

GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver



Features:

- European input voltage range: 180-305VAC
- Constant power design, output programmable
- Output current reconfigurable by infrared controller
- Protections: SCP / OVP / OTP
- Surge protection: line-line - 5kV, line-earth – 10kV
- Dimming 3 in 1(1-10VDC, PWM, Timer dimming)
- IP67 design for indoor and outdoor applications
- Suitable for dry / damp / wet locations
- 5 Years warranty

Application:

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



DESCRIPTION

The GLDP-120W series is 120W 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 luminaire designs. LDP 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
							230VAC
GLDP-120X062	120	20 ÷ 62	0.30 ÷ 3.00	1.93 ÷ 3.00	20 ÷ 45V / 2.67A	91%	0.96
GLDP-120X170	120	60 ÷ 170	0.14 ÷ 1.40	0.70 ÷ 1.40	60 ÷ 114V / 1.05A	92%	0.96
GLDP-120X305	120	120 ÷ 305	0.070 ÷ 0.70	0.40 ÷ 0.70	120 ÷ 171V / 0.71A	92%	0.96

Notes:

	X = R	X = M
1.	Example: GLDP-120R062 Programmable, timer dimmable	Example: GLDP-120M062 Programmable, 3-in-1 dimmable
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.	

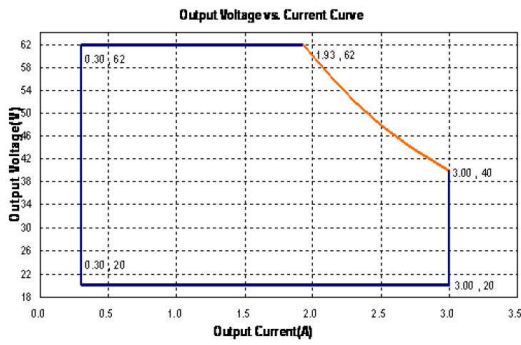
GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver

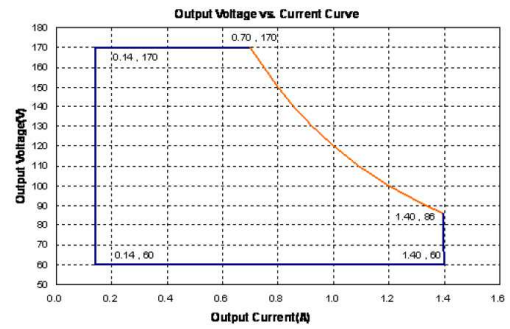


© OPERATING AREA I-V

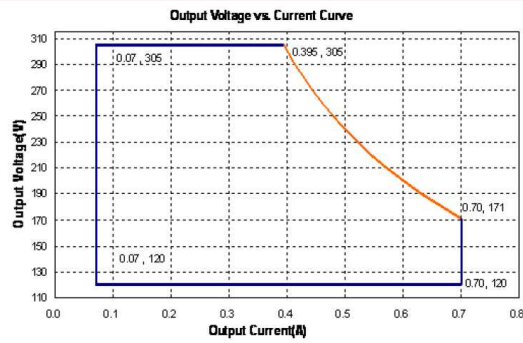
GLDP-120X062



GLDP-120X170



GLDP-120X305



© INPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
INPUT VOLTAGE	180VAC	200 ÷ 277VAC	305VAC	-
INPUT FREQUENCY	47Hz	50/60Hz	63Hz	-
LEAKAGE CURRENT	-	-	0.75mA	277VAC/50Hz
INPUT AC CURRENT	-	-	1.0Amax	200-277VAC & full load
INRUSH CURRENT	-	-	75A	230VAC, full load
POWER FACTOR	0.95	0.96	-	230VAC, full load
THD	-	-	20%	230VAC, 70 ÷ 100% load

GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver



⊙ 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-120X062 GLDP-120X170 GLDP-120X305	0.30A 0.14A 0.07A	-	3.00A 1.40A 0.70A	-
OUTPUT CURRENT SETTING RANGE WITH CONSTANT POWER GLDP-120X062 GLDP-120X170 GLDP-120X305	1.93A 0.70A 0.40A	-	3.00A 1.40A 0.70A	-
TOTAL OUTPUT CURRENT RIPPLE (PK-PK)	-	10%	16%	230VAC & full LED load, ripple is different with difference LED load
STARTUP OVERTHOOT CURRENT	-	-	10%	200 ~ 277VAC & 100% load, load is LED
NO LOAD OUTPUT VOLTAGE GLDP-120X062 GLDP-120X170 GLDP-120X305	-	-	80V 190V 340V	-
LINE REGULATION	-	-	1%	25°C ± 10°C ambient temperature, input voltage changes from 200VAC to 277VAC
LOAD REGULATION	-	-	3%	25°C ± 10°C ambient temperature, 230 VAC input load changes from 50% to 100%
TURN-ON DELAY TIME	-	-	3s	180VAC, full load
	-	-	0.5s	230VAC, full load

⊙ GENERAL SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
EFFICIENCY AT 230VAC GLDP-120X062 I _o = 1.93A I _o = 3.00A GLDP-120X170 I _o = 0.70A I _o = 1.40A GLDP-120X305 I _o = 0.40A I _o = 0.70A	89% 89%	91% 91%	-	25°C ambient temperature, full load
MTBF	-	200 000 hours	-	230VAC, 80% load (MIL-HDBK-217F)
LIFETIME	-	50 000 hours	-	230VAC, 100% load, 70°C case temperature, refer to lifetime VS T _c curve for details
OPERATING CASE TEMPERATURE FOR SAFETY T_{c_s}	-40°C	-	+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)	178 x 68 x 39mm			-
NET WEIGHT	755 ± 50g / pcs.			-
PACKAGE (L x W x H)	500 x 310 x 160mm; Gross Weight: 8.65kg; 10pcs/ctn			-

GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver



© DIMMING

PARAMETER		Min.	Typ.	Max.	Notes
0-5 / 0-10V ABSOLUTE MAXIMUM VOLTAGE ON THE V_{DIM} (+) PIN		-	5V/10V	-	-
0-5 / 0-10V SOURCE CURRENT ON THE V_{DIM} (+) PIN		-	-	2mA	-
DIMMING OUTPUT RANGE	GLDP-120X062 GLDP-120X170 GLDP-120X305	10% I_{MAX}	-	100% I_{MAX}	$I_{max}=3.00A$ $I_{max}=1.40A$ $I_{max}=0.70A$
	GLDP-120X062 GLDP-120X170 GLDP-120X305	0.30A 0.14A 0.07A	-	3.00A 1.40A 0.70A	
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	-	10V	
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	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

GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver

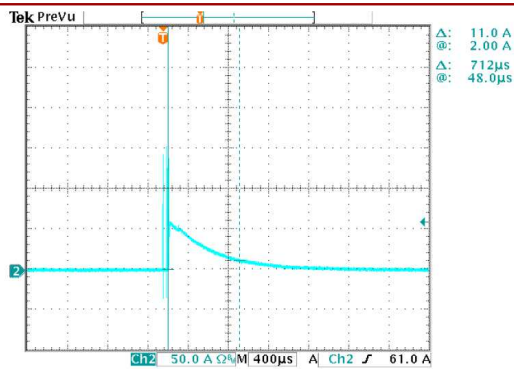


© EMC STANDARDS

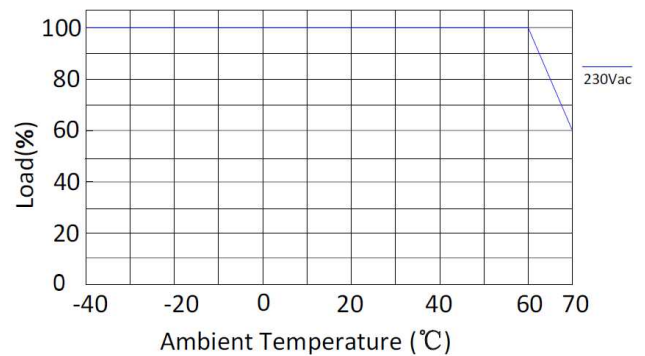
EMC CATEGORY	COUNTRY / TERRITORY	STANDARDS
CCC	China	GB17743
		GB17625.1
CE	Europe	EN55015
		EN61000-3-2
		EN61000-3-3
		EN61547
KC	South Korea	K61547
		K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

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.

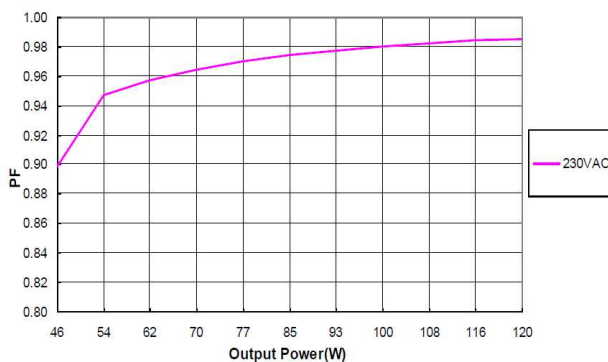
© INRUSH CURRENT WAVEFORM



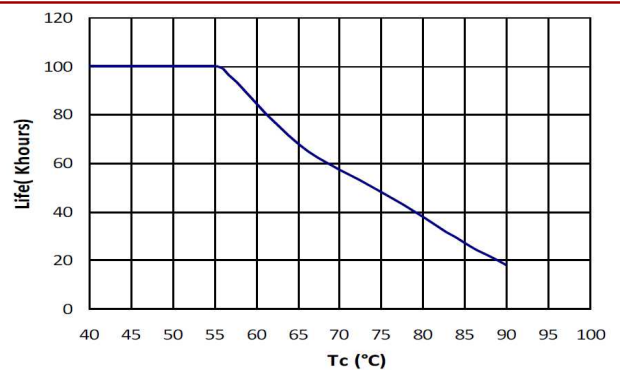
© DERATING CURVE



© POWER FACTOR vs. LOAD CURVE



© LIFETIME vs. CASE TEMPERATURE CURVE

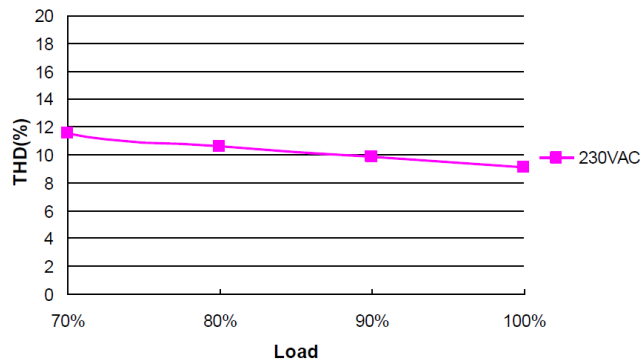


GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver

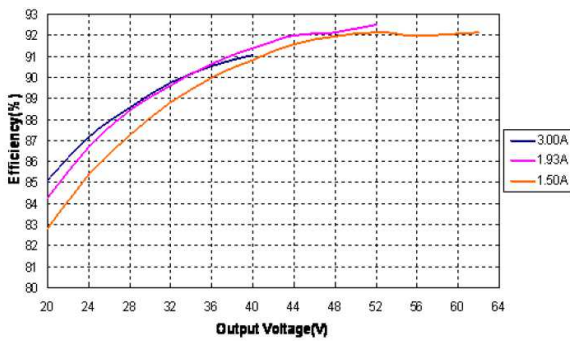


© THD vs. LOAD CURVE

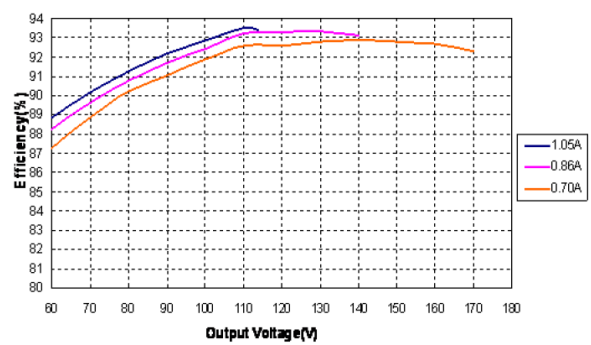


© EFFICIENCY vs. LOAD CURVE

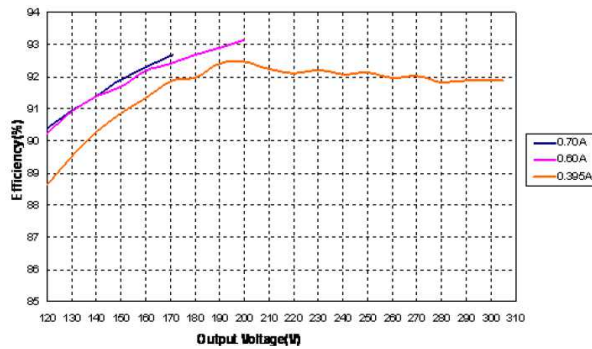
GLDP-120X062



GLDP-120X170



GLDP-120X305



© 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.

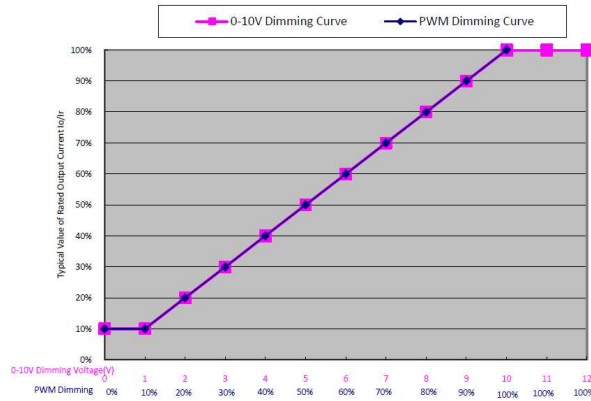
GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver

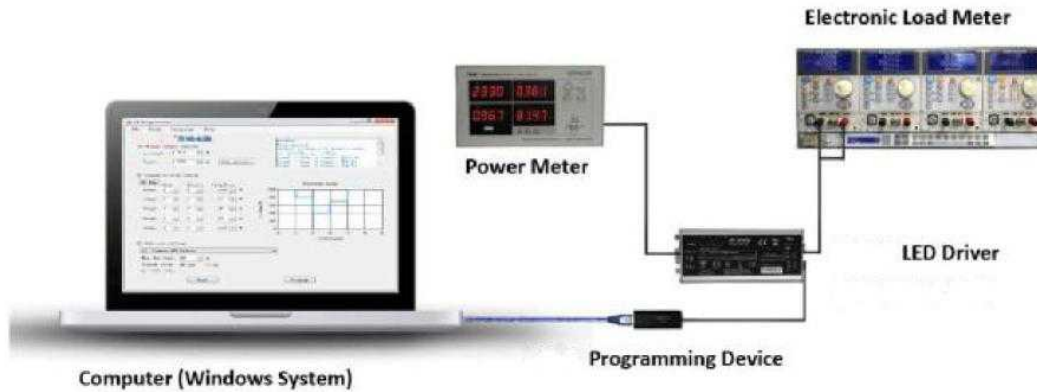


© 0-10V / PWM DIMMING

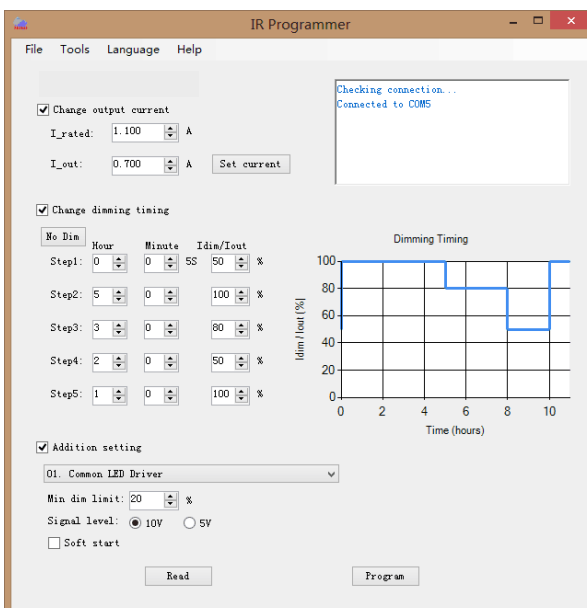
0-10V/PWM Dimming Curve



© 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

GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver

© 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 automaticcaly

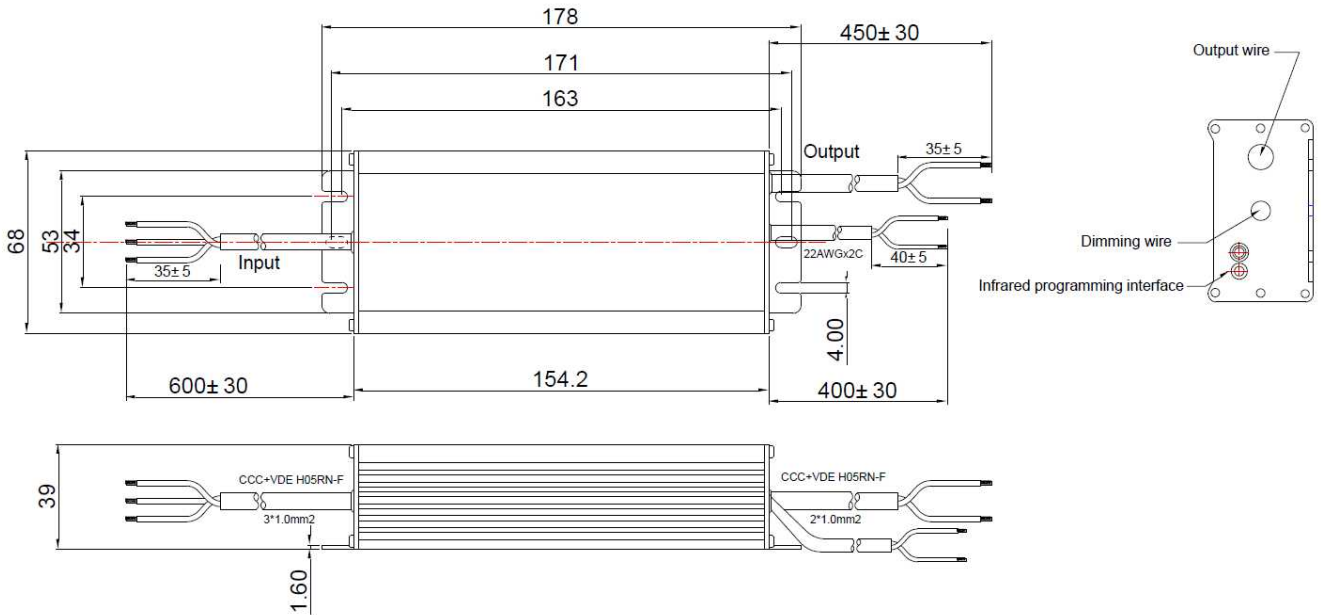
GLDP-120 series

120W Programmable Constant Current with Constant Power Output LED Driver



© MECHANICAL SPECIFICATIONS

GLDP-120M type



GLDP-120R type

