

GLTP-100 circular series

100W Constant Current with Constant Power output LED High Bay Driver



Features:

- Universal AC input/Full range up to 305VAC
- Constant power design with adjustable output current level
- Built-in active PFC function
- Protections: Short Circuit / Over Current / Over voltage / Over Temperature
- Innovative Over Temperature protection type: decrease power instead shut off or hiccup mode: LED still lights on but with lower luminosity
- Cooling by free air convection
- Surge immunity: Differential Mode - 4kV, Common Mode – 6kV
- High efficiency up to 92%
- Dimming 2 in 1(0-10V, PWM, model GLTP-100M)
- Output current adjustable via internal potentiometer
- IP65 design for indoor and outdoor applications
- 5 Years warranty

Application:

- Industrial LED lighting



DESCRIPTION

The GLTP-100W series is especially designed for industrial lighting application. This series takes constant power design, supports 0-10V and PWM dimming. The output adapts wide load range and the parameter can be adjusted through internal potentiometer. The circular integrated structure enables perfect match to industrial lighting fixtures and performs excellent heat dissipation to meet the industrial lighting demand.

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
GLTP-100X036	100	14 ÷ 36	2.50 ÷ 3.57	2.78 ÷ 3.57	14÷ 36VDC / 2.78A	90%	0.99	0.96
GLTP-100X054	100	21 ÷ 54	1.66 ÷ 2.38	1.85 ÷ 2.38	21÷ 54VDC / 1.85A	91%	0.99	0.96
GLTP-100X071	100	27 ÷ 71	1.26 ÷ 1.85	1.40 ÷ 1.85	27 ÷ 71VDC / 1.40A	91%	0.99	0.96
GLTP-100X143	100	48 ÷ 143	0.63 ÷ 1.05	0.70 ÷ 1.05	48 ÷ 143VDC / 0.70A	92%	0.99	0.96

Notes:

	X = V	X = M
1.	Example: GLTP-100V036 Output current adjustable	Example: GLTP-100M036 Output current adjustable, dimming function (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.	

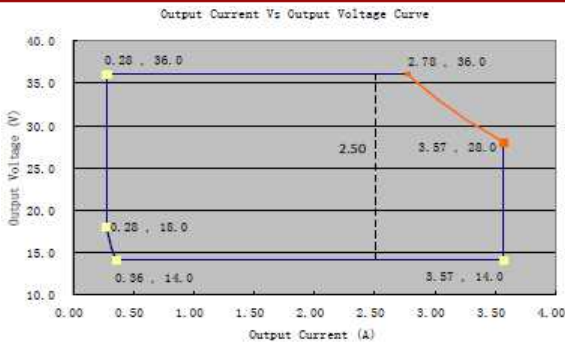
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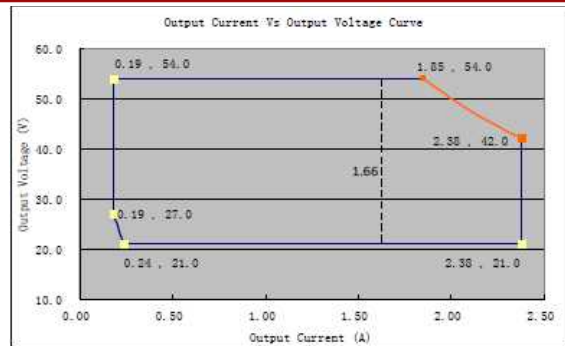


© OPERATING AREA I-V

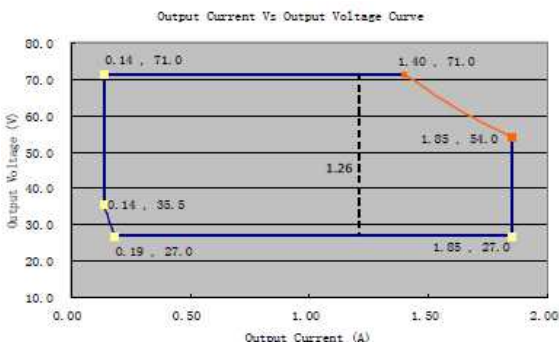
GLDP-100X036



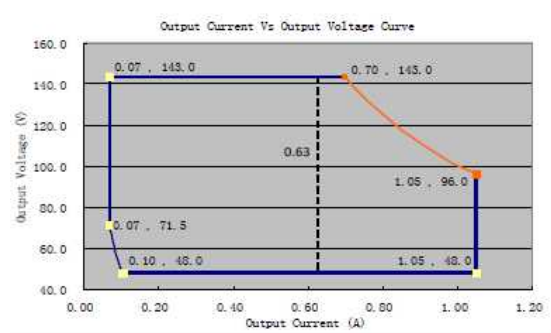
GLDP-100X054



GLDP-100X071



GLDP-100X143



© 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	-	-	1.5Amax	100-277VAC & full load
INRUSH CURRENT	-	-	75A	230VAC, full load
POWER FACTOR	0.95	0.96	-	230VAC, full load
THD	-	-	20%	115-277VAC, 75 ÷ 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})				
GLTP-100X036	2.50A	-	3.57A	
GLTP-100X054	1.66A	-	2.38A	
GLTP-100X071	1.26A	-	1.83A	
GLTP-100X143	0.63A	-	1.05A	
OUTPUT CURRENT SETTING RANGE WITH CONSTANT POWER				
GLTP-100X036	2.87A	-	3.57A	
GLTP-100X054	1.85A	-	2.38A	
GLTP-100X071	1.40A	-	1.85A	
GLTP-100X143	0.70A	-	1.05A	

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TOTAL OUTPUT CURRENT RIPPLE (PK-PK)	-		10%	230VAC & full LED load, ripple is different with difference LED load
STARTUP OVERTHROOT CURRENT	-	-	10%	115 ~ 277VAC & 100% load, load is LED
NO LOAD OUTPUT VOLTAGE GLTP-100X036 GLTP-100X054 GLTP-100X071 GLTP-100X143	-	-	50V 80V 90V 160V	-
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	-	-	3s	115VAC, full load
	-	-	0.5s	230VAC, full load

⊙ GENERAL SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes	
EFFICIENCY AT 115VAC					
GLTP-100X036 I _o = 2.87A	86%	88%		25°C ambient temperature, full load	
I _o = 3.57A	86%	88%			
GLTP-100X054 I _o = 1.85A	87%	89%	-		
I _o = 2.38A	86%	88%			
GLTP-100X071 I _o = 1.40A	86%	88%			
I _o = 1.85A	87%	89%			
GLTP-100X143 I _o = 0.70A	88%	90%			
I _o = 1.05A	88%	90%			
EFFICIENCY AT 230VAC					
GLTP-100X036 I _o = 2.87A	89%	91%			25°C ambient temperature, full load
I _o = 3.57A	88%	90%			
GLTP-100X054 I _o = 1.85A	89%	91%	-		
I _o = 2.38A	89%	91%			
GLTP-100X071 I _o = 1.40A	89%	91%			
I _o = 1.85A	89%	91%			
GLTP-100X143 I _o = 0.70A	90%	92%			
I _o = 1.05A	89%	92%			
EFFICIENCY AT 277VAC					
GLTP-100X036 I _o = 2.87A	89%	91%		25°C ambient temperature, full load	
I _o = 3.57A	88%	90%			
GLTP-100X054 I _o = 1.85A	89%	91%	-		
I _o = 2.38A	89%	91%			
GLTP-100X071 I _o = 1.40A	89%	91%			
I _o = 1.85A	89%	91%			
GLTP-100X143 I _o = 0.70A	90%	92%			
I _o = 1.05A	89%	92%			
MTBF	-	200 000 hours	-		230VAC, 80% load (MIL-HDBK-217F)

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PARAMETER	Min.	Typ.	Max.	Notes
LIFETIME	-	50 000 hours	-	230VAC, 100% load, 70°C case temperature, refer to lifetime VS Tc 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: 20% to 95% RH
DIMENSIONS (D x H)	φ130 x H69.5mm			-
NET WEIGHT	950 ± 50g / pcs.			-
PACKAGE (L x W x H)	490 x 370 x 175mm; 12pcs/ctn			-

© DIMMING

PARAMETER	Min.	Typ.	Max.	Notes	
0-10V ABSOLUTE MAXIMUM VOLTAGE ON THE V _{DIM} (+) PIN	0V	-	10V	-	
0-10V SOURCE CURRENT ON THE V _{DIM} (+) PIN	-	-	2mA	-	
DIMMING OUTPUT RANGE	GLTP-100X036 GLTP-100X054 GLTP-100X071 GLTP-100X143	10% I _{MAX}	-	100% I _{MAX}	
	GLTP-100X036 GLTP-100X054 GLTP-100X071 GLTP-100X143	0.36A 0.24A 0.19A 0.11A	-	3.57A 2.38A 1.85A 1.05A	
RECOMMENDED DIMMING RANGE FOR 0-10V	0V	-	10V	Default 0-10V / 10V PWM Dimming	
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)

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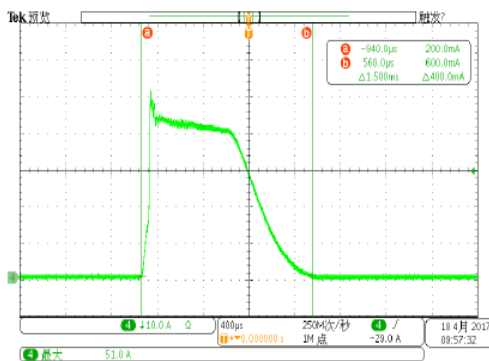
KC	South Korea	K61347-1
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		K62384
PSE	Japan	J61347-1
		J61347-2-13
SAA	Australia	AS/NZS IEC61347-2-13
		AS/NZS IEC61347.1

© EMC STANDARDS

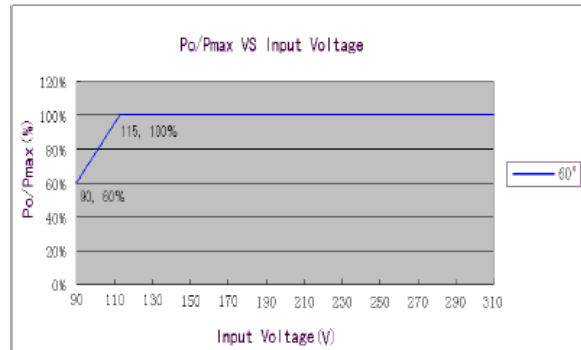
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		EN61000-3-2
		EN61000-3-3
		EN61547
KC	South Korea	K61547
		K00015
PSE	Japan	J55015
FCC	USA	FCC part 15

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



© P_o/P_{MAX} vs. INPUT VOLTAGE CURVE

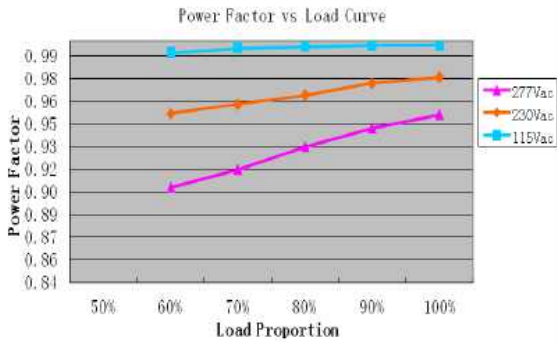


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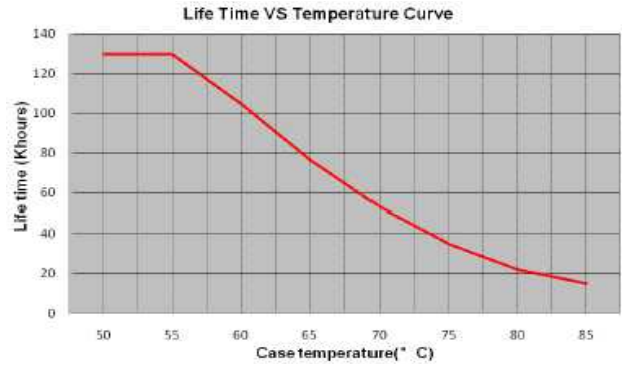
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© POWER FACTOR vs. LOAD CURVE

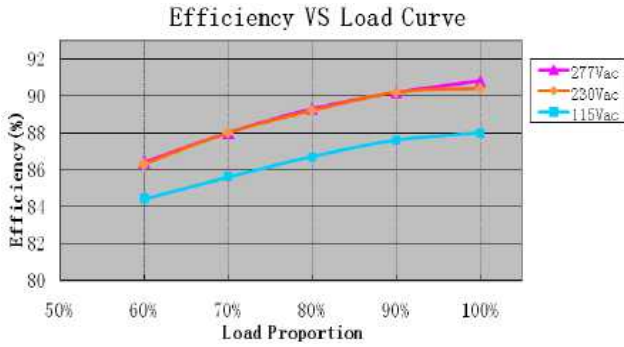


© LIFETIME vs. CASE TEMPERATURE CURVE



© EFFICIENCY vs. LOAD CURVE

GLTP-100X036 (Vin = 115VAC)



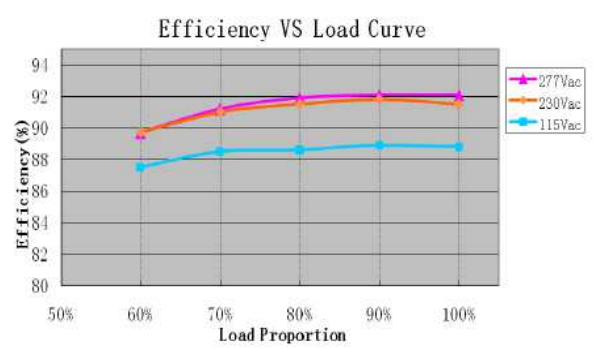
GLTP-100X036 (Vin = 230VAC)



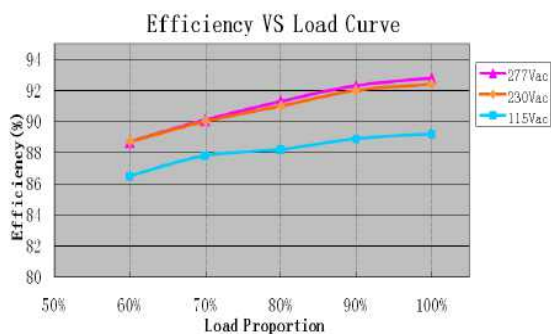
GLTP-100X054 (Vin = 115VAC)



GLTP-100X054 (Vin = 230VAC)



GLTP-100X071 (Vin = 115VAC)



GLTP-100X071 (Vin = 230VAC)

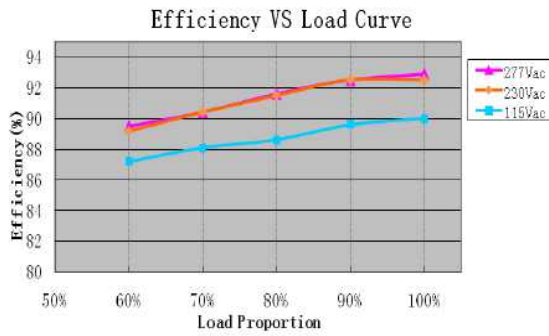


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GLTP-100X143 (Vin = 115VAC)



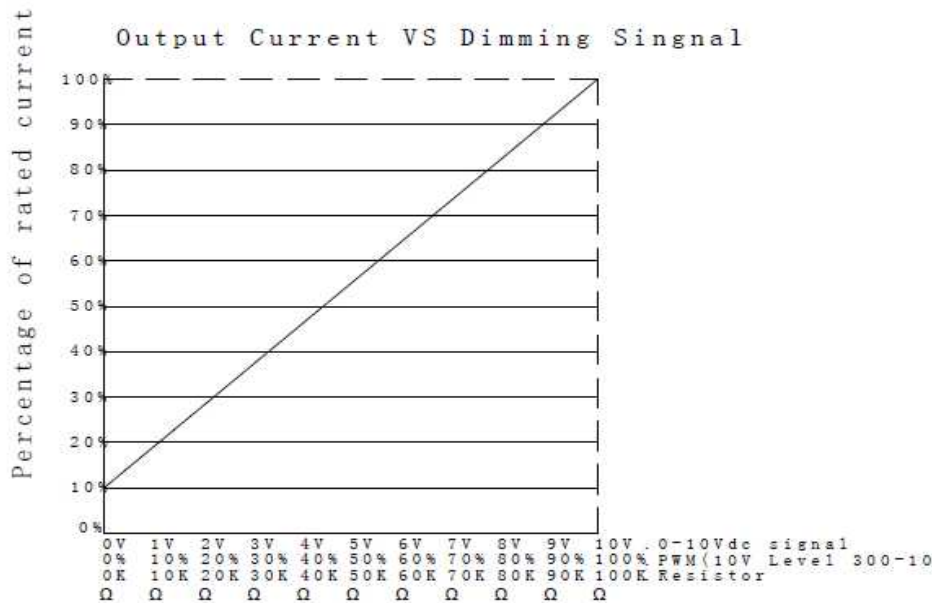
GLTP-100X143 (Vin = 230VAC)



© PROTECTIONS

PARAMETER	NOTES
OVER TEMPERATURE PROTECTION	Decreases output current, returning to normal operation after over temperature is removed. The max. Derating could be 20%.
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

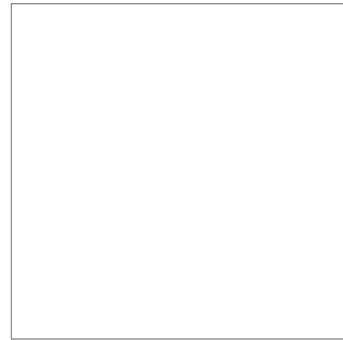
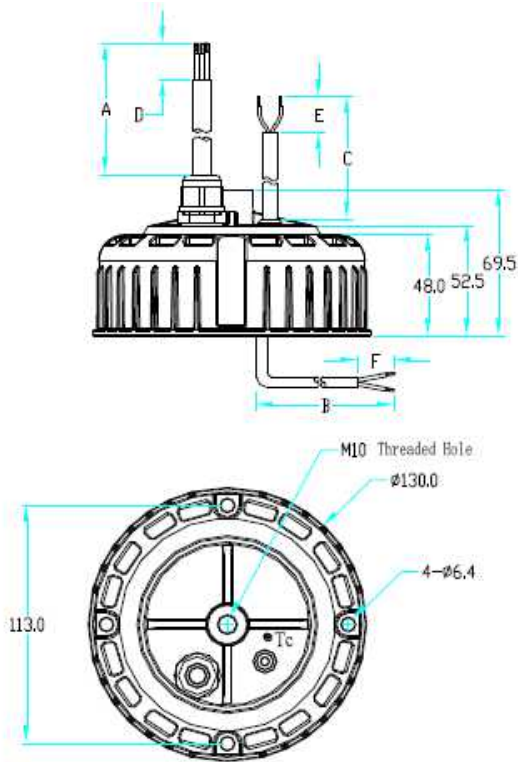


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© MECHANICAL SPECIFICATIONS

GLTP-100M type



WIRE	SPEC	NOTE
INPUT	3C 18AWG Length = 300± 20mm; AC/L -> brown, AC/N -> blue, GND -> yellow/green	Wire A
OUTPUT	2C 18AWG Length = 300± 20mm; V+ -> brown V- -> blue	Wire B
DIMMING	2C 18AWG Length = 300± 20mm; DIM+ -> red, DIM- -> black	Wire C

NOTE: GLTP-100V HAS NO DIMMING WIRE