Product Features

- Input voltage range: 180~305Vac;
- Constant power design, outputs programmable;
- Output current reconfigurable by infrared controller;
- 3-in-1 dimmable (M types): 0~10Vdc / PWM signal / Timer dimming;
- Surge protection: 5KV line-line, 10KV line-earth;
- Protections: SCP / OVP / OTP;
- IP67 design for indoor and outdoor applications;
- Suitable for dry / damp / wet locations;
- 5 years warranty

Application

- Suitable for LED architecture lighting, industrial lighting, flood lighting, and roadway lighting, etc.

DESCRIPTION

The EDC-105W series is 105W outdoor programmable LED driver that operates in constant current model. Monitored by an infrared based programming device, the fully programmed drivers offer all dimming options and a wide range of output current in a single driver, which deliver maximum flexibility with customized operating settings and intelligent control options for lighting manufacturers, as one driver can be programmed for many different luminarie designs. LDP provides built-in timer dimming schedules further increasing the energy savings and CO_2 reductions achieved with LED lighting. It also helps clients to improve the management of logistics and stock. The compact metal case and high efficiency enables the driver to operating with high reliability, and extending product lifetime. Overall protection is provided against lightening surge, output over voltage, short circuit, and over temperature, to ensure low failure rate.

MODELS

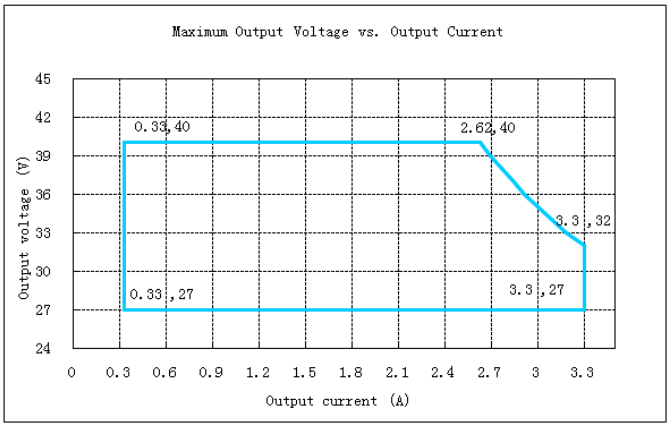
Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Full Power Current Adjustable Range (A)	Default Output Setting	Typ. Eff.	THD	PF
EDC-105X040	105	27-40	0.33~3.30	2.62~3.30	27~32V/3.3A	89%	10%	0.97
EDC-105X050	105	27-50	0.25~2.50	2.10~2.50	27~42V/2.5A	89%	10%	0.97

Notes: [1].X=M, programmable output with 0-10V/PWM/timing dimming; X=R, programmable output with timing dimming.

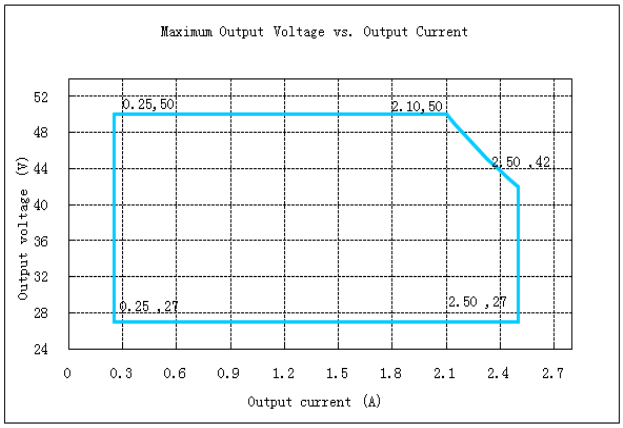
[2] .All specifications are measured at 25℃ ambient temperature, if no specific note.

OPERATING AREA I-V

EDC-105X040



EDC-105X050



INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	180Vac	200-277Vac	305Vac	
Input Frequency	47Hz	50/60	63Hz	
Leakage Current	-	-	0.75mA	277Vac/50Hz
Input AC Current	-	-	0.80A	200-277Vac & full load
Inrush Current	-	-	75A	230Vac & full load
Power Factor	0.96	0.97	-	230Vac & full load
THD	-	10%	15%	230Vac & full load

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Iset	-	5%Iset	Full load
Output Current Setting Range (Iset) EDC-105X040 EDC-105X050	 0.33A 0.25A	-	 3.30A 2.50A	
Output Current Setting Range with Constant Power EDC-105X040 EDC-105X050	 2.62A 2.10A	-	 3.30A 2.50A	
Total Output Current Ripple (pk-pk)		10%	16%	230Vac & full Load ,load is LED, ripple is different with difference LED load.
Startup Overshoot Current		-	10%	200~277Vac & 100% Load, load is LED
No Load Output Voltage EDC-105X040 EDC-105X050	 -	 -	 50V 60V	
Line Regulation	-	-	1%	25℃±10℃ ambient temperature, input voltage changes from180Vac to 305Vac.
Load Regulation	-	-	3%	25℃±10℃ambient temperature, 230Vacinput, load changes from 50% to 100%.
Turn-on Delay Time	-	-	3S	200~277Vac,100% load

GENERAL SPECIFICATIONS

Parameter		Min.	Typ.	Max.	Notes
Efficiency @230Vac EDC-105X040 Io=2.62A Io=3.30A EDC-105X050 Io=2.10A Io=2.50A		 87% 86% 87% 86%	 89% 88% 89% 88%		Measured at full load and 25℃ambient temperature
Efficiency @277Vac EDC-105X040 Io=2.62A Io=3.30A EDC-105X050 Io=2.10A Io=2.50A		 87% 86% 87% 86%	 89% 88% 89% 88%		Measured at full load and 25℃ambient temperature
Dielectric Strength	Input-Output	-	3750Vac	-	10mA/60S
	Input-PE	-	1600Vac	-	
	Output- PE	-	1600Vac	-	
Grounding Resistance		-	-	0.1Ω	25A/60S
Insulation Resistance		50MΩ	-	-	Input-Output, Input-PE, Output-PE, 500Vdc/60S/25℃/70%RH
MTBF		-	200000 Hours	-	230Vac, (MIL-HDBK-217F)
Lifetime		-	50000 Hours	-	230Vac,70℃case temperature, refer to lifetime VS Tc curve for details
Operating Case Temperature for Safety Tc_s		-40℃	-	+85℃	
Operating Case Temperature for Warranty Tc_w		-40℃	-	+60℃	
Storage Temperature		-40℃	-	+85℃	Humidity: 20% to 95% RH
Dimensions (L×W×H)mm		164*68*43.5			
Net Weight		755±50g/PCS			
Package		L500mm*W315mm*H150mm ; 10pcs/Ctn.			

DIMMING

Parameter		Min.	Typ.	Max.	Notes
0~5V/0~10VAbsolute Maximum Voltage on the Vdim (+) Pin		-	5V/10V	-	
0~5V/0~10V Source Current on Vdim(+)Pin		-	-	2mA	
Dimming Output Range	EDC-105X040 EDC-105X050	10%Imax	-	100%Imax	Imax=3.30A Imax=2.50A
	EDC-105X040 EDC-105X050	0.33A 0.25A	-	3.30A 2.50A	
Recommended Dimming Range for 0-5V		0V	-	5V	Default 0-10V/10V PWM Dimming
Recommended Dimming Range for 0-10V		0V	-	10V	
PWM_in High Level		9.7V	-	10.3V	
PWM_in Low Level		0V	-	0.3V	
PWM_in Frequency Range		250Hz		1000Hz	
PWM_in Duty Cycle		1%	-	99%	

SAFTY STANDARDS

Safety Category	Country / Territory	Standards
CCC	China	GB19510.1, GB19510.14
CE	China	EN61347-1, EN61347-2-13
CB	CB Countries	IEC61347-1, IEC61347-2-13
BIS	India	IS 15885(PART 2/SEC 13)
UL	USA	UL 8750
CUL	Canada	CSA C22.2 No.250.13
KC	South Korea	K61347-1, K61347-2-13, K62384
PSE	Japan	J61347-1, J61347-2-13
SAA	Australia	AS/NZS IEC 61347-2-13
		AS/NZS 61347.1

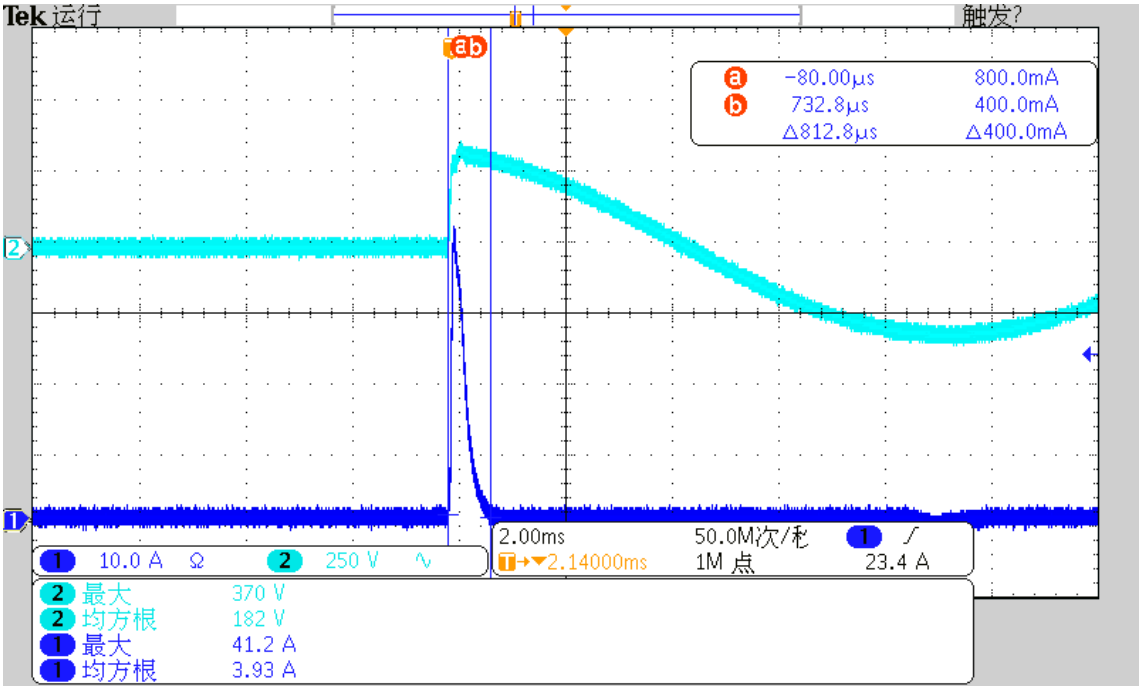
EMC COMPLIANCE

EMC Category	Country / Territory	Standards
CCC	China	GB 17743, GB 17625.1
CE	Europe	EN 55015, EN 61000-3-2, EN 61000-3-3
		EN61000-4-2,3,4,5,6,8,11
		EN 61547
KC	South Korea	K61547
		K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

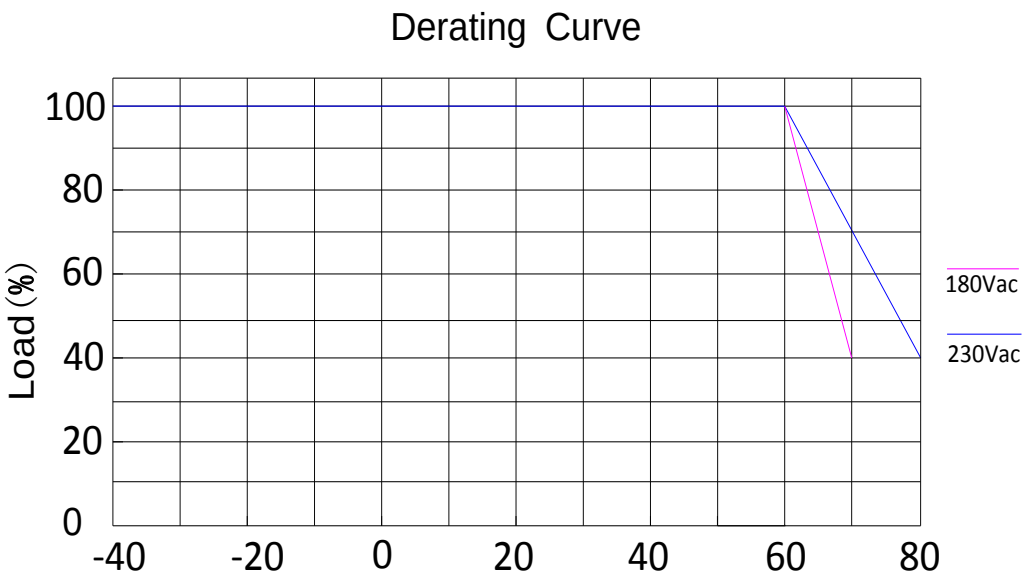
NOTE:

This LED driver meets the EMI specifications above, but EMI performance of a luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

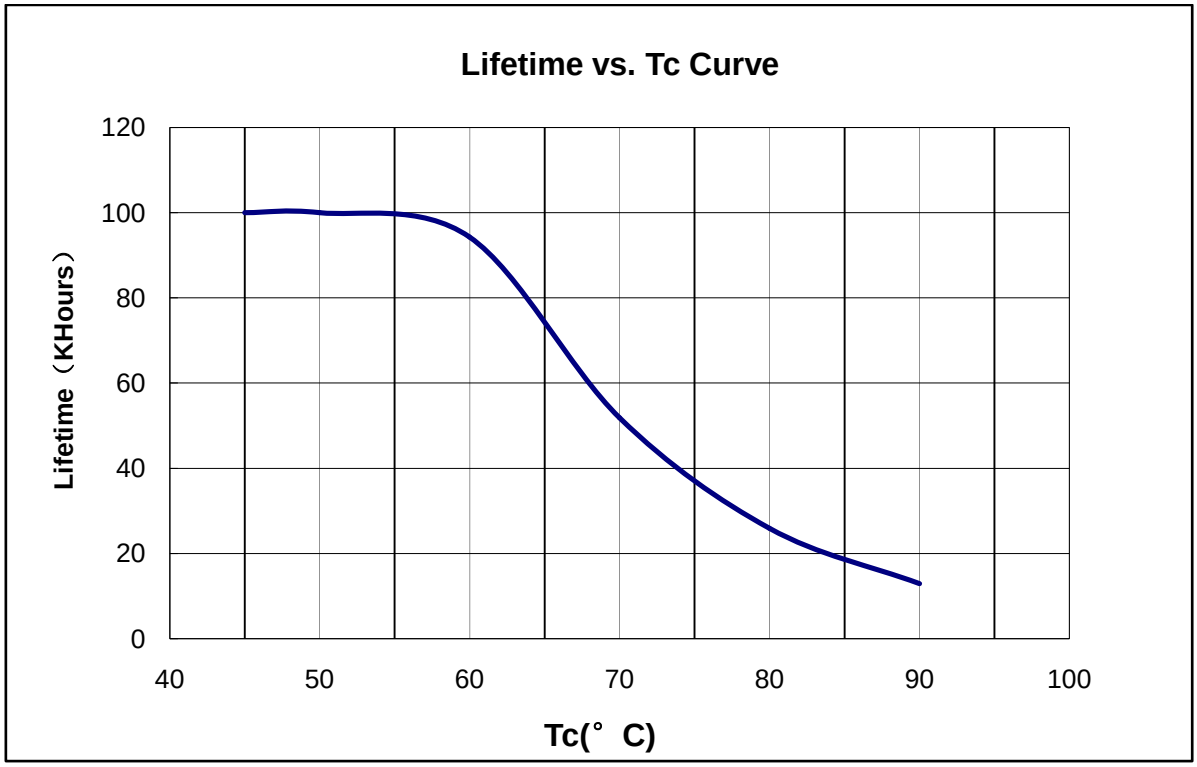
INRUSH CURRENT WAVEFORM



DERATING CURVE

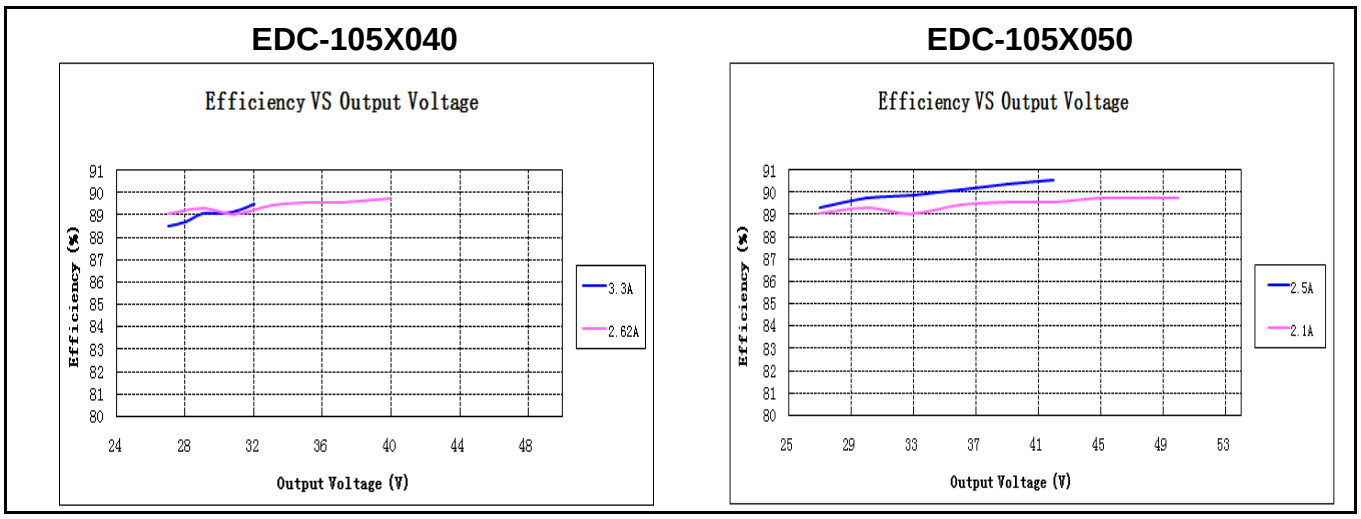


LIFETIME VS CASE TEMPERATURE

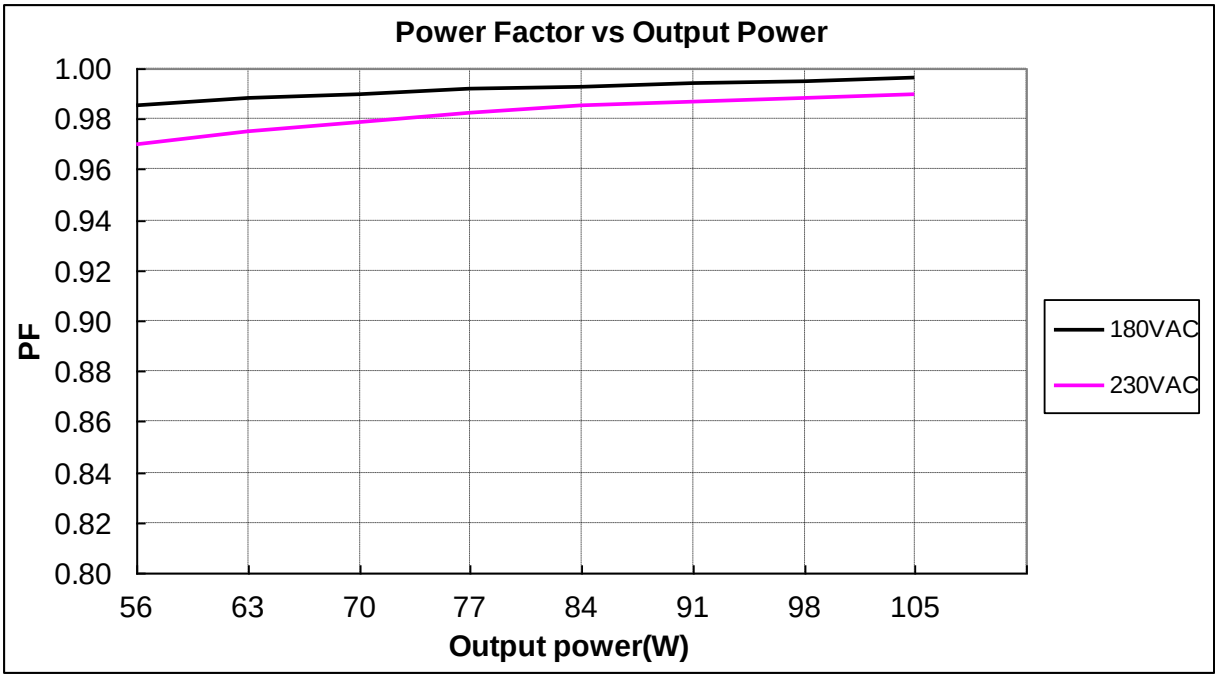


EFFICIENCY VS LOAD

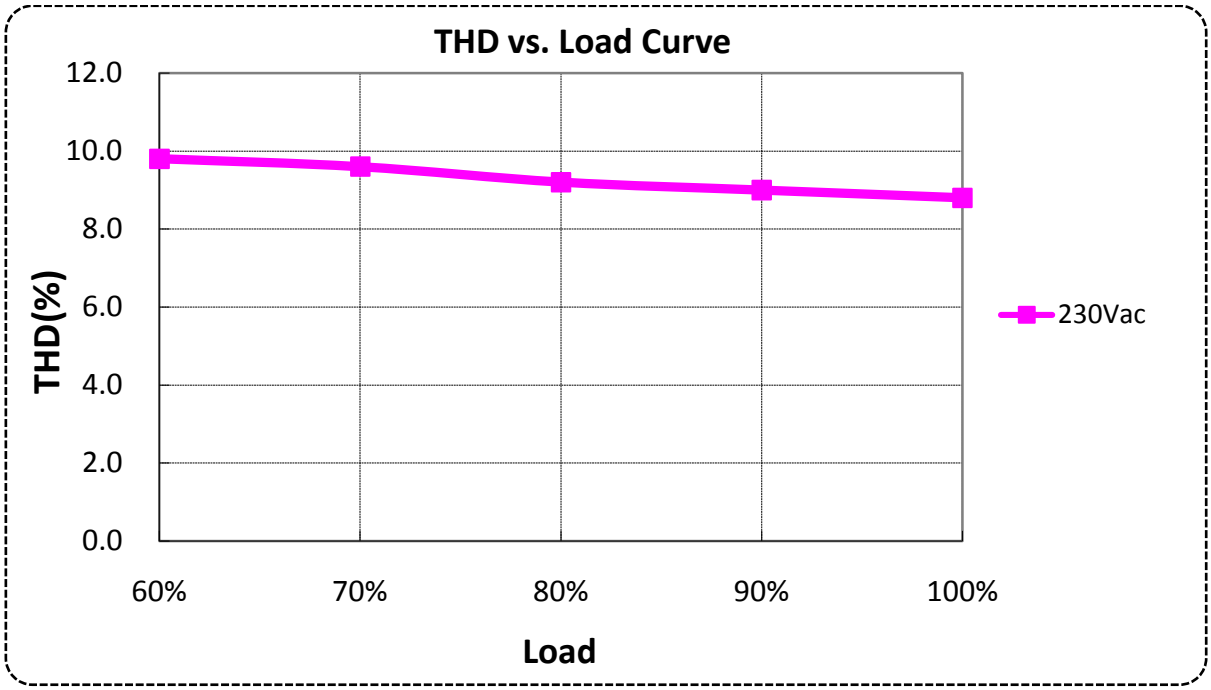
Vin＝230Vac　Ta=25℃



POWER FACTOR VS LOAD



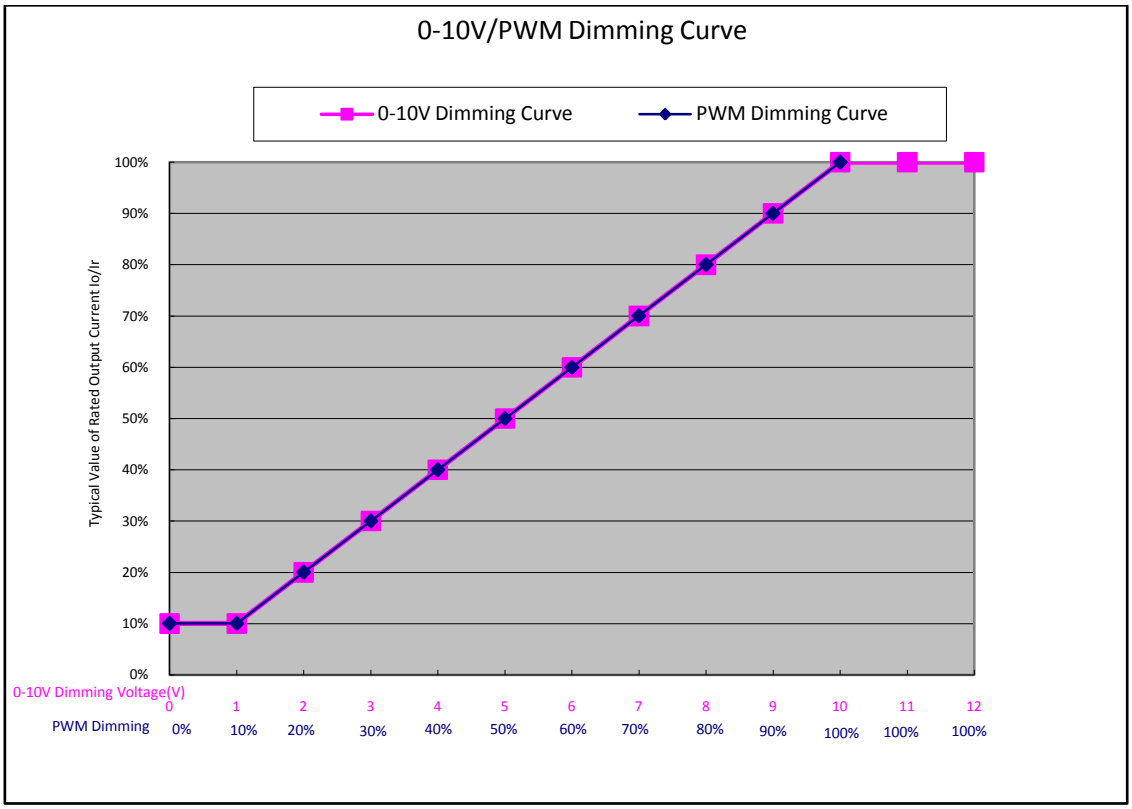
TOTAL HARMONIC DISTORTION



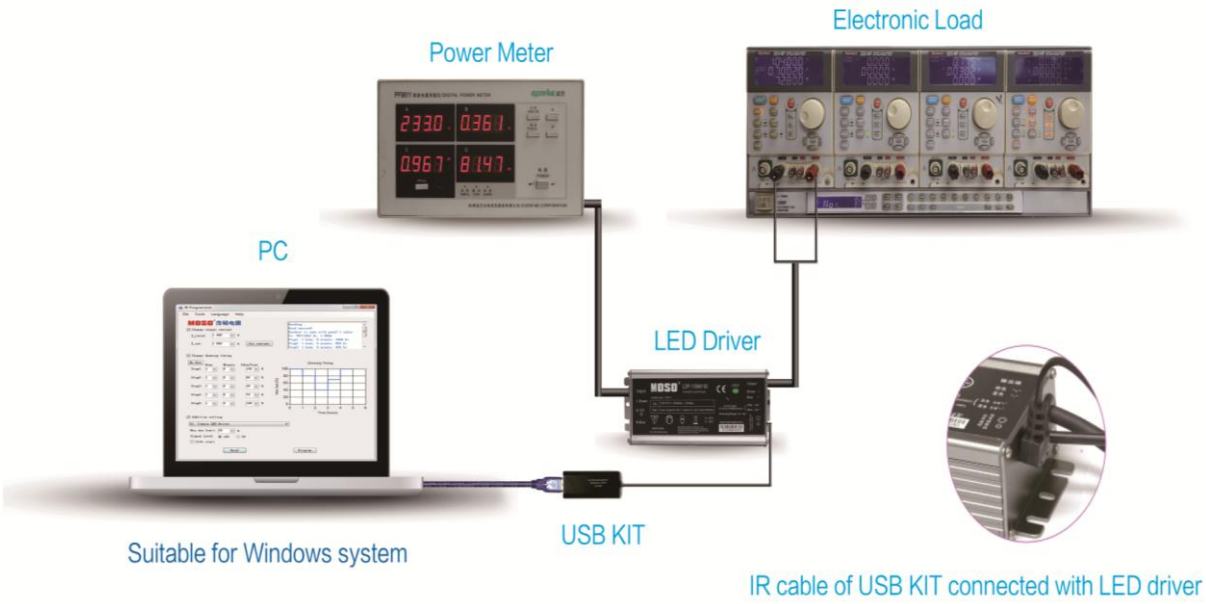
PROTECTIONS

Parameter	Notes
Over Temperature Protection	Decreases output current, returning to normal after over temperature is removed. The max derating could be 30% (typ.).
Short Circuit Protection	The average value of input power shall less than 13W when the output rail short, the power supply shall be self-recovery when the fault condition is removed.
Over Voltage Protection	Run into protection model when output voltage exceeds limit, and return to normal when the fault

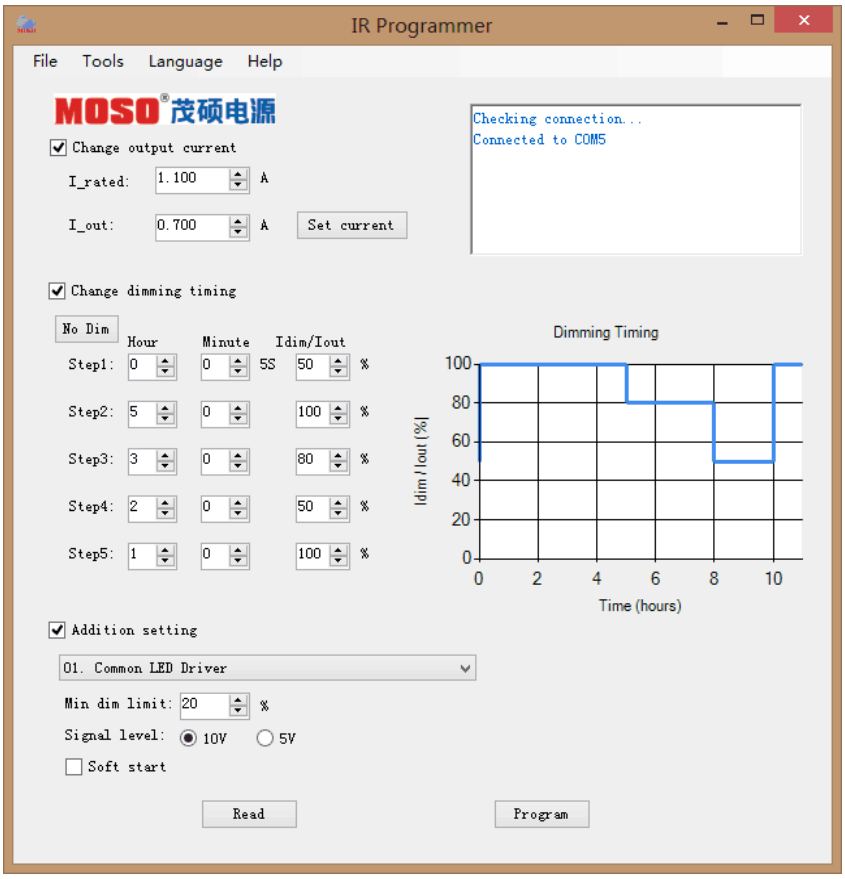
0-10V/PWM DIMMING



PROGRAMMING CONNECTION



PROGRAMMING GUIDE AND SOFTWARE INTERFACE



Programming by Software:

1) Read existing setting of the driver
2) Change output current;
3) Set timer dimming schedules;
4) Addition setting
   - Set min. dim value;
   - Set signal level can be 5V or 10V;
   - Set soft start.

USING INFRERED CONTROLLER TO RESET OUTPUT CURRENT

Operation Instruction:

1) Insert cable terminal of the infrared controller into the infrared communication port, which is at the DC output side of the LED driver.
2) Press “ON” key to power on the controller;
3) Within 10S interval, press a function key to adjust output current to the percentage of max delivered current;

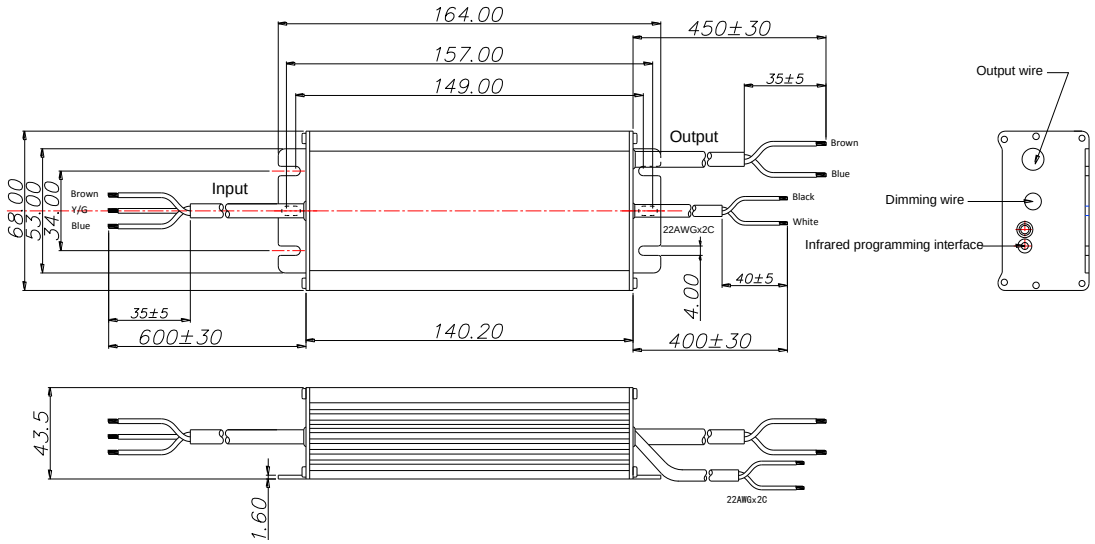
- 10%-100%: Percentage of maximum output current of such driver.
- + / - : Fine adjustment of output current, increase / decrease 1% each time.
- ON: Power on controller.
- OFF: Set min output current of such driver.
- SE: No function.

Warning:

- Please do not hold "+"key, to avoid the over power protection and unstable output.
- Each step of operation should be done within 10S interval, otherwise the controller is power off automatically.

MECHANICAL OUTLINE

EDC-105M types



Note: EDC-105R no dimming wire.

Wire	Specification
AC Input	CCC+VDE 3x1.0mm^2 L=600mm
DC Output	CCC+VDE 2x1.0mm^2 L=450mm
Dimming	22AWG 2C L=400mm

REVISION HISTORY

Version	Description of Change		Date	Notes
	Before	Now		
A.1	—	Datasheets Release	2018-02-28	