



Product Features

- Input voltage range: 90~305 Vac;
- Constant power design, outputs programmable;
- Multiple dimming capability (D types): 1~10Vdc / PWM / resistance; (S types): 0~10Vdc / PWM / resistance/ Dim to Off);
- Protections: SCP / OVP / OTP;
- Suitable for dry / damp / wet locations;
- 5 years warranty

Application

Street Lighting, architecture lighting, industrial lighting, flood lighting, etc.

Model Encoding

M F E – 100C - 260 XY

①②③ ④ ⑤ ⑥

Serial Number	Item	Definition
①	Structure	M: metal case, P: plastic case, O: open frame (it can add module power supply, iron shell power supply, and etc.)
②	Type	C: constant current, V: constant voltage, P: constant current & constant voltage (other specifications can be defined later, such as I: Industrial power supply, R: Rainproof power supply, S: Customized power supply, F: non-isolated power, etc.)
③	Series Name	Product series, in alphabetical order
④	Rated Wattage	3 to 4 digits (such as 100 means 100w)
⑤	Output Voltage	Maximum voltage
⑥	Dimming	X : (X=D:wire dimming: 1-10V / PWM; X=S:wire dimming: 0-10V / PWM, Dim to Off X=N:No dimming) Y (Y=1-12v auxiliary power supply)

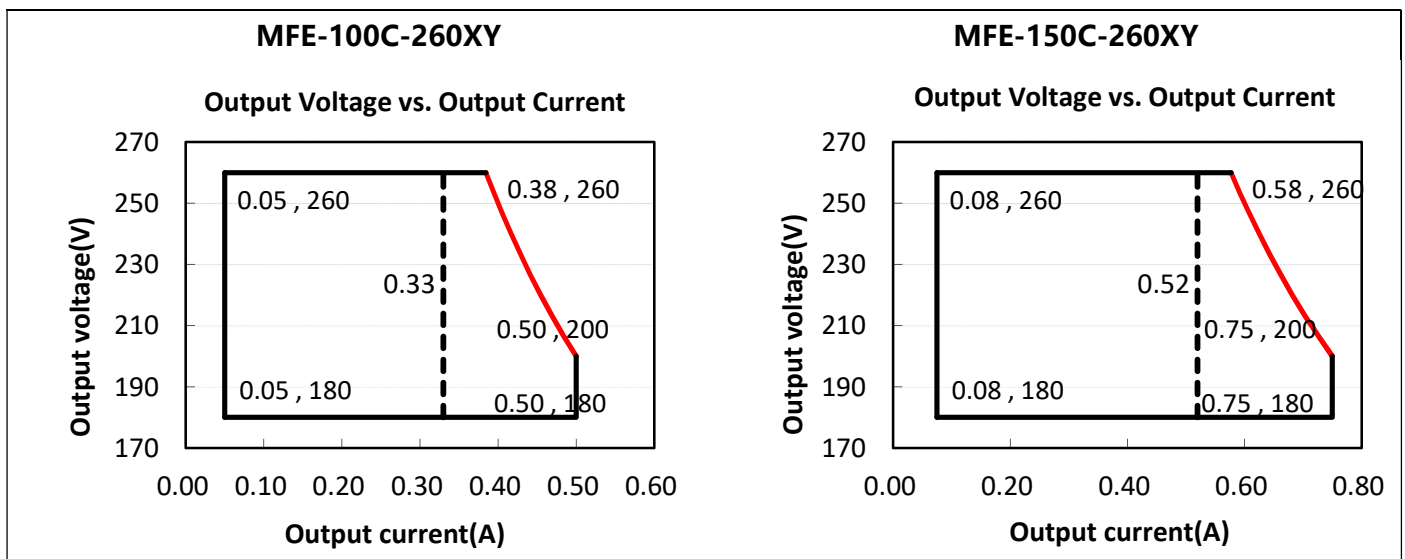
*Available Model

Dimming	Function	Notes
D	dimming: 1-10V / PWM	
D12	dimming: 1-10V / PWM, 12v auxiliary power supply	
S12	dimming: 0-10V / PWM, Dim to Off, 12v auxiliary power supply	
N	No dimming with resistor	

Specification					
Model		MFE-100C-260	MFE-150C-260	MFE-200C-260	MFE-240C-260
MFE-XXX-XXXX					
Input	Efficiency (230Vac)(Typ.)	96%			
	Voltage Range (V) Note1	90~305Vac, OR 127~ 430Vdc			
	Rated Voltage (V)	100~277Vac			
	Frequency Range (Hz)	47~63			
	Power Factor	PF>0.97/120VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load			
	THD	THD<10% when output loading ≥ 50% at 120VAC/230VAC THD<15% when output loading ≥ 50% at 277VAC (Take refer to THD vs. Load Curve for details)			
	AC Current (Max.)	1.2A MAX	1.8 MAX	2.4 MAX	2.9 MAX
	Inrush Current (Max.)	COLD START 75A(twidth=316μs measured at 50% Ipeak) at 230VAC, Per NEMA410			
	Leakage Current (Max.)	0.75mA at 277Vac/60Hz			
	MAX. No. of PSUs on 16A Circuit Breaker	3 units (circuit breaker of type B) / 6 units (circuit breaker of type C) at 230VAC			
Output	Output Voltage Range (V)	180-260	180-260	180-260	180-260
	Rated Current (A)	0.38-0.5	0.57-0.75	0.76-1.0	0.92-1.2
	Rated Power (W)	100	150	200	240
	Output Current Setting Range/ Dimming Range (A)	0.05-0.5	0.075-0.75	0.1-1.0	0.12-1.2
	Resistance setting range (A)	0.33-0.5	0.52-0.75	0.7-1.0	0.84-1.2
	Initial current (A)	0.42	0.63	0.84	1.0
	Ripple Current (Typ.)	10% of Io_max. ((PK-AV) /AV) with LED loading mode and full load)			
	Current Tolerance	<5%			
	Line Regulation	<5%			
	Load Regulation	<5%			
	Setup Time	<2s, at 120Vac; <0.5s, at 230Vac			
	DC AUX Power	12V Output Voltage Tolerance: ±10%; Max Output Power (S12) : 2.4W, The instantaneous maximum current is 200Ma; Max Output Power(D12): 0.6W, The instantaneous maximum current is 50mA			
Protection	Short Circuit Protect (SCP)	Hiccup mode, recover automatically with short circuit removed.			
	Over Voltage Protect (OVP)	Voltage limiting. Output current is decreased if the required loading voltage is higher than MAX. output voltage.			
	Over Temperature Protect (OTP)	Decrease the output current,recover automatically once the fault condition is removed.			

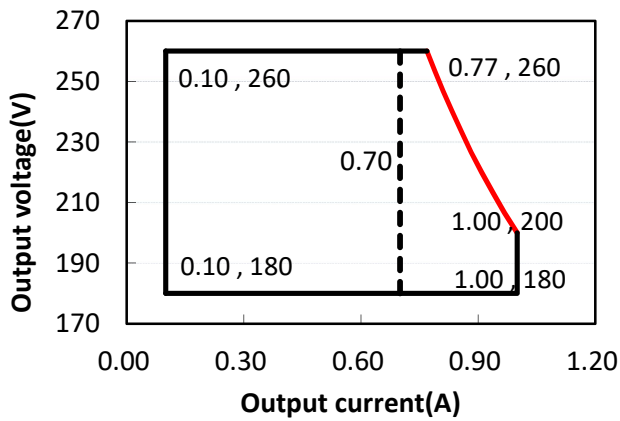
Environmental	Working Temperature	-40~+55°C(Refer to 'Derating Curve')
	Max. Case Temperature (Tc)	90°C max
	Working Humidity	20~95%RH
	Storage Temp., Humidity	-40~+85°C, 10-95%RH
	Vibration	10-500Hz, 5G 12min/cycle, period for 72min each along X、Y、Z axes
Safety & EMC	Safety Standard	UL8750, CSA C22.2 No. 250.13-12; ENEC EN61347-1, EN61347-2-13 independent, EN62384; GB19510.1,GB19510.14
	Withstand Voltage	I/P-FG:1.65kVac, O/P-FG:1.5kVac (remove line (G1) from metal case)
	Isolation Resistance	I/P-FG, O/P-FG: 100M Ohms (500VDC / 25°C/ 70% RH)
	EMC Emission	FCC Part 15 Class B/ EN55015, EN61000-3-2 Class C, EN61000-3-3
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61547 (Surge: L-N: ±6kV, L,N-FG: ±10kV)
Others	MTBF	200000Hrs @25°C±10°C ambient temperature, 230Vac,80% load (MIL-HDBK-217F)
	Lifetime	50000Hrs@80°C case temperature (Refer to 'Lifetime Curve')
	Dimension	164*66.2*36.8MM
	Weight (Typ.)	750±50g/PCS
Reliability	Screen test (1)	336Hrs aging test @95°C & full load without temperature protection
Notes: 1. The test results are based on 14 samples with OTP moved 2. All the data are measured under room temperature if not specified.		

OPERATING AREA I-V



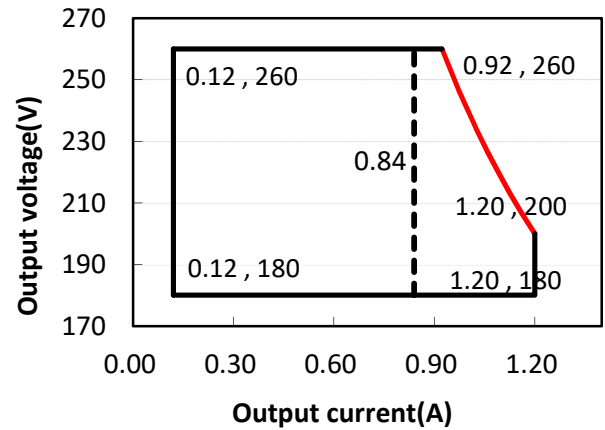
MFE-200C-260XY

Output Voltage vs. Output Current

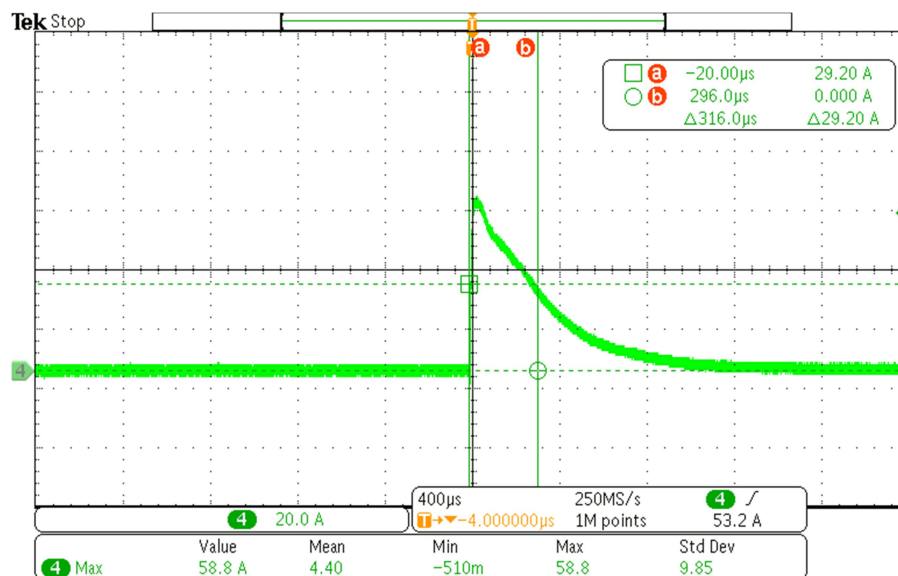


MFE-240C-260XY

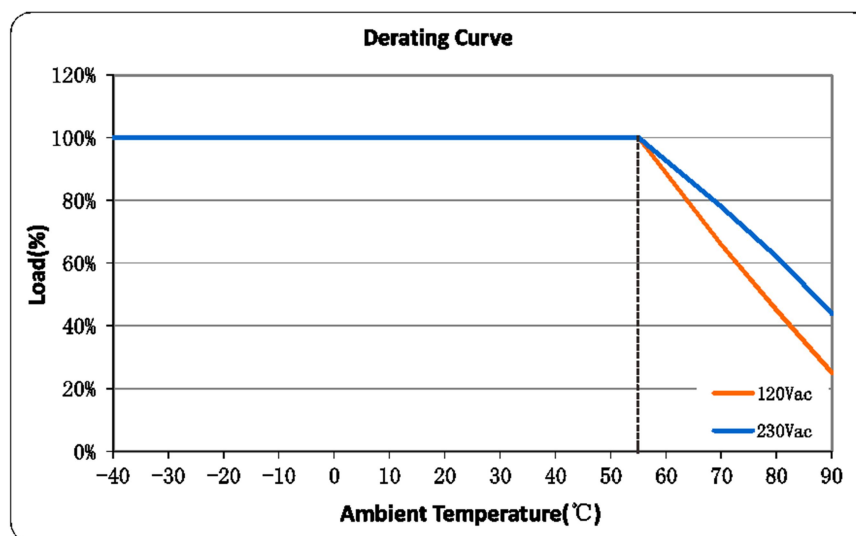
Output Voltage vs. Output Current



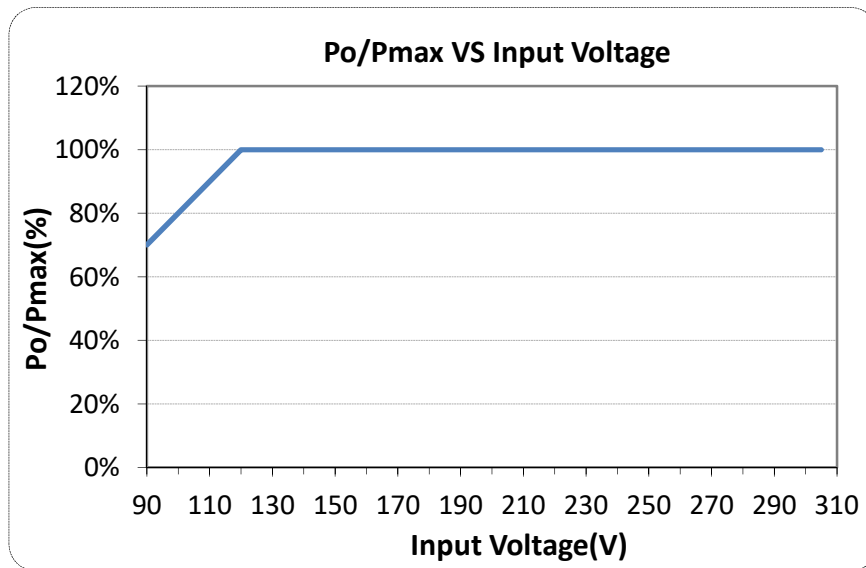
INRUSH CURRENT WAVEFORM



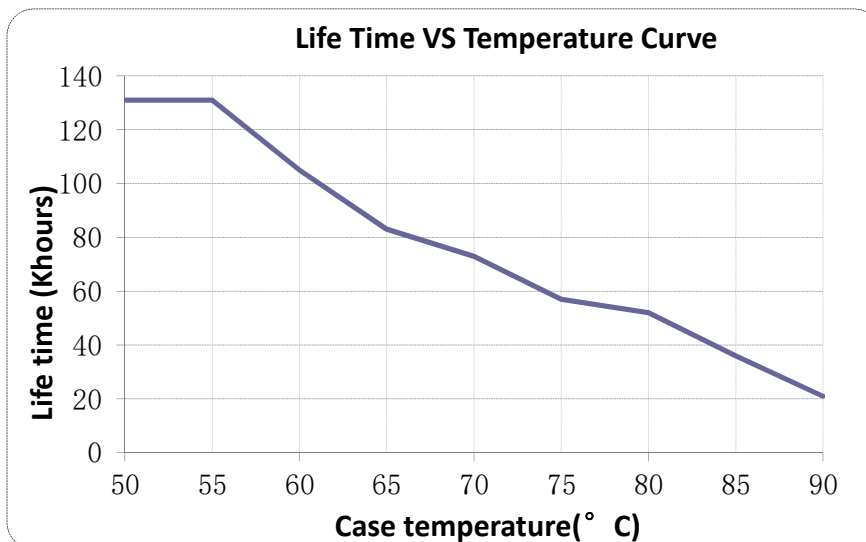
DERATING CURVE



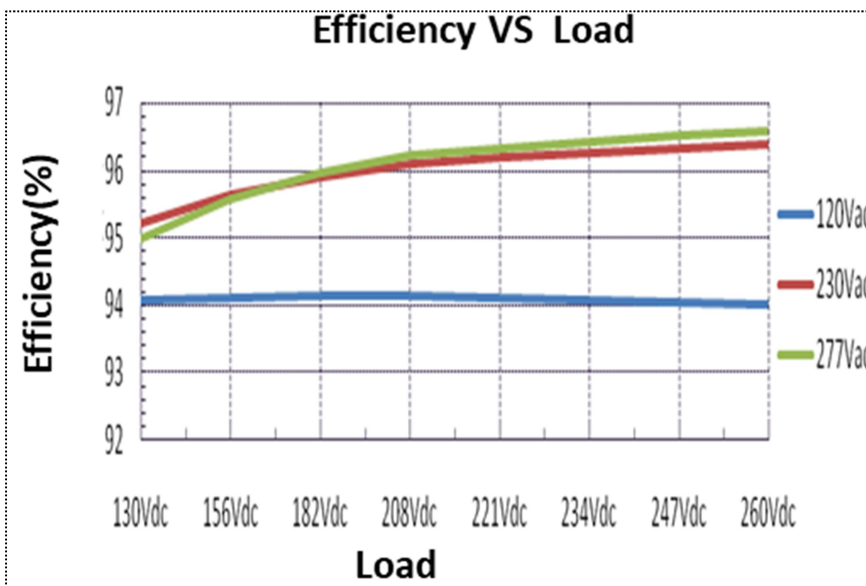
OUTPUT POWER VS INPUT VOLTAGE



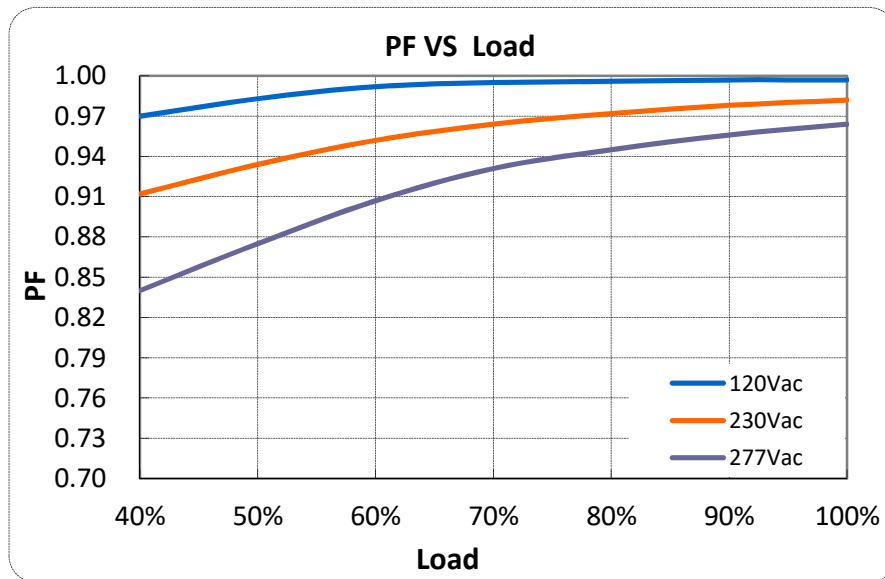
LIFETIME VS CASE TEMPERATURE



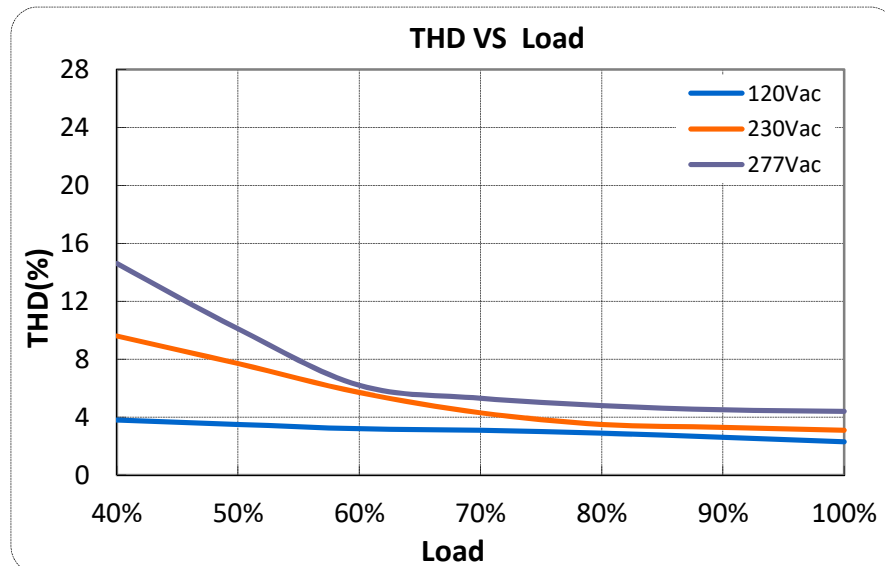
EFFICIENCY VS LOAD



POWER FACTOR VS LOAD

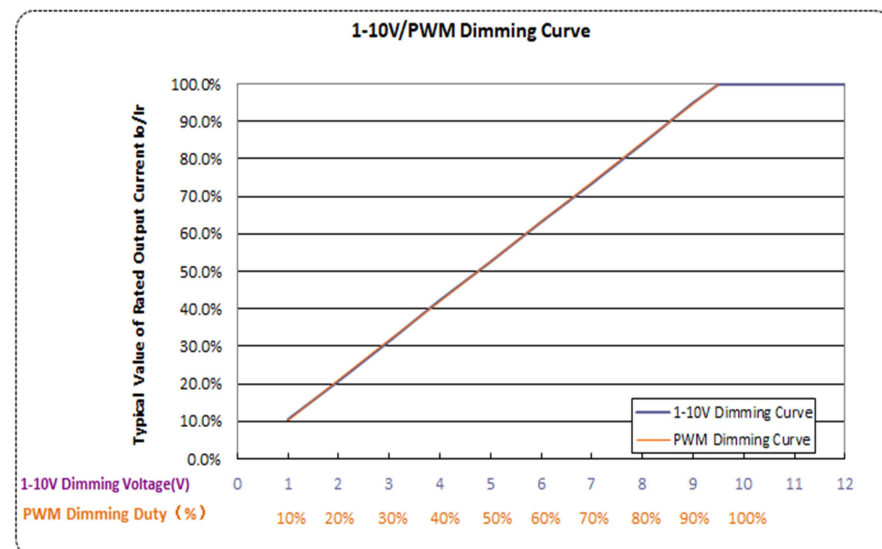


TOTAL HARMONIC DISTORTION

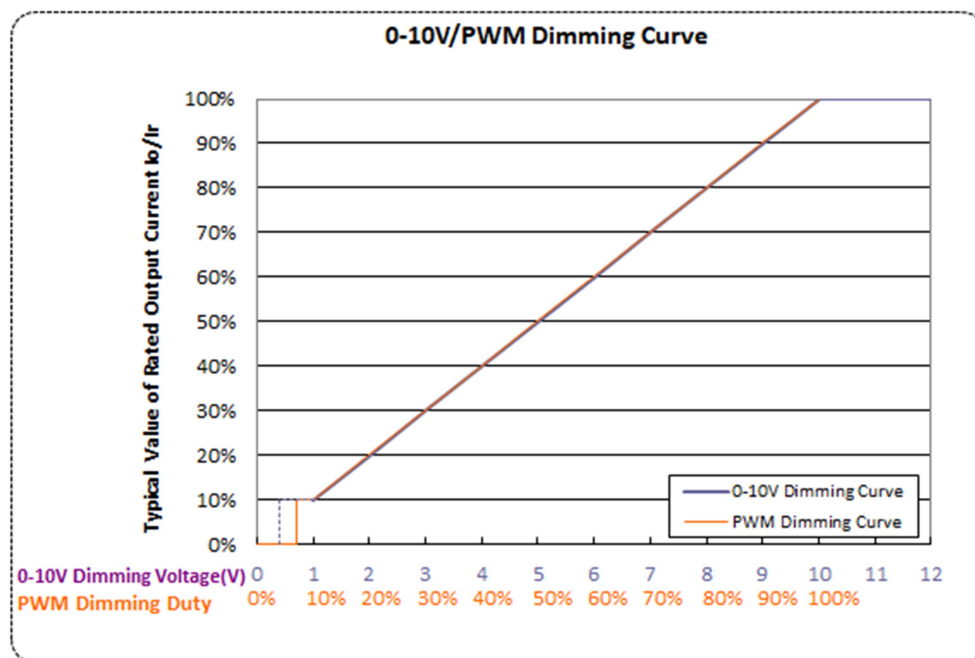


DIMMING CURVE

1-10V/PWM Dimming Curve



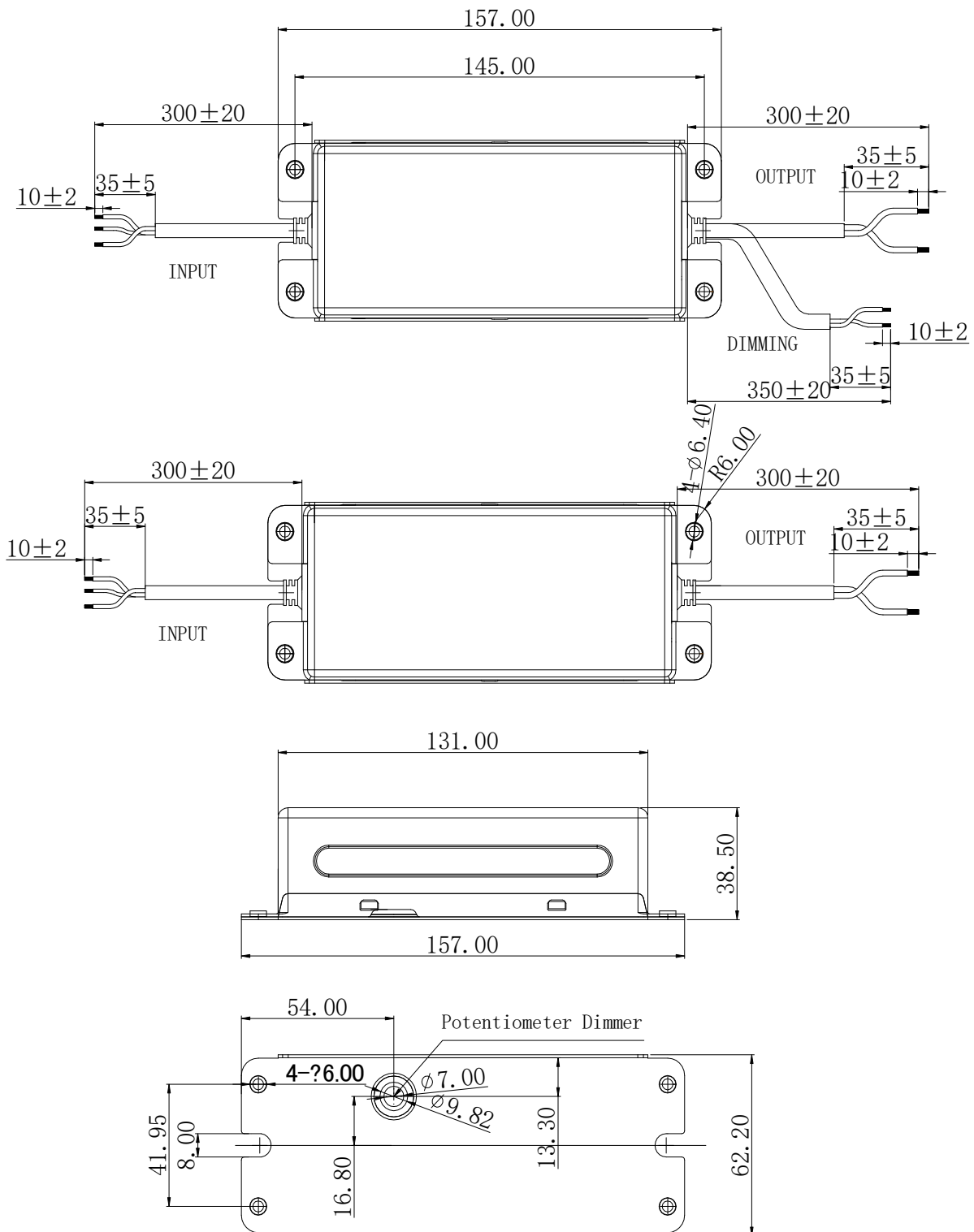
0-10V/PWM Dimming Curve



PWM DIMMING

Mode	Electrical Interface	
PWM Dimming	Frequency	400Hz~1000Hz
	High Voltage Level	10V
	Low Voltage Level	0~0.3V
	Open Circuit of Dimming	100% output current
	Linear Dimming Range	10%~100%Ir
	Short Circuit of Dimming	The output current is 10%Ir

Mechanical Outline



Wire	Specification	Note
Input	CCC+VDE H05RN-F 3*1.0mm ² L=300mm	For CE
	L (BROWN) N (BLUE) G (Y/G)	
	18AWG*3C SJTW L=300mm	For UL
	L (BLACK) N (WHITE) G (GREEN)	

Output	CCC+VDE H05RN-F 2*1.0mm ² L=300mm	For CE
	+ (BROWN) - (BLUE)	
	18AWG*2C SJTW L=300mm	For UL
	+ (RED) - (BLACK)	
Dimming	22AWG*2C UL21996 L=350mm	For (S Type)
	DIM+ (PURPLE) DIM- (PINK)	
	22AWG*3C UL21996 L=350mm	For (S12 Type)
	DIM+ (PURPLE) DIM- (PINK) 12V(Yellow)	

REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	—	Datasheets Release	2023-07-13	