

GLDP-075 series

75W Programmable Constant Current with Constant Power Output LED Driver



Features:

- Universal AC input voltage / Full range: 90-305VAC
- Constant current with Constant power output design with adjustable output current
- Output current adjustable via infrared controller or software interface
- Built-in active PFC function
- Protections: Short Circuit / Over Voltage / Over Temperature
- Cooling by free air convection
- Surge immunity: Differential Mode - 5kV, Common Mode - 10kV
- Dimming 3 in 1 (0-10V, PWM, Time dimming) function for M version
- IP67 design for indoor and outdoor applications
- Suitable for dry/damp/wet locations

Application:

- LED street / tunnel lighting
- Industrial lighting
- Flood lighting
- Grow lights



DESCRIPTION

The GLDP-075W series is 75W 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. GLDP provides built-in timer dimming schedules further increasing the energy savings and CO2 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 lightning surge, output over voltage, short circuit, and over temperature, to ensure low failure rate.

MODEL INFORMATION

MODEL NUMBER	OUTPUT POWER [W]	OUTPUT VOLTAGE RANGE [VDC]	OUTPUT CURRENT ADJUSTABLE RANGE [A]	FULL POWER OUTPUT CURRENT ADJUSTABLE RANGE FOR [A]	DEFAULT SETTING	TYPICAL EFFICIENCY	POWER FACTOR	
							115VAC	230VAC
GLDP-075X054H	75	20 ÷ 54	0.21 ÷ 2.10	1.40 ÷ 2.10	20 ÷ 54VDC / 2.10A	87%	0.99	0.97
GLDP-075X062H	75	35 ÷ 62	0.17 ÷ 1.67	1.20 ÷ 1.67	35 ÷ 62VDC / 1.05A	87%	0.99	0.97
GLDP-075X141H	75	60 ÷ 141	0.11 ÷ 1.10	0.53 ÷ 1.10	60 ÷ 141VDC / 0.70A	87%	0.99	0.97
GLDP-075X270H	75	120 ÷ 270	0.05 ÷ 0.53	0.28 ÷ 0.53	120 ÷ 270VDC / 0.35A	87%	0.99	0.97

Notes:

	X = R	X = M
1.	Example: GLDP-075R054H Programmable, output current adjustable via infrared controller, time dimming	Example: GLDP-075M054H Programmable, output current adjustable via infrared controller, time dimming; dimmable (0-10V, PWM)
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.	

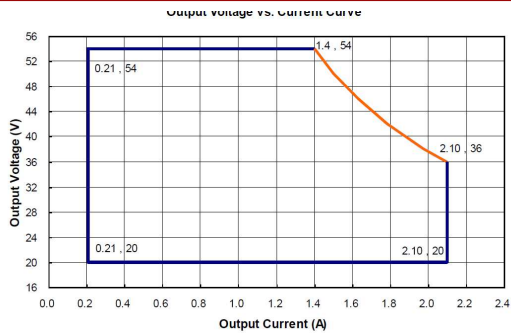
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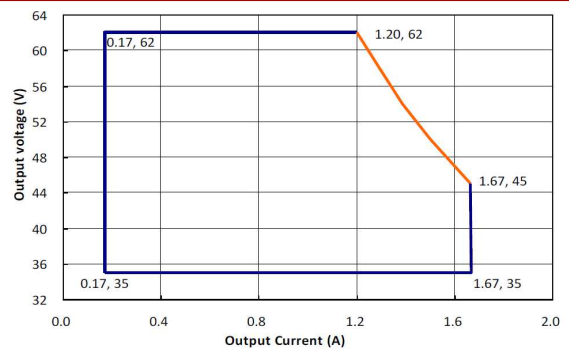


OPERATING AREA I-V

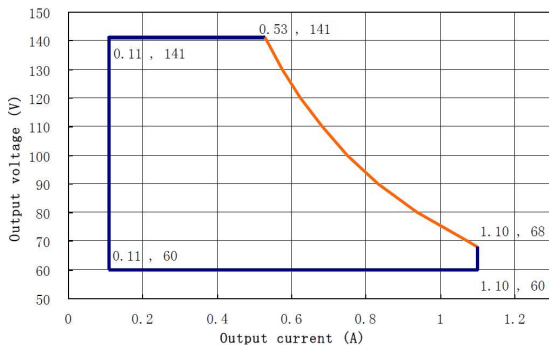
GLDP-075X054H



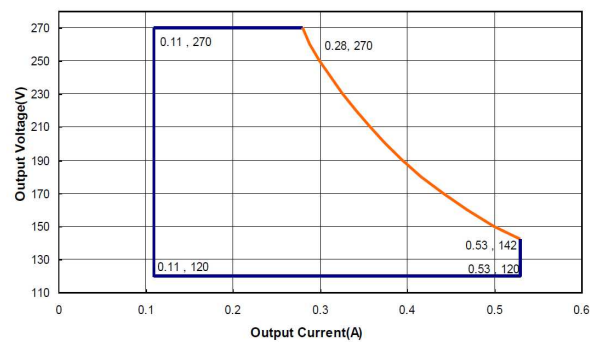
GLDP-075X062H



GLDP-075X141H



GLDP-075X270H



INPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
INPUT VOLTAGE	90VAC	100 ÷ 277VAC	305VAC	-
INPUT FREQUENCY	47Hz	50/60Hz	63Hz	-
LEAKAGE CURRENT	-	-	0.75mA	277VAC/50Hz
INPUT AC CURRENT	-	-	0.9A	100 ÷ 277VAC, full load
INRUSH CURRENT	-	-	75A	230VAC, full load
POWER FACTOR	0.95	0.96	-	230VAC, full load
THD	-	-	20%	115 ÷ 230VAC, 70 ÷ 100% load

OUTPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
OUTPUT CURRENT TOLERANCE	-5% I _{SET}	-	+5% I _{SET}	Full load
OUTPUT CURRENT SETTING RANGE (I _{SET})				
GLDP-075X054H	0.21A	-	2.10A	-
GLDP-075X062H	0.17A	-	1.67A	-
GLDP-075X141H	0.11A	-	1.10A	-
GLDP-075X270H	0.05A	-	0.53A	-

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OUTPUT CURRENT SETTING RANGE WITH CONSTANT POWER				
GLDP-075X054H	1.40A		2.10A	
GLDP-075X062H	1.20A		1.67A	-
GLDP-075X141H	0.53A		1.10A	
GLDP-075X270H	0.28A		0.53A	
TOTAL OUTPUT CURRENT RIPPLE (PK-PK)	-	10%	16%Imax	230VAC & full LED load, ripple is different with difference LED load
STARTUP OVERSHOOT CURRENT		-	10%	115 ~ 277VAC & 100% load, load is LED
NO LOAD OUTPUT VOLTAGE				
GLDP-075X054H			60V	
GLDP-075X062H		-	70V	-
GLDP-075X141H			160V	
GLDP-075X270H			300V	
LINE REGULATION	-	-	1%	25°C ± 10°C ambient temperature, input voltage changes from 115VAC to 305VAC
LOAD REGULATION	-	-	3%	25°C ± 10°C ambient temperature, 230 VAC input load changes from 50% to 100%
TURN-ON DELAY TIME	-	-	1s	115VAC, full load
	-	-	3s	230VAC, full load

© GENERAL SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
EFFICIENCY AT 115VAC				
GLDP-075X054H				
I _o = 1.40A	82%	84%		
I _o = 2.10A	82%	84%		
GLDP-075X062H				
I _o = 0.75A	85%	85%		
I _o = 1.05A	85%	85%		25°C ambient temperature, full load
GLDP-075X141H				
I _o = 0.53A	82%	84%		
I _o = 1.10A	82%	84%		
GLDP-075X270H				
I _o = 0.28A	82%	84%		
I _o = 0.53A	84%	84%	-	
EFFICIENCY AT 230VAC				
GLDP-075X054H				
I _o = 1.40A	85%	87%		
I _o = 2.10A	85%	87%		
GLDP-075X062H				
I _o = 0.75A	85%	85%		
I _o = 1.05A	85%	85%	-	25°C ambient temperature, full load
GLDP-075X141H				
I _o = 0.53A	85%	87%		
I _o = 1.10A	86%	88%		
GLDP-075X270H				
I _o = 0.28A	85%	87%		
I _o = 0.53A	85%	87%		

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PARAMETER	Min.	Typ.	Max.	Notes
EFFICIENCY AT 277VAC				
GLDP-075X054H				
$I_o = 1.40A$	85%	85%		
$I_o = 2.10A$	85%	85%		
GLDP-075X062H				
$I_o = 0.75A$	85%	85%		
$I_o = 1.05A$	85%	85%	-	25°C ambient temperature, full load
GLDP-075X141H				
$I_o = 0.53A$	85%	85%		
$I_o = 1.10A$	86%	86%		
GLDP-075X270H				
$I_o = 0.28A$	85%	85%		
$I_o = 0.53A$	85%	85%		
MTBF	-	200 000 hours	-	230VAC, 80% load (MIL-HDBK-217F)
LIFETIME	-	50 000 hours	-	230VAC, 100% load, 70°C case temperature
OPERATING CASE TEMPERATURE FOR SAFETY T_{c_s}		-	+85°C	-
OPERATING CASE TEMPERATURE FOR WARRANTY T_{c_w}	-40°C	-	+70°C	-
STORAGE TEMPERATURE	-40°C	-	+85°C	Humidity: 10% to 95% RH
DIMENSIONS (L x W x H)	164 x 68 x 39mm			-
NET WEIGHT	755 ± 50g / pc.			-
PACKAGE (L x W x H)	500 x 310 x 60mm; 10pcs/ctn			-

⊙ DIMMING

PARAMETER	Min.	Typ.	Max.	Notes	
0-5V / 0-10V ABSOLUTE MAXIMUM VOLTAGE ON THE V_{DIM} (+) PIN	-	5V / 10V	-	-	
0-5V / 0-10V SOURCE CURRENT ON THE V_{DIM} (+) PIN	-	-	2mA	-	
DIMMING OUTPUT RANGE	GLDP-075X054H	10% I_{MAX}	-	100% I_{MAX}	$I_{MAX} = 1.80A$ $I_{MAX} = 1.05A$ $I_{MAX} = 0.70A$
	GLDP-075X062H				
	GLDP-075X141H				
	GLDP-075X270H				
	GLDP-075X054H				
GLDP-075X062H	0.17A	1.67A			
GLDP-075X141H	0.11A	1.10A			
GLDP-075X270H	0.05A	0.53A			
RECOMMENDED DIMMING RANGE FOR 0-5V	0V	-	5V	-	
RECOMMENDED DIMMING RANGE FOR 0-10V	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%		

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© 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	UL8750
		UL1310 (Class 2 Power Units)
		UL1012
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 IEC61347-2-13
		AS/NZS IEC61347.1

© EMC STANDARDS

EMC CATEGORY	COUNTRY / TERRITORY	STANDARDS
CCC	China	GB17743
		GB17625.1
CE	Europe	EN55015
		EN61000-3-2
		EN61000-3-3
		EN61547
KC	South Korea	K61547
		K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

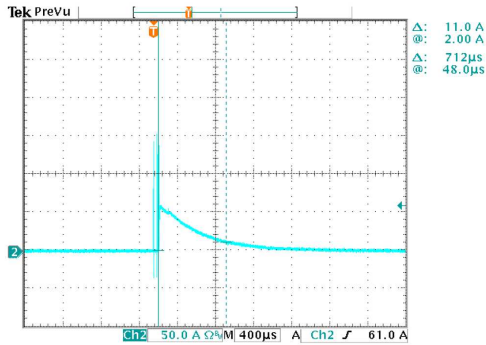
Note: This LED driver meets the EMC specifications above, but EMC performance of luminaire that contains it depends also on the other devices connected to the driver and on the fixture itself.

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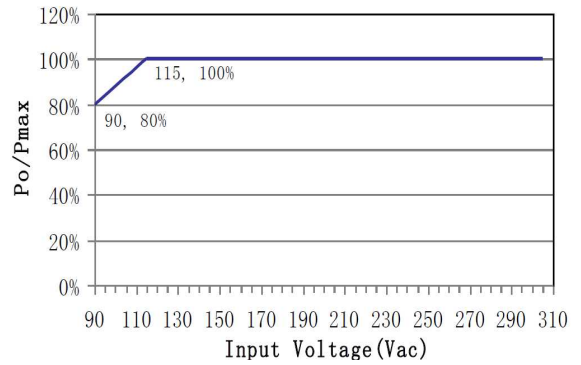
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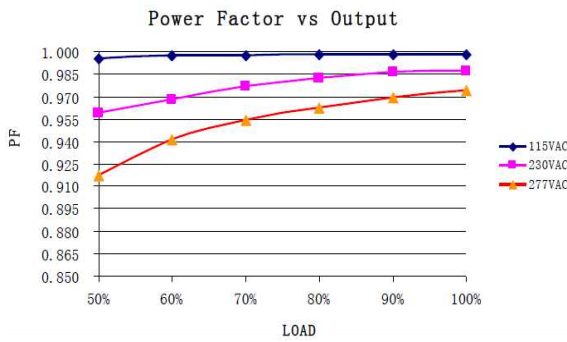
Ⓢ INRUSH CURRENT WAVEFORM



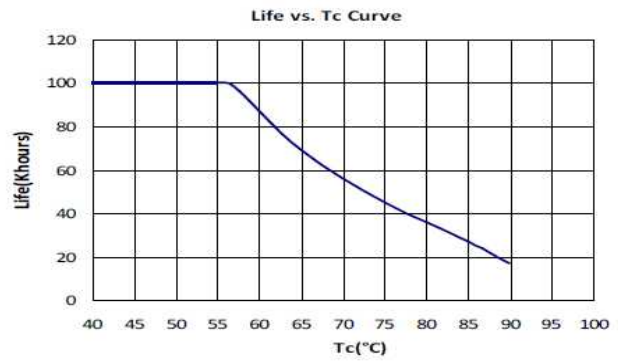
Ⓢ P_O / P_{MAX} vs. INPUT VOLTAGE CURVE



Ⓢ POWER FACTOR vs. LOAD CURV

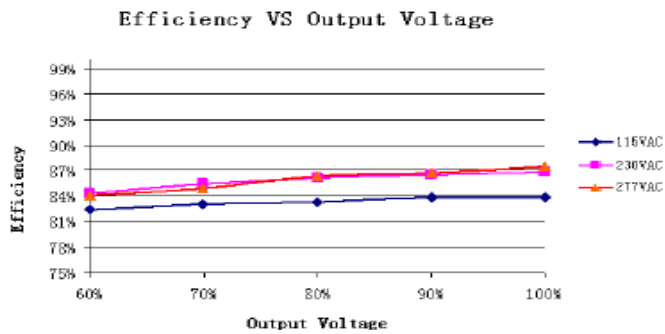


Ⓢ LIFETIME vs. CASE TEMPERATURE CURVE

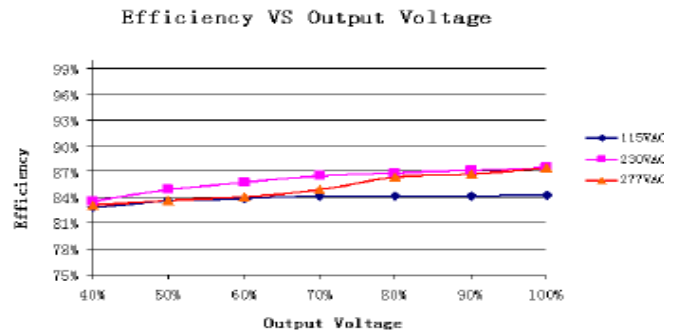


Ⓢ EFFICIENCY vs. LOAD CURVE

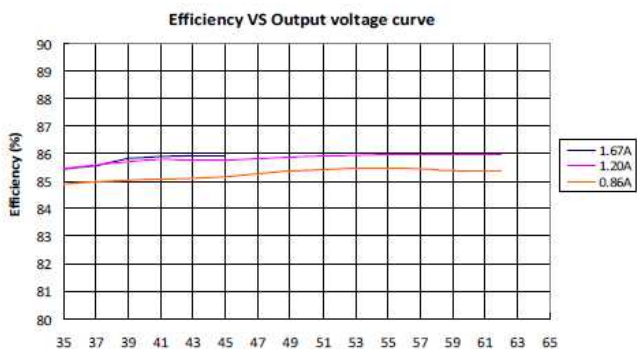
GLDP-075X054H (Vin = 115VAC)



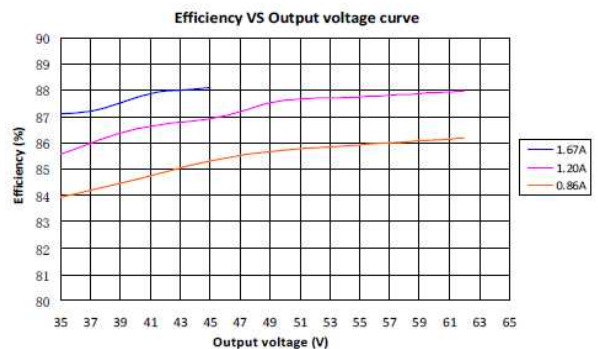
GLDP-075X054H (Vin = 230VAC)



GLDP-075X062H (Vin = 115VAC)



GLDP-075X062H (Vin = 230VAC)



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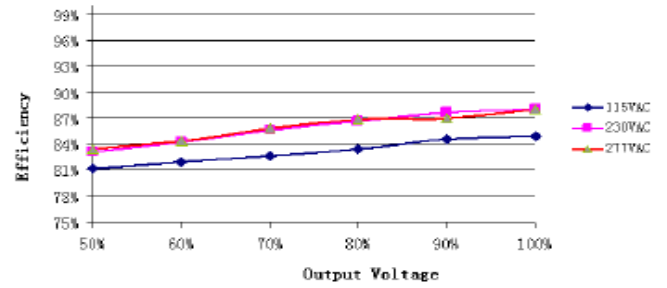
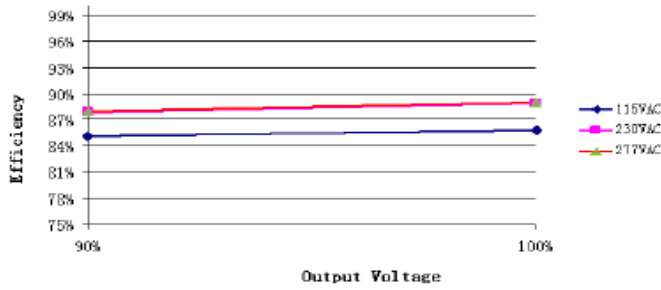


GLDP-075X141H (Vin = 115VAC)

GLDP-075X141H (Vin = 230VAC)

Efficiency VS Output Voltage

Efficiency VS Output Voltage

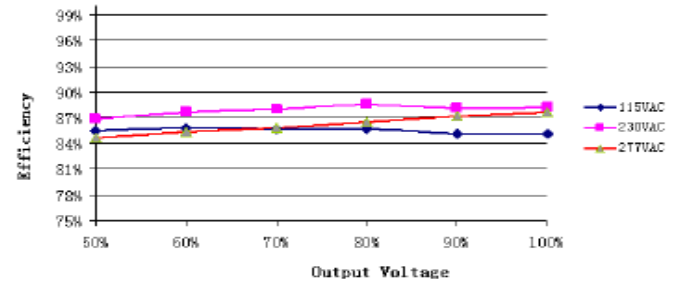
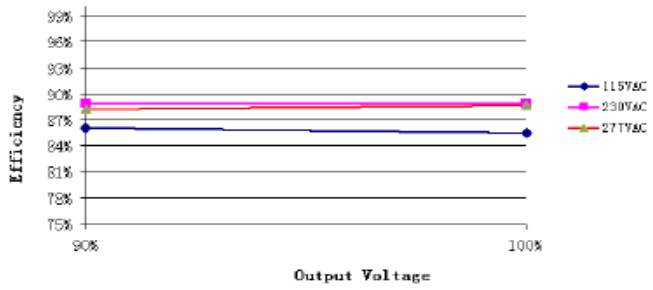


GLDP-075X270H (Vin = 115VAC)

GLDP-075X270H (Vin = 230VAC)

Efficiency VS Output Voltage

Efficiency VS Output Voltage



GLDP-075 series

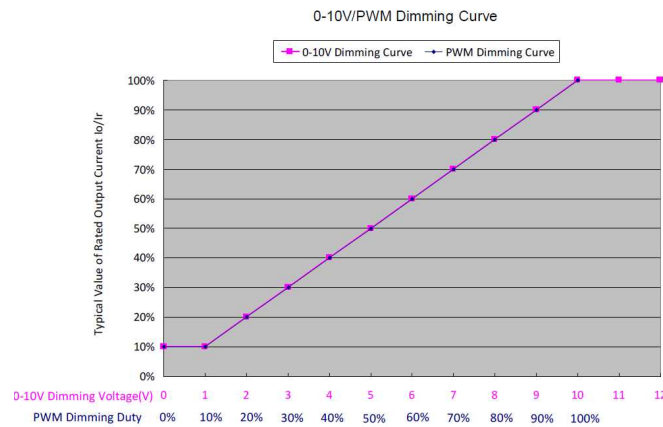
75W Programmable Constant Current with Constant Power Output LED Driver



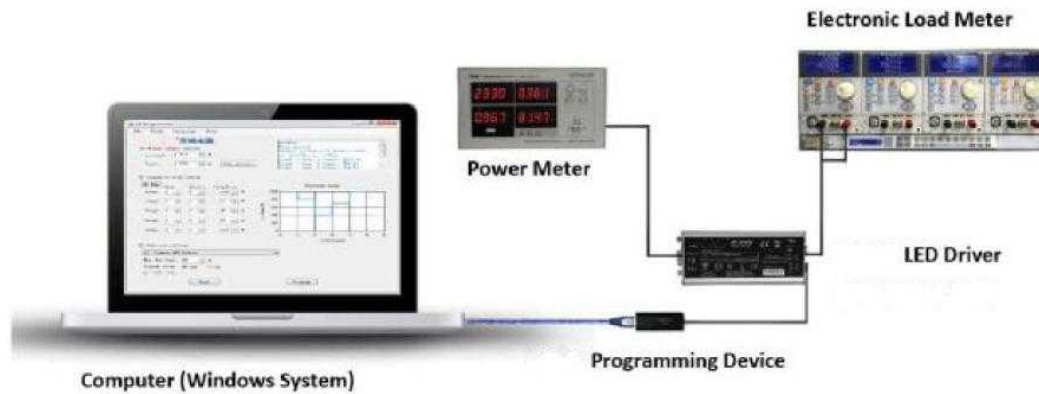
© PROTECTIONS

PARAMETER	NOTES
OVER TEMPERATURE PROTECTION	Decreases output current, returning to normal operation after over temperature is removed. The max. Derating could be 30%.
SHORT CIRCUIT PROTECTION	Hiccup mode and auto recovery. No damage will occur when output is under short circuit condition. The output shall return to normal operation when the fault condition is removed.
OVERT VOLTAGE PROTECTION	Run into protection mode when output voltage exceeds limit and return to normal operation when the fault condition is removed.

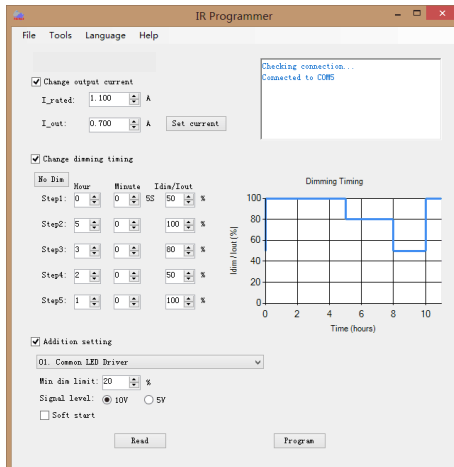
© 0-10V / PWM DIMMING



© PROGRAMMING CONNECTION



© PROGRAMMING GUIDE and SOFTWARE INTERFACE



Programming by software:

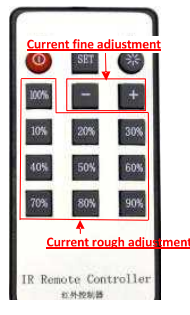
- 1) Read existing setting of the driver
- 2) Change output current
- 3) Set time dimming schedules
- 4) Additional setting:

- set min. Dim. Value
- set signal level can be 5V or 10V
- set soft start

© USING INFRARED CONTROLLER TO RESET OUTPUT CURRENT



Insert the signal terminal into the bigger hole at the driver output side



IR remote controller

Operation instruction:

- 1) Insert cable terminal of the infrared controller into the infrared communication port, which is at DC output side of the 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 driver
 - "+/-": Fine adjustment of output current, increase/decrease 1% each time is pressed
 - "ON": Power on controller
 - "OFF": Set minimum output current of driver
 - "SET": No function

Warning:

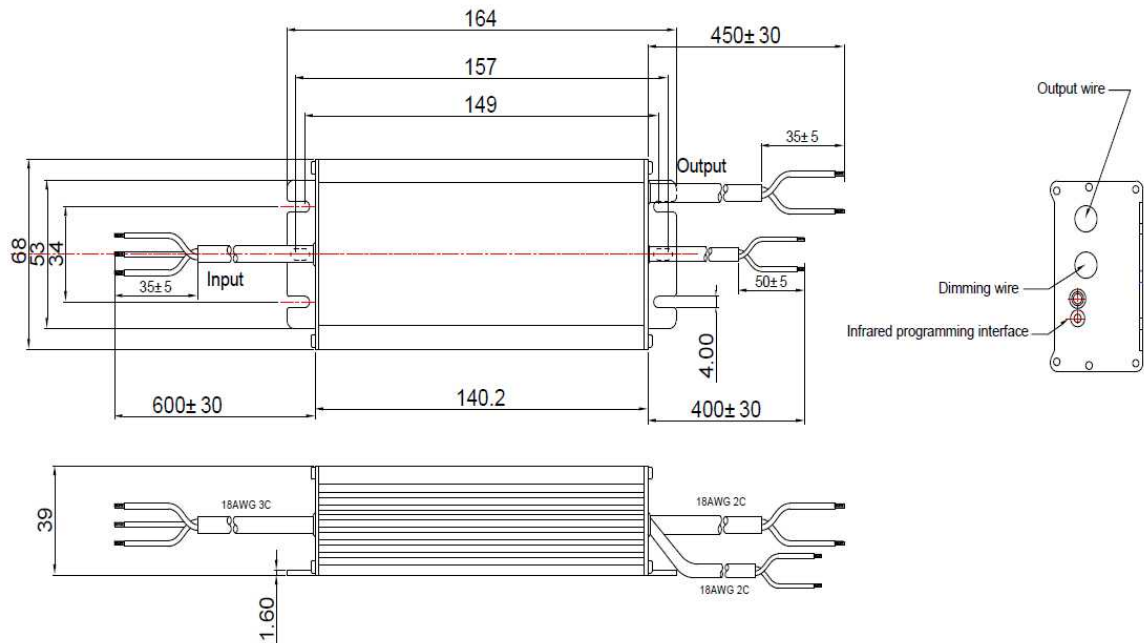
- Please do not hold "+" key to avoid over power protection and unstable output
- Each step of operation should be done within 10s interval, otherwise the controller is powered of automaticaly

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MECHANICAL SPECIFICATIONS

GLDP-075M type



GLDP-075R type

