, EN 61000-3-2, EN 61000-3-3
		EN61000-4-2,3,4,5,6,11
		EN 61547
FCC	USA	FCC part 15

NOTE: This LED driver meets the EMC specifications above; but EMC performance of a luminaire that contains this LED driver also depends on other devices connected to this driver and on the fixture.

Protection Specifications

Parameter	Notes
Over temperature protection	The output current will return to its set point when the over temperature condition is cleared..
Short circuit protection	The driver will enter hiccup/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.
Over voltage protection	The driver will enter protection mode and will resume normal operation when the fault condition is cleared.

Characteristic Curves

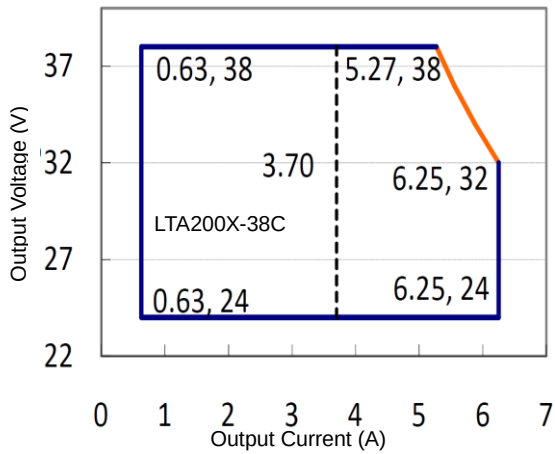


Figure 1: Output voltage vs. Output current

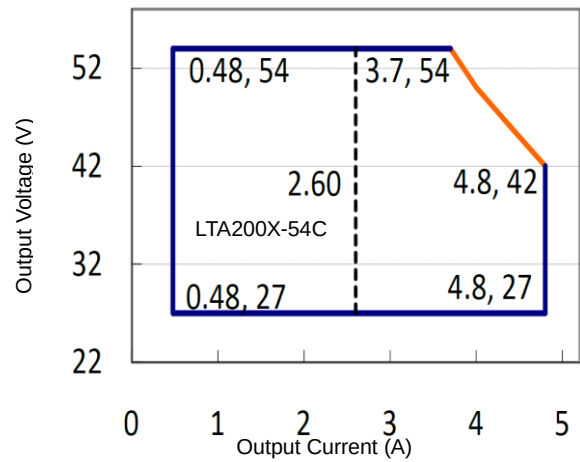


Figure 2: Output voltage vs. Output current

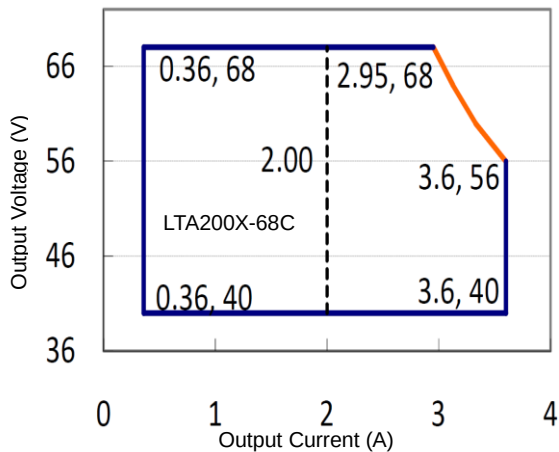


Figure 3: Output voltage vs. Output current

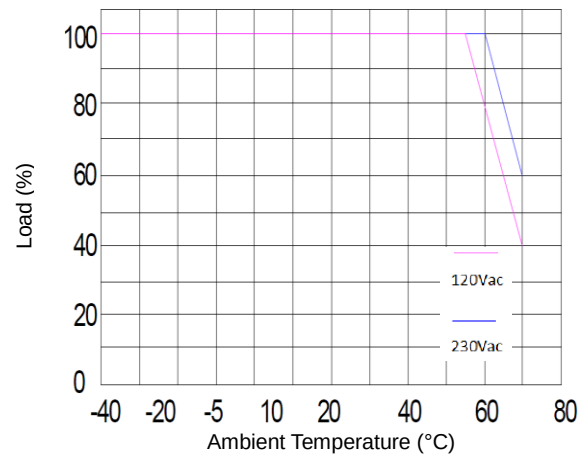


Figure 4: Output Power vs. Ambient temperature

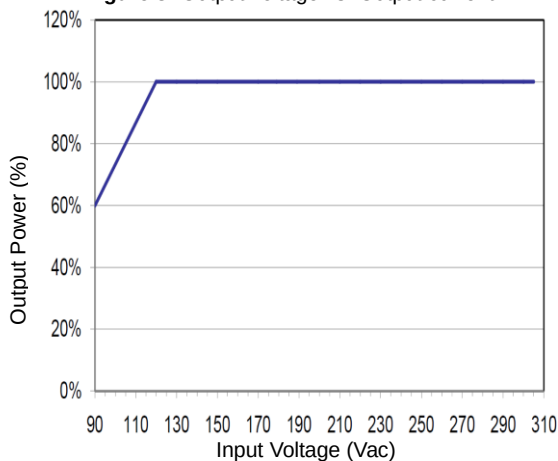


Figure 5: Output power vs. Input voltage

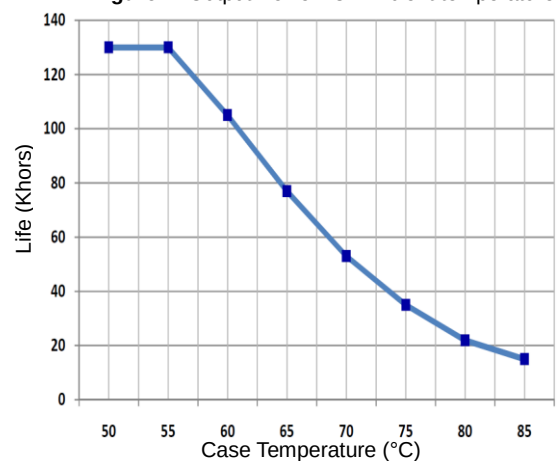


Figure 6: Life vs. Case temperature

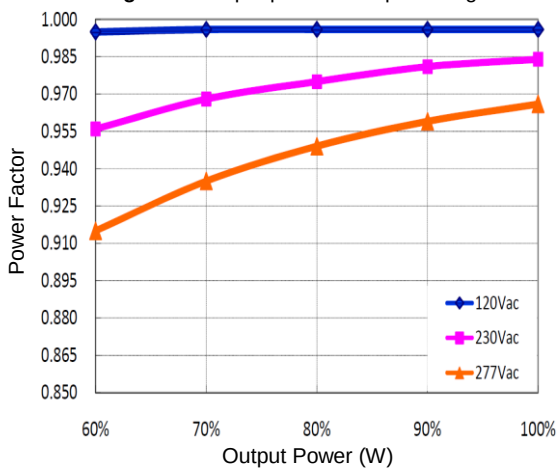


Figure 7: Power factor vs. Output power

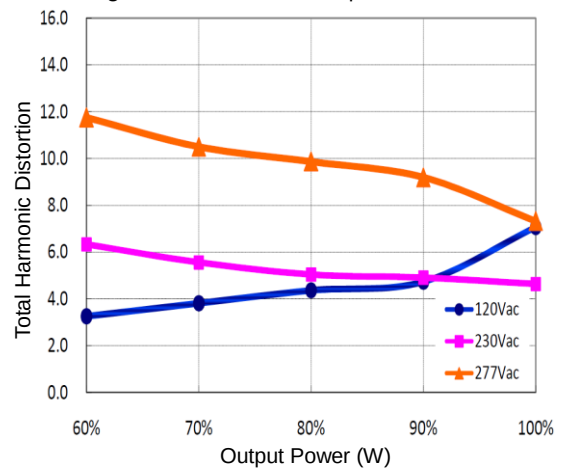


Figure 8: Total harmonic distortion vs. Output power

LTA200X Series 90-305VAC Input Indoor/Outdoor Programmable LED Driver

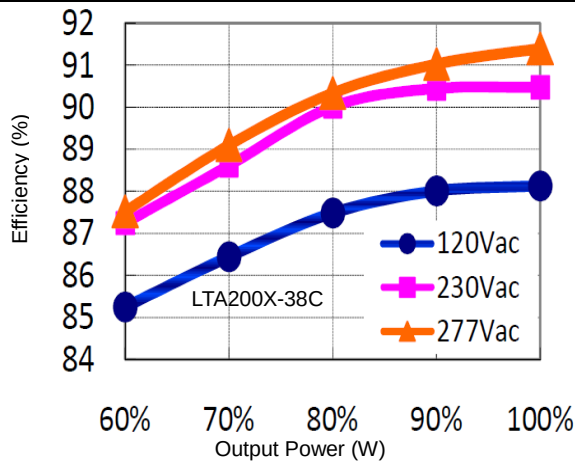


Figure 9: Efficiency vs. Output power (Io = 6.25A)

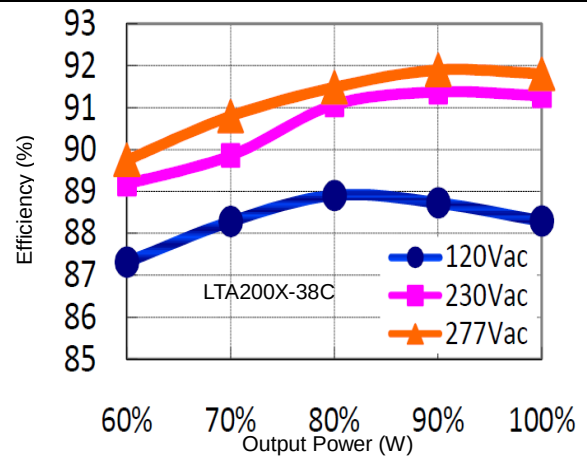


Figure 10: Efficiency vs. Output power (Io = 5.27A)

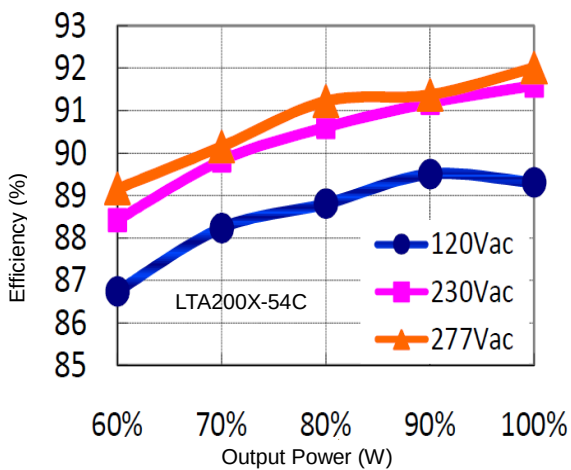


Figure 11: Efficiency vs. Output power (Io = 4.80A)

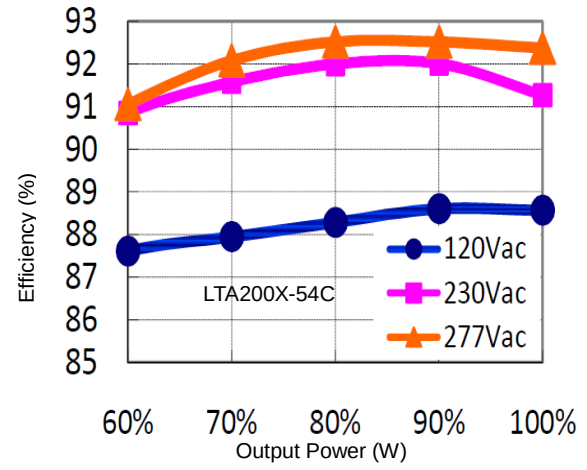


Figure 12: Efficiency vs. Output power (Io = 3.70A)

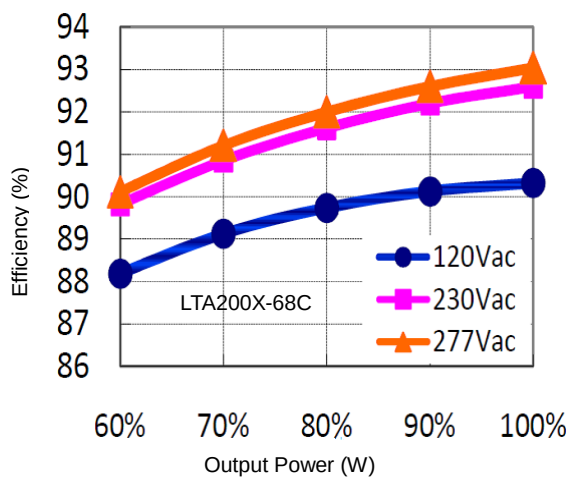


Figure 13: Efficiency vs. Output power (Io = 3.60A)

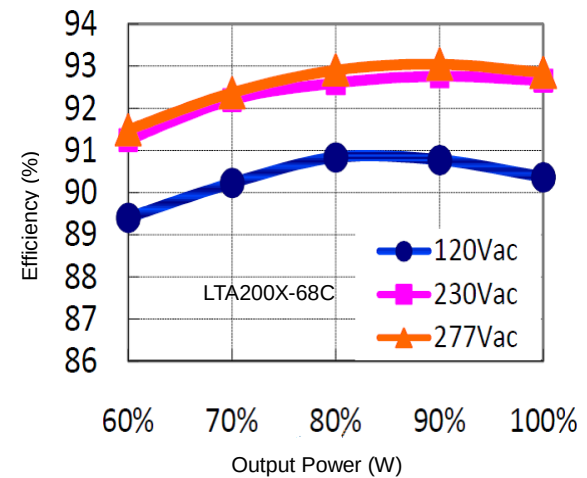
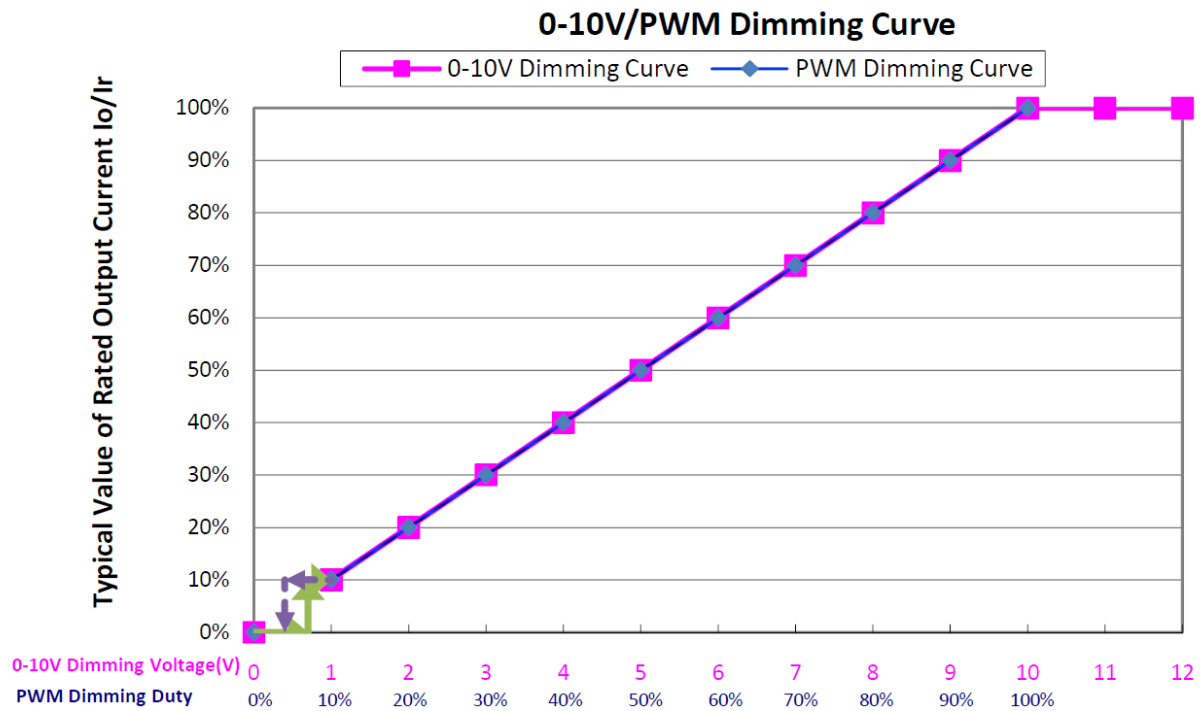


Figure 14: Efficiency vs. Output power (Io = 2.95A)

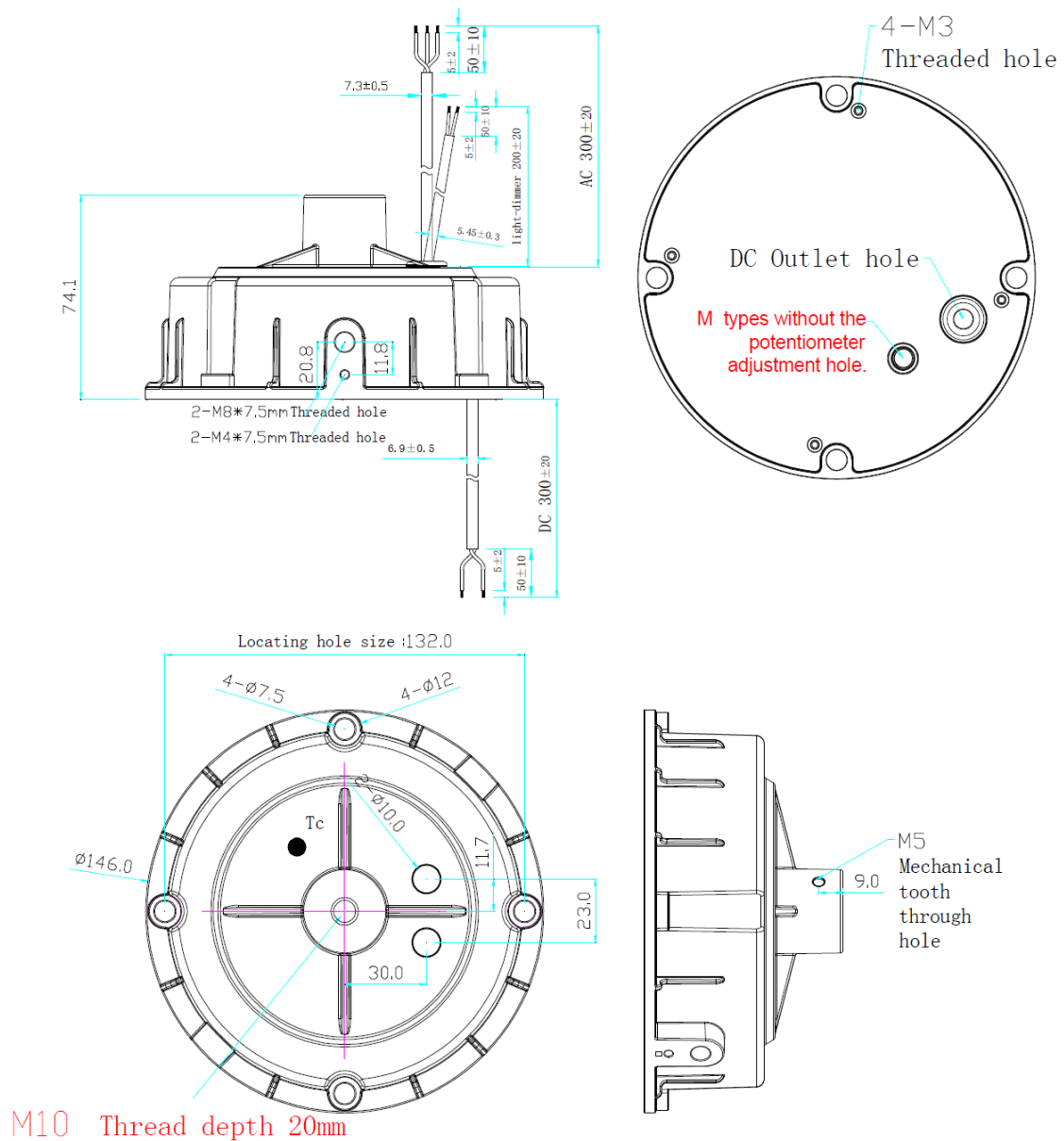
0-10V/PWM Dimming Curve



Note: Dim to off model is realized by decreasing the output voltage, the power supply still has residual voltage when dim to off, so the startup voltage of the lamp should be higher than residual voltage.

Mechanical Specifications

Unit: mm



Wire	Specification	Note
Input	H05RN-F 3*1.0mm ² OD=7.3mm L=300±20mm	for CE
	18AWG*3C SJOW OD=7.8mm L=300±20mm	for UL
Output	H05RN-F 2*1.0mm ² OD=7.0mm L=300±20mm	for CE
	18AWG*2C SJOW OD=7.3mm L=300±20mm	for UL
Dimming	22AWG*2C UL2733 OD=5.45mm L=200±20mm	X=M

Note: No dimming if X=V.

Optional Accessories

