

Product Features

- Input voltage range: 90~305Vac;
- Constant power design, outputs programmable;
- Built-in 3-in-1 dimming and auto-react: 0-10Vdc, PWM, timer control;
- DALI control is optional, can be dim-to-off;
- 12V/0.3A auxiliary power supply is optional;
- Output is isolated with dimming signal;
- Stand-by power consumption <0.5W;
- Multiple protection: SCP / OVP/OTP;
- Surge protection: line-line 5KV, line-earth 10KV;
- Ambient temperature: -40°C ~ +60°C;
- Degrees of protection: IP67;
- 5 years warranty.



Application

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

DESCRIPTION

The GLUP-150 series is programmable outdoor LED driver that operates from 90-305Vac input with excellent power factor. Created for high bay, tunnel and roadway lights, it provides a dim-to-off mode with low standby power. The high efficiency of these drivers and compact metal case enables them to run cooler, significantly improving reliability and extending product life. To ensure trouble-free operation, protection is provided against input surge, output over voltage, short circuit, and over temperature.

MODELS

Model Number [1]	Max Output Power (W)	Output Voltage Range (Vdc)	Output Current Adjustable Range (A)	Full Power Current Adjustable Range (A) [2]	Default Output Setting	Typ. Effi. [3]	Typ. PF
GLUP-150X036Z	150	20~36	0.54~5.36	4.17~5.36	20~36V/4.17A	90%	0.96
GLUP-150X054Z	150	20~54	0.42~4.2	2.8~4.2	20~48V/3.13A	90%	0.96
GLUP-150X120Z	150	60 ~ 120	0.21 ~ 2.1	1.25 ~ 2.1	60~107V/1.4A	90%	0.96
GLUP-150X214Z	150	80 ~ 214	0.11~1.1	0.7~1.1	80~143V/1.05A	90%	0.96
GLUP-150X335Z	150	176 ~ 335	0.07~0.7	0.45~0.7	176~214V/0.7A	91%	0.96

Notes:

[1]. X=M, programable output with 0-10V/PWM/Timing dimming ; X=R, programable output with timing dimming ; X=D, dali dimming; Z=A12,output with 12V/0.2A auxiliary power supply;

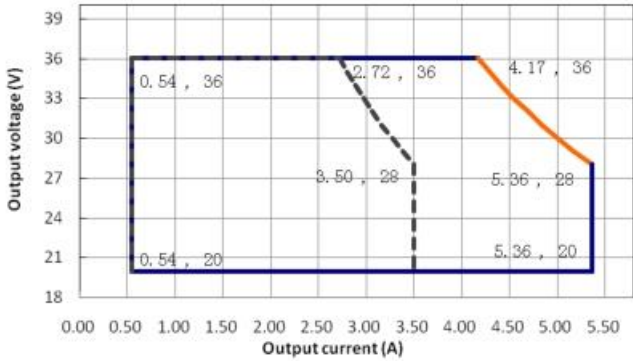
[2]. Output current adjustable range with constant power at max output power;

[3]. All specifications are measured at 25°C ambient temperature, if no specific note.

OPERATING AREA I-V

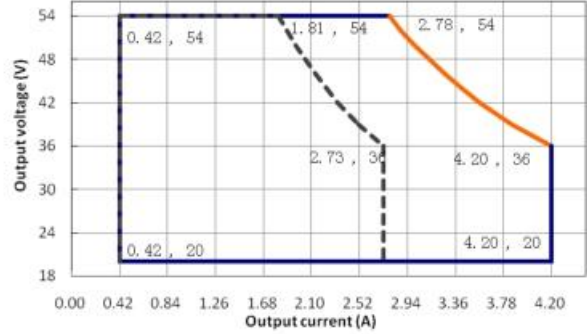
GLUP-150X036Z

Maximum Output Voltage vs. Output Current



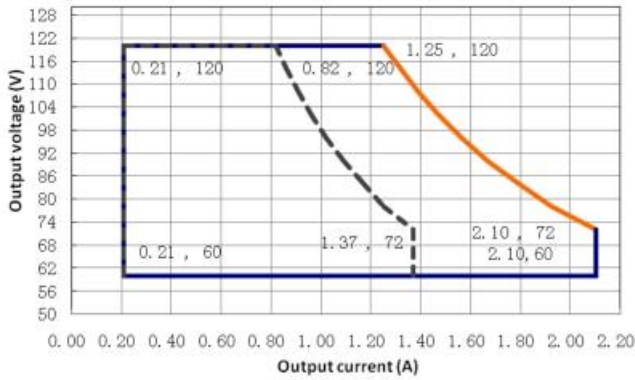
GLUP-150X054Z

Maximum Output Voltage vs. Output Current



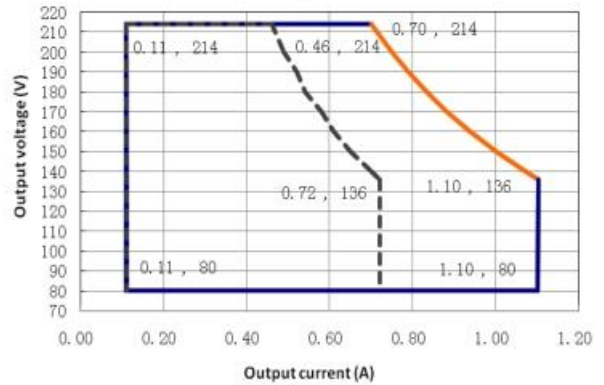
GLUP-150X120Z

Maximum Output Voltage vs. Output Current



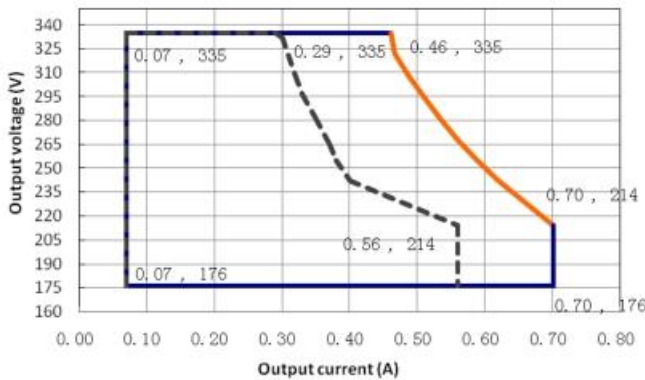
GLUP-150X214Z

Maximum Output Voltage vs. Output Current



GLUP-150X335Z

Maximum Output Voltage vs. Output Current



Note: 98W is suitable for the dotted line on the left side area; 150W is suitable for the solid line contain area.

INPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90Vac	100-277Vac	305Vac	
Input Frequency	47Hz	50/60	63Hz	
Leakage Current	-	-	0.75mA	277V/50Hz
Input AC Current	-	-	1.8A max	100-277Vac & full load
Inrush Current(A)	-	-	75A	Cold start, 230Vac & full load
Power Factor	0.95	0.96	-	230Vac & full load
THD	-	-	15%	230Vac, 70%-100% load
	-	-	20%	277Vac, 70%-100% load

OUTPUT SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Rated Power	-	-	150W	200-277Vac
	-	-	98W	100-200Vac
Output Current Tolerance	-5%Iset	-	5%Iset	Full load
Output Current Setting Range (Iset) GLUP-150X036Z GLUP-150X054Z GLUP-150X120Z GLUP-150X214Z GLUP-150X335Z	0.54A 0.42A 0.21A 0.11A 0.07A	-	5.36A 4.20A 2.10A 1.10A 0.70A	200-277Vac
Output Current Setting Range with Constant Power GLUP-150X036Z GLUP-150X054Z GLUP-150X120Z GLUP-150X214Z GLUP-150X335Z	4.17A 2.80A 1.25A 0.70A 0.45A	-	5.36A 4.20A 2.10A 1.10A 0.70A	200-277Vac
Total Output Current Ripple (pk-pk)	-	-	10%	Load is LED, ripple is different with difference LED load. 20MHz BW.
Startup Overshoot Current		-	10%	230Vac & 100% Load, load is LED

No Load Output Voltage GLUP-150X036Z GLUP-150X054Z GLUP-150X120Z GLUP-150X214Z GLUP-150X335Z	-	-	50V 70V 140V 240V 370V	
Line Regulation	-	-	1%	25°C±10°C ambient temperature, input voltage changes from 115Vac to
Load Regulation	-	-	1%	25°C±10°C ambient temperature, 230Vac input, load changes from 50% to 100%.
Turn-on Delay Time	-	-	3S	115Vac, 100% load
	-	-	0.5S	230Vac, 100% load
12V auxiliary output voltage	11.4V	12V	12.6V	
12V auxiliary output source current	0mA		300mA	

GENERAL SPECIFICATIONS

Parameter	Min.	Typ.	Max.	Notes
Efficiency @115Vac GLUP-150X036Z I _o = 2.72A	86%	88%		Measured at full load and 25°C ambient temperature
GLUP-150X054Z I _o = 1.82A	87%	89%		
GLUP-150X120Z I _o = 0.82A	88%	90%		
GLUP-150X214Z I _o = 0.46A	88%	90%		
GLUP-150X335Z I _o = 0.29A	89%	91%		
Efficiency @230Vac GLUP-150X036Z I _o = 4.17A I _o = 5.36A	88% 87%	90% 89%		Measured at full load and 25°C ambient temperature
GLUP-150X054Z I _o = 2.80A I _o = 4.20A	89% 88%	91% 90%		
GLUP-150X120Z I _o = 1.25A I _o = 2.10A	89% 88%	91% 90%		
GLUP-150X214Z I _o = 0.70A I _o = 1.10A	89% 88%	91% 90%		
GLUP-150X335Z I _o = 0.45A I _o = 0.70A	89% 89%	92% 91%		

Efficiency @277Vac				
GLUP-150X036Z Io = 4.17A Io = 5.36A	88% 87%	90% 89%		Measured at full load and 25°C ambient temperature
GLUP-150X054Z Io = 2.80A Io = 4.20A	89% 88%	91% 90%		
GLUP-150X120Z Io = 1.25A Io = 2.10A	89% 88%	91% 90%		
GLUP-150X214Z Io = 0.70A Io = 1.10A	89% 88%	91% 90%		
GLUP-150X335Z Io = 0.45A Io = 0.70A	89% 89%	92% 91%		
Standby power consumption	-	-	0.5W	
MTBF	-	200000 Hours	-	230Vac,80% load (MIL-HDBK-217F)
Lifetime	-	50000 Hours	-	230Vac&100% load,70°C case temperature, refer to lifetime VS Tc curve for details
Operating Case Temperature for Safety Tc_s	-40°C	-	+85°C	
Operating Case Temperature for Warranty Tc_w	-40°C	-	+70°C	
Storage Temperature	-40°C	-	+85°C	Humidity: 10% to 95% RH
Dimensions (L×W×H)mm	217*68*43.5			
Net Weight	950±50g			
Package	L500×W390×H170mm; 10pcs/Ctn			

DIMMING

Parameter		Min.	Typ.	Max.	Notes
0~5V/0~10V Absolute Maximum Voltage on the Vdim (+) Pin		-	5V/10V	-	
0~5V/0~10V Source Current on Vdim(+)Pin		-	-	2mA	
Dimming Output Range	GLUP-150X036Z GLUP-150X054Z GLUP-150X120Z GLUP-150X214Z GLUP-150X335Z	10%Imax	-	100%Imax	Imax=5.36A Imax=4.20A Imax=2.10A Imax=1.10A Imax=0.70A
	GLUP-150X036Z GLUP-150X054Z GLUP-150X120Z GLUP-150X214Z GLUP-150X335Z	0.54A 0.42A 0.21A 0.11A 0.07A	-	5.36A 4.20A 2.10A 1.10A 0.70A	
DA, DA High Level		9.5 V	16 V	22.5 V	
DA, DA Low Level		-6.5 V	0 V	6.5 V	
Recommended Dimming Range for 0-5 V		0V	-	5V	
Recommended Dimming Range for 0-10 V		0V	-	10V	Default 0-10V/10V PWM Dimming
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%	

SAFETY STANDARDS

Safety Category	Country / Territory	Standards
CCC	China	GB19510.1
		GB19510.14
CE	Europe	EN61347-1
		EN61347-2-13
CB	CB Countries	IEC61347-1
		IEC61347-2-13
UL	USA	UL 8750
		UL 1310 (Class 2 Power Units)
		UL 1012
cUL	Canada	CSA C22.2 No.250.13-12
		CSA C22.2 No.223-M91 (Power Supplies With Extra-Low-Voltage Class 2 Outputs)
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
		EN 61547
KC	South Korea	K61547
		K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

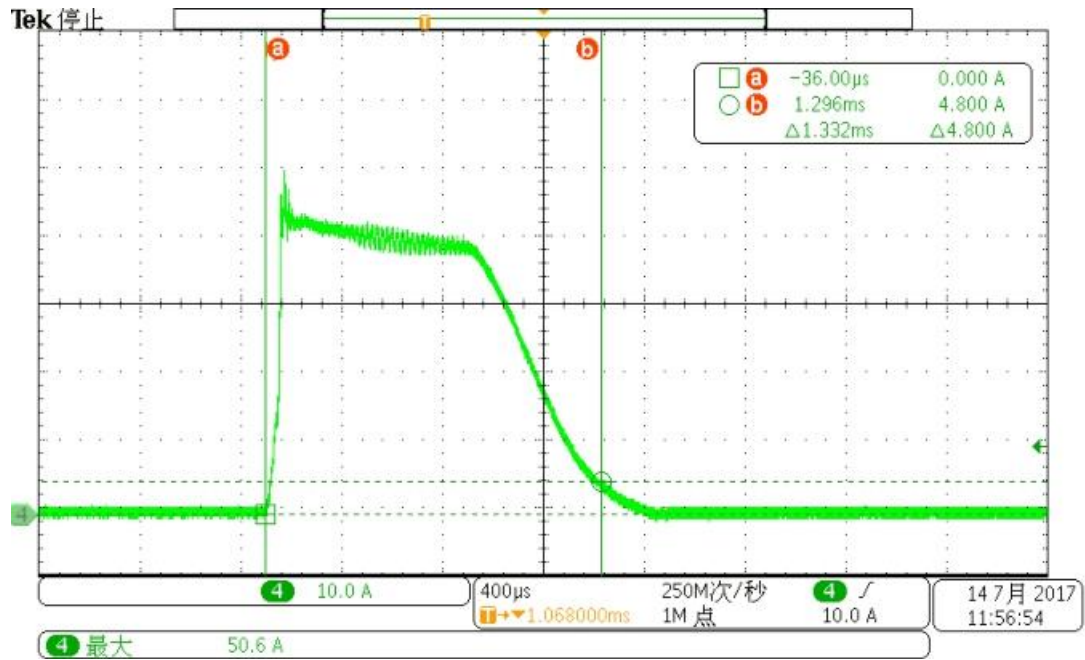
NOTE:

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.

DALI STANDARDS

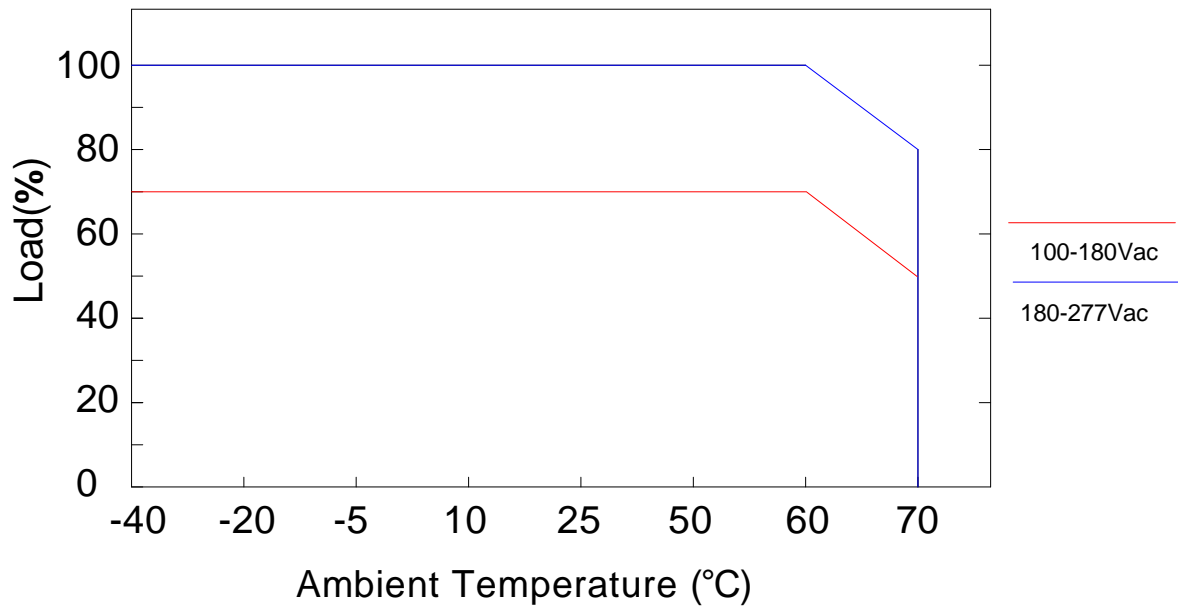
IEC 62386 -101, 102, 207.

INRUSH CURRENT WAVEFORM



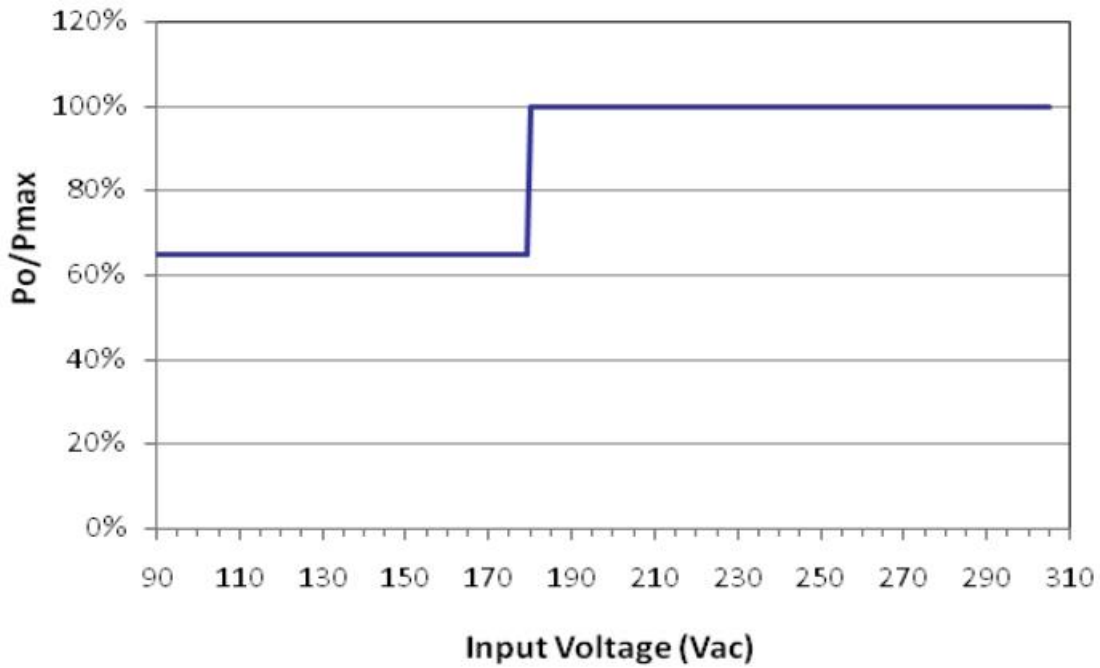
DERATING CURVE

Derating Curve

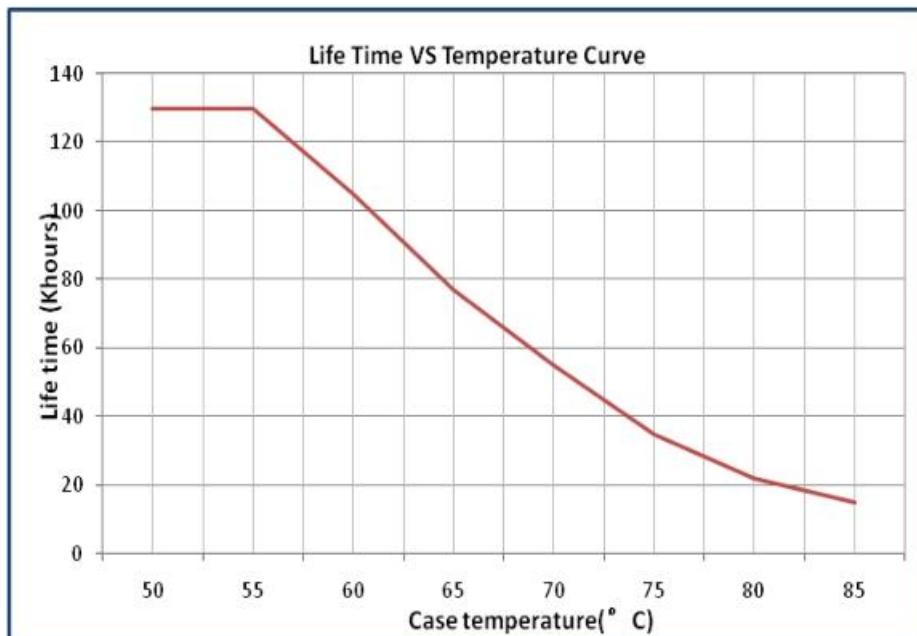


OUTPUT POWER VS INPUT VOLTAGE

Po/Pmax vs. Input Voltage Curve

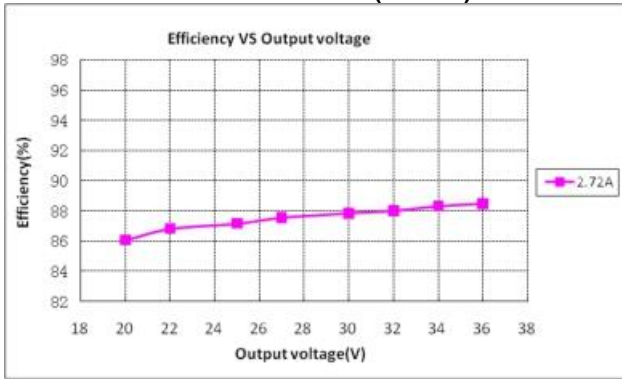


LIFETIME VS CASE TEMPERATURE

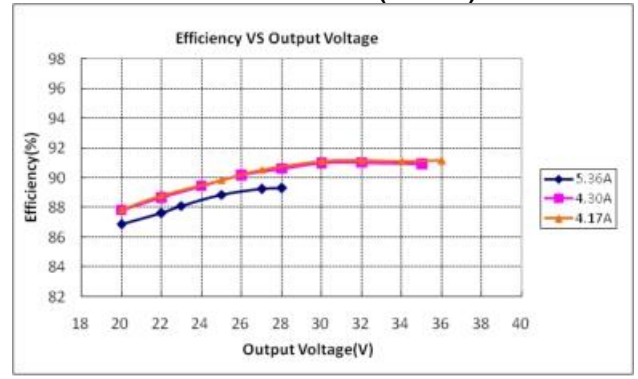


EFFICIENCY VS LOAD

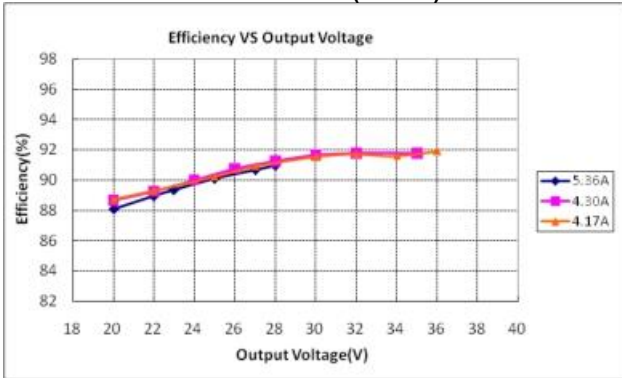
GLUP-150X036Z (115Vac)



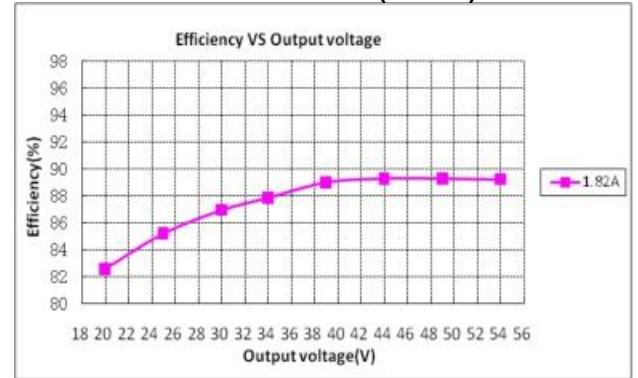
GLUP-150X036Z (230Vac)



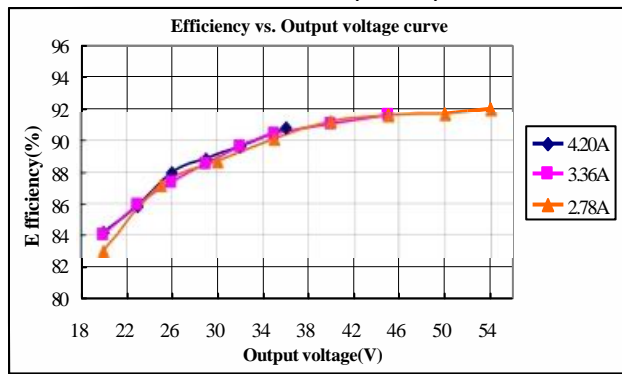
GLUP-150X036Z (277Vac)



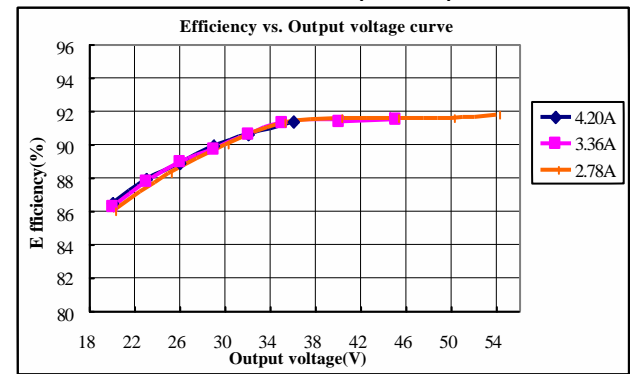
GLUP-150X054Z (115Vac)



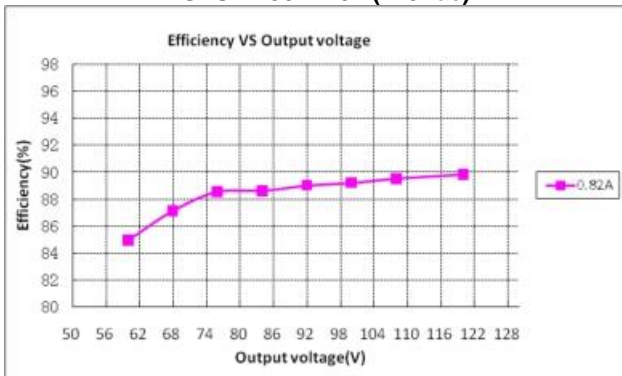
GLUP-150X054Z (230Vac)



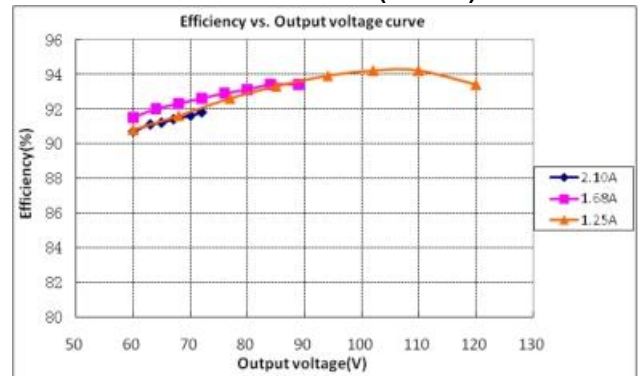
GLUP-150X054Z (277Vac)



GLUP-150X120Z (115Vac)

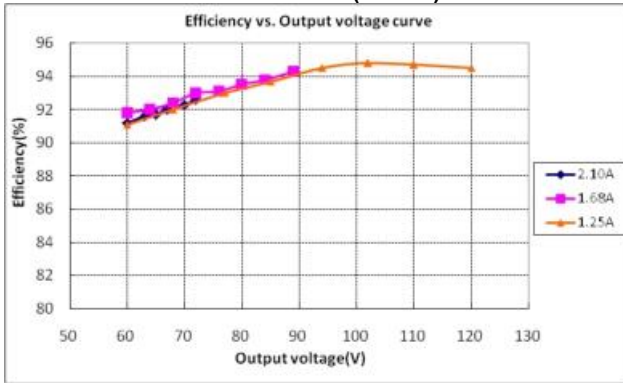


GLUP-150X120Z (230Vac)

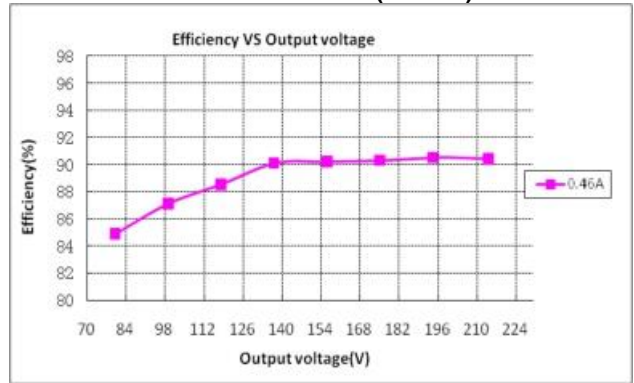


EFFICIENCY VS LOAD

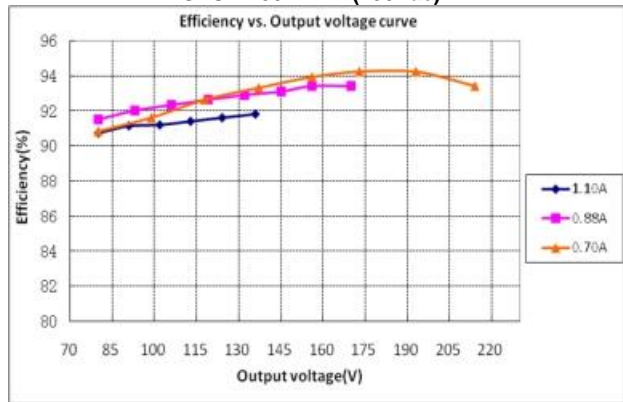
GLUP-150X120Z (277Vac)



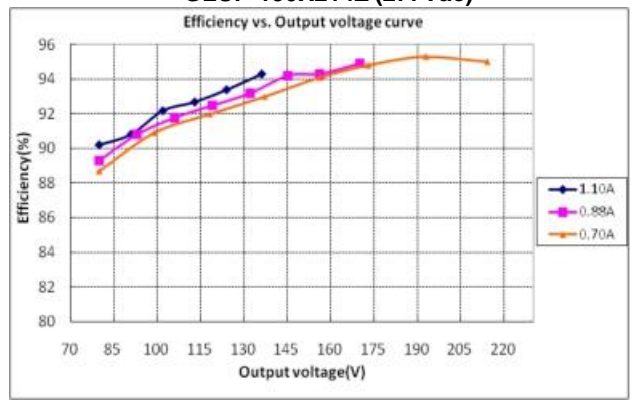
GLUP-150X214Z (115Vac)



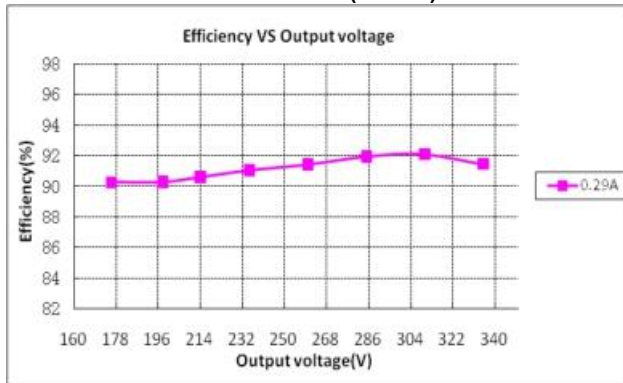
GLUP-150X214Z (230Vac)



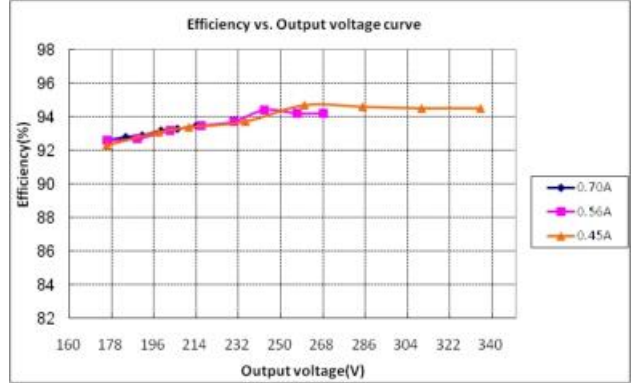
GLUP-150X214Z (277Vac)



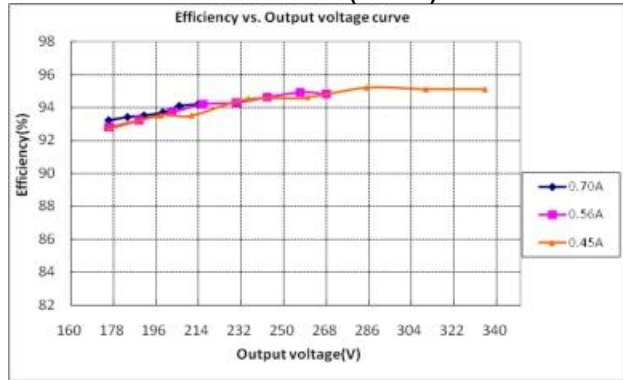
GLUP-150X335Z(115Vac)



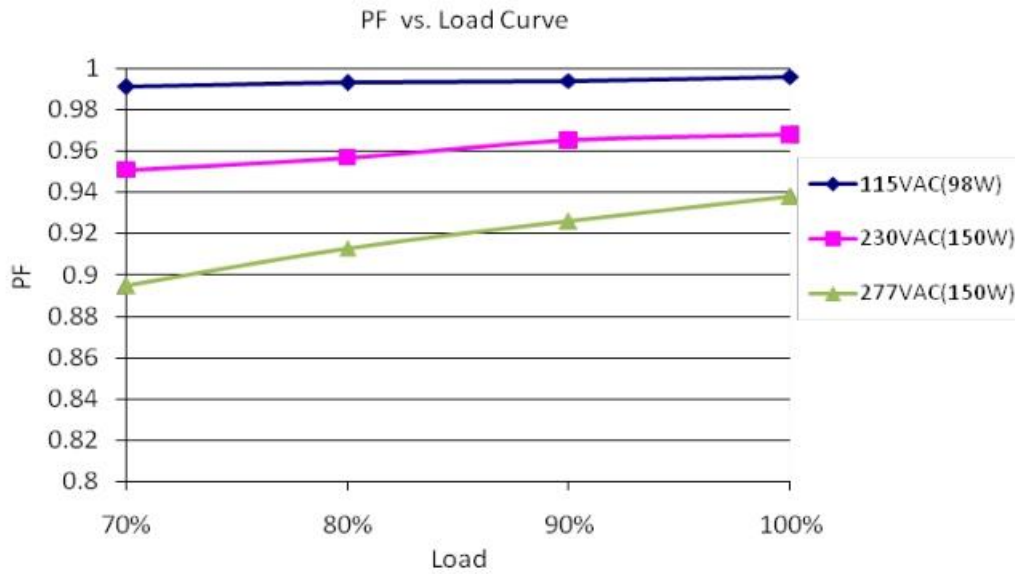
GLUP-150X335Z(230Vac)



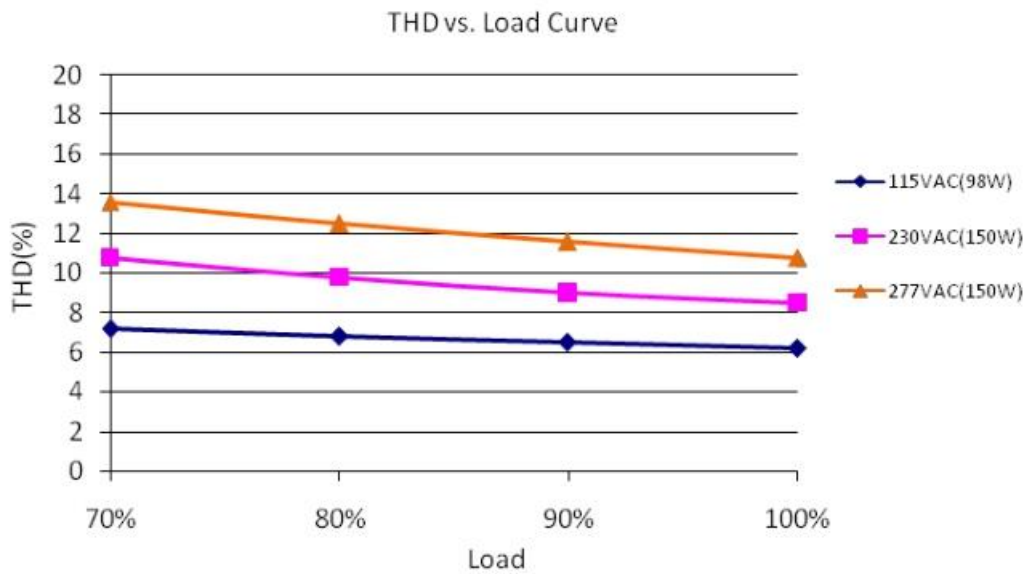
GLUP-150X335Z(277Vac)



POWER FACTOR VS LOAD



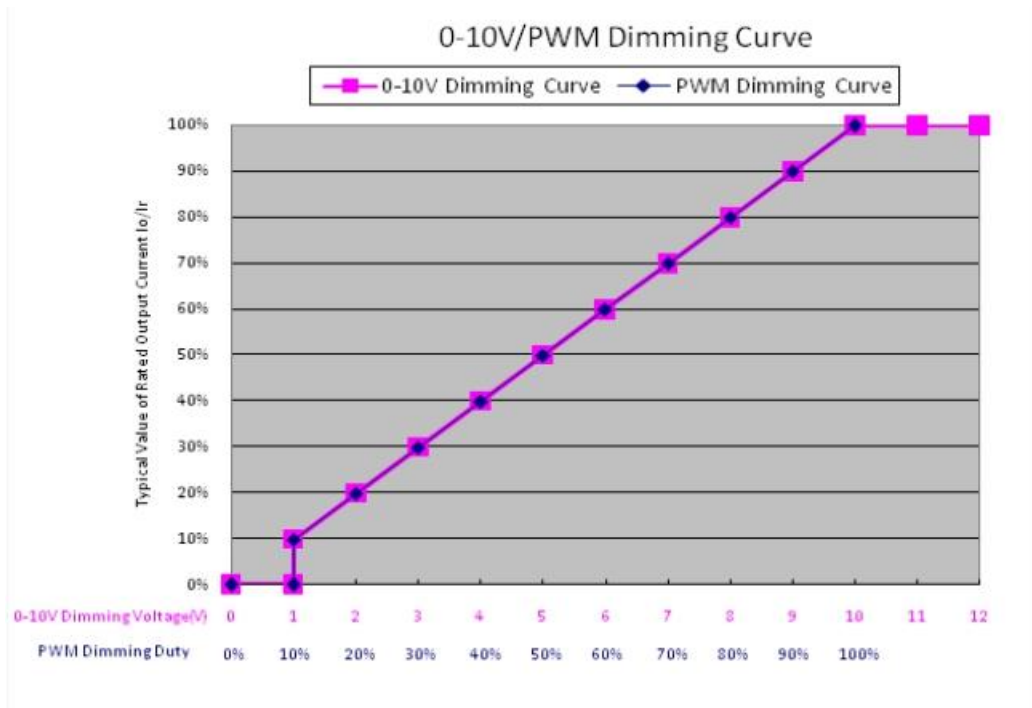
TOTAL HARMONIC DISTORTION



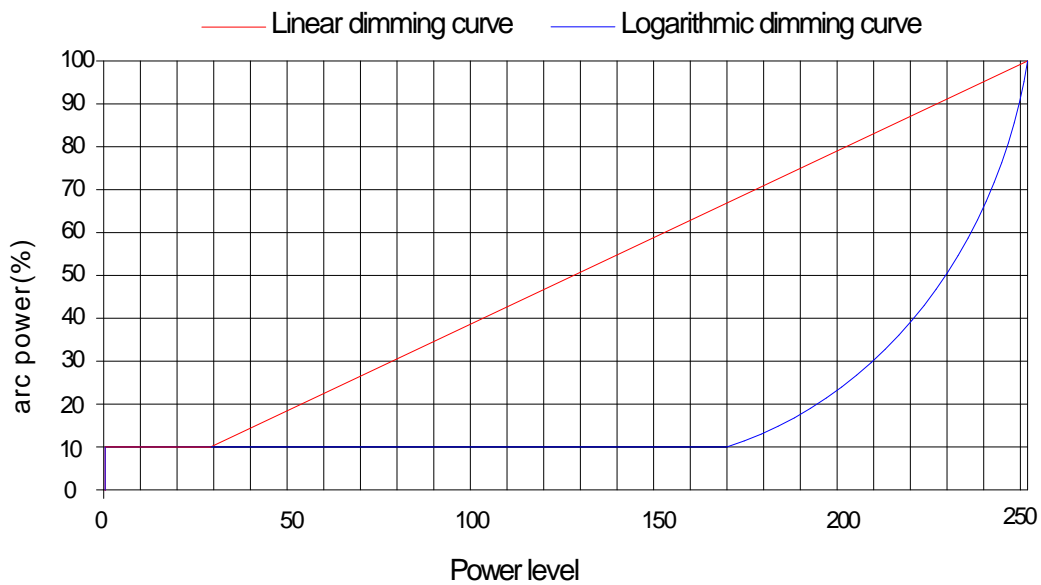
PROTECTIONS

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 input power shall decrease when the output rail short, the power supply shall not be damaged.
Over Voltage Protection	Run into protection model when output voltage exceeds limit, and return to normal when the fault

0-10V/PWM DIMMING

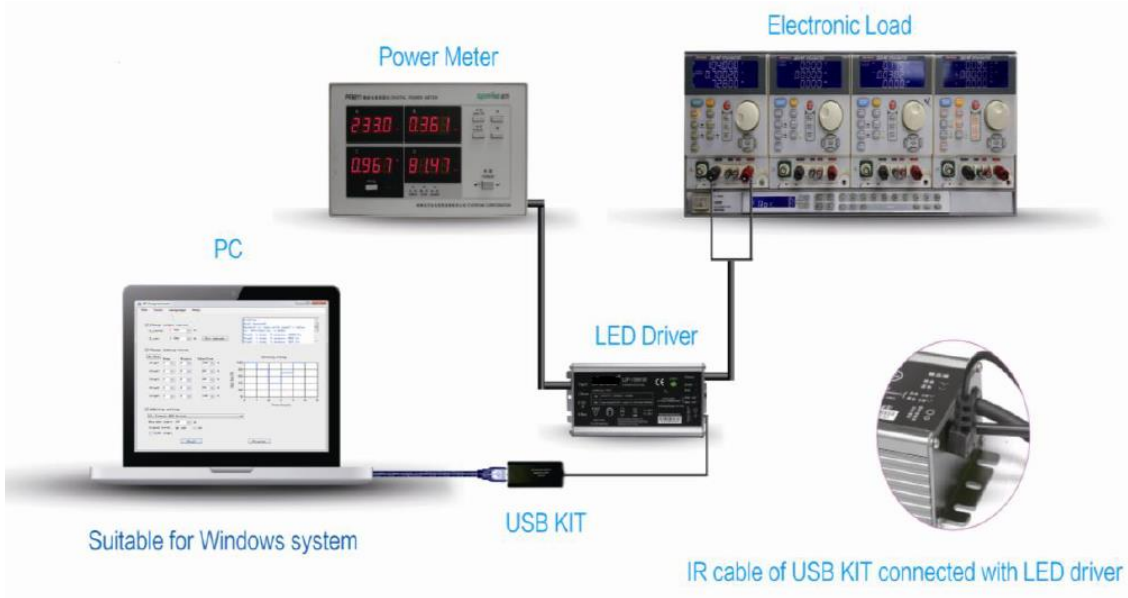


DALI DIMMING

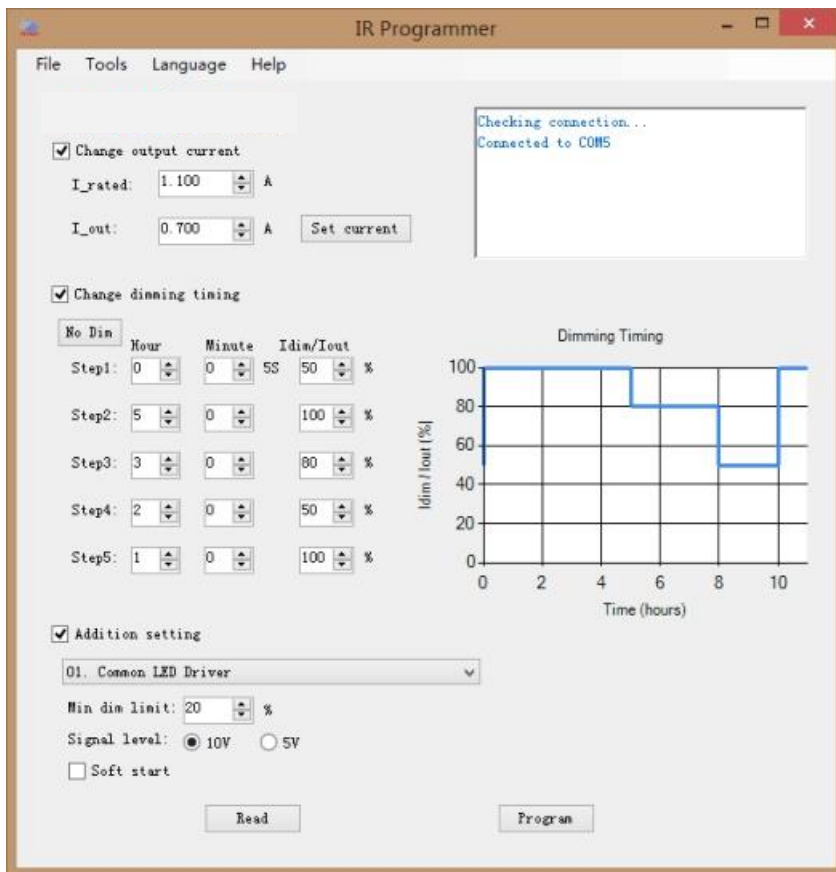


Note: Factory Default Output Logarithmic Curve

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 INFRARED CONTROLLER TO RESET OUTPUT CURRENT



Operation Instruction:

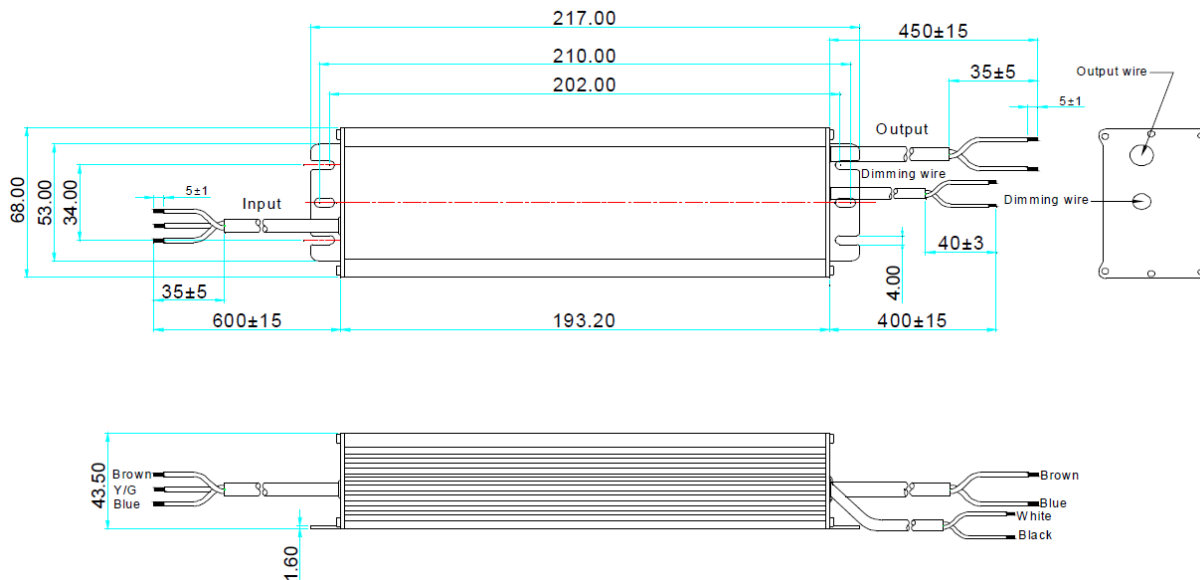
- 1) Insert cable terminal of the infrared controller into the infrared communication port, which is at the DC output side of the LED driver.
- 2) Press "ON" key to power on the controller;
- 3) Within 10S interval, press a function key to adjust output current to the percentage of max delivered current;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

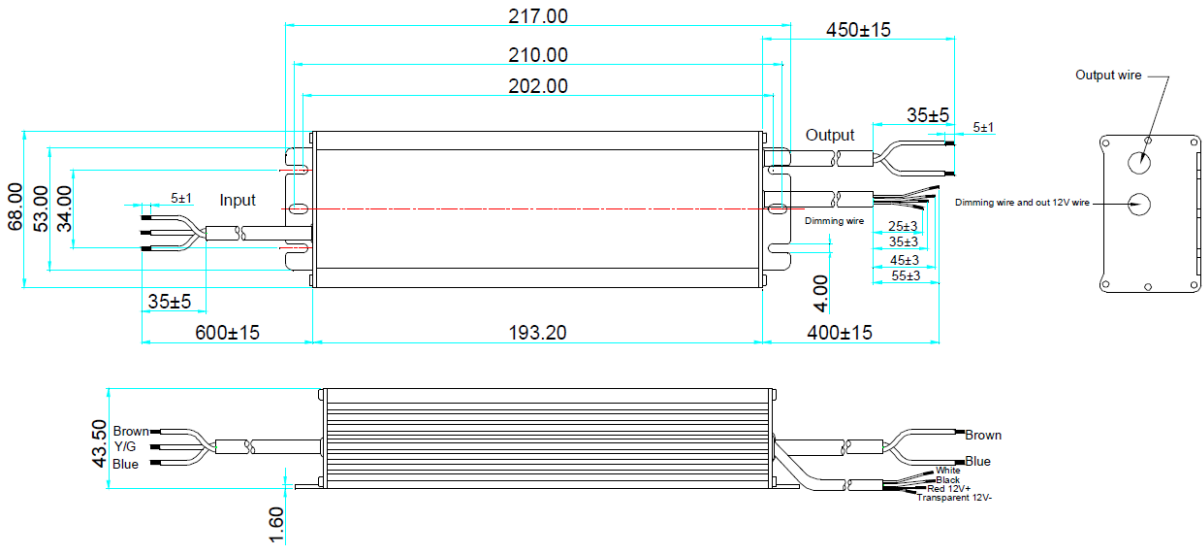
- Please do not hold "+"key, to avoid the over power protection and unstable output.
- Each step of operation should be done within 10S interval, otherwise the controller is power off automatically.

MECHANICAL OUTLINE

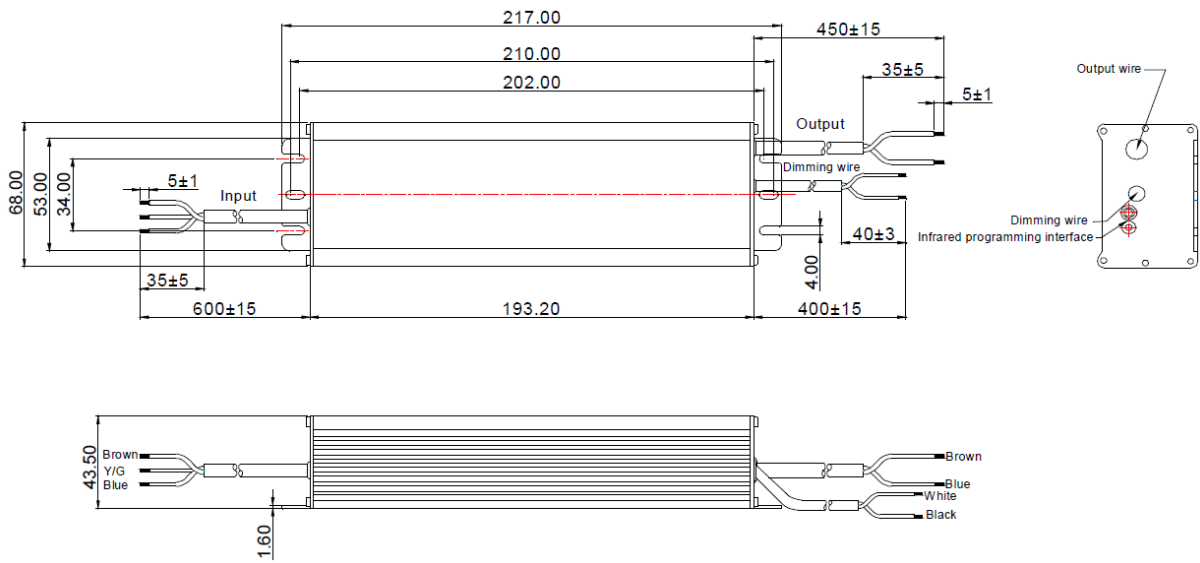
GLUP-150D types



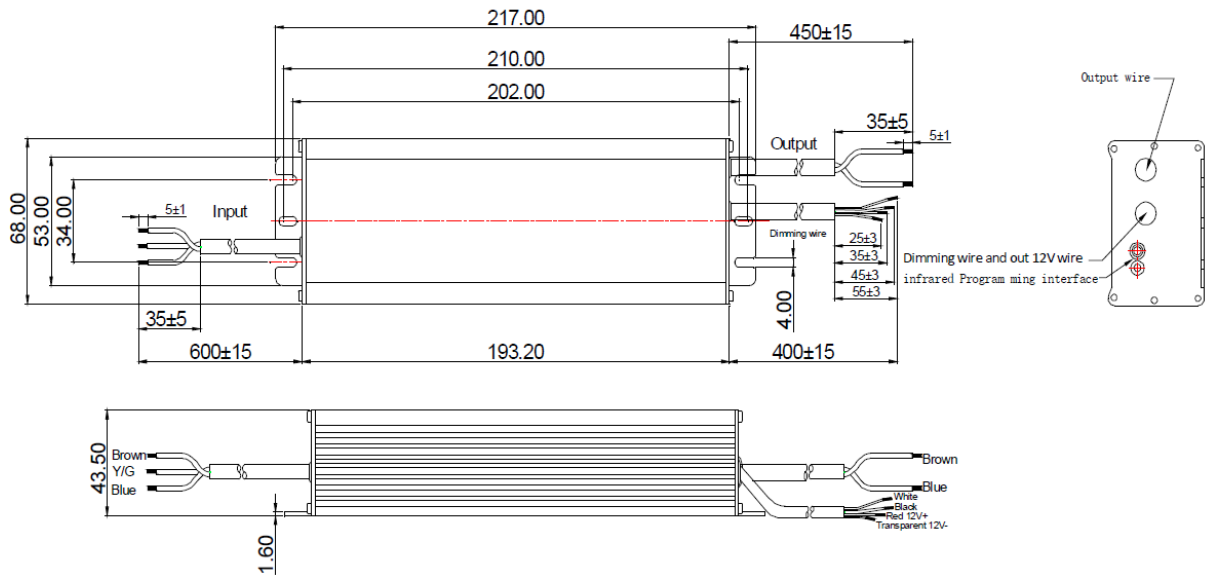
GLUP-150D-A12 types



GLUP-150M types



GLUP-150M-A12 types



Wire	Specification
AC Input	CCC+VDE 3x1.0mm ² L=600mm
DC Output	CCC+VDE 2x1.0mm ² L=450mm
Dimming	22# 2C L=400mm
	22# 4C L=400mm