

GLTP-160 circular series

160W 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 91%
- Dimming 2 in 1(0-10V, PWM, model GLTP-160M); DALI dimming (model GLTP-160D)
- Output current adjustable via internal potentiometer
- IP65 design for indoor and outdoor applications
- 5 Years warranty

Application:

- Industrial LED lighting



DESCRIPTION

The GLTP-160W 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-160X036	160	14 ÷ 36	4.00 ÷ 5.71	4.44 ÷ 5.71	14÷ 36VDC / 4.44A	90%	0.99	0.96
GLTP-160X062	160	21 ÷ 62	2.20 ÷ 3.80	2.96 ÷ 3.80	21÷ 62VDC / 2.96A	91%	0.99	0.96

Notes:

	X = V	X = M	X = D
1.	Example: GLTP-160V036	Example: GLTP-160M036	Example: GLTP-160D036
	Output current adjustable	Output current adjustable, dimming function (0-10V, PWM)	DALI dimming function, output current adjustable
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.		

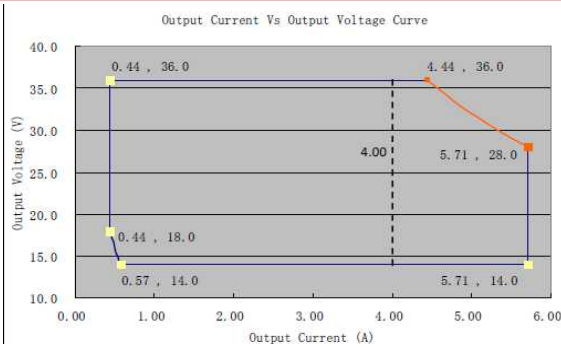
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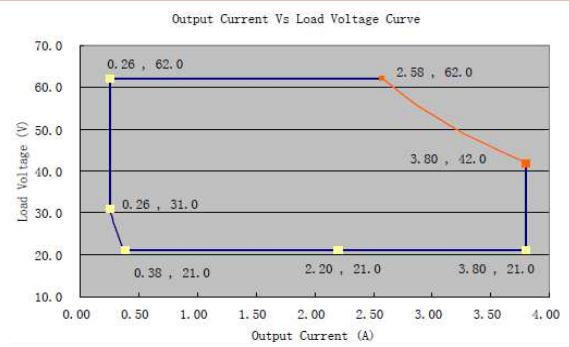


OPERATING AREA I-V

GLTP-160X036



GLTP-160X062



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	-	-	2.0Amax	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-160X036	4.00A	-	5.71A	-
GLTP-160X062	2.20A	-	3.80A	-
OUTPUT CURRENT SETTING RANGE WITH CONSTANT POWER				
GLTP-160X036	4.44A	-	5.71A	-
GLTP-160X062	2.58A	-	3.80A	-
TOTAL OUTPUT CURRENT RIPPLE (PK-PK)	-	-	15%	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				
GLTP-100X036	-	-	50V	-
GLTP-100X054	-	-	80V	-
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

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© GENERAL SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
EFFICIENCY AT 115VAC				
GLTP-160X036				25°C ambient temperature, full load
I _o = 4.44A	87%	89%	-	
I _o = 5.71A	88%	89%		
GLTP-160X062				
I _o = 2.58A	87.5%	89.5%		
I _o = 3.80A	87.5%	89.5%		
EFFICIENCY AT 230VAC				
GLTP-160X036				25°C ambient temperature, full load
I _o = 4.44A	89%	91%	-	
I _o = 5.71A	88%	90%		
GLTP-160X062				
I _o = 2.58A	90%	91.5%		
I _o = 3.80A	90%	91.5%		
EFFICIENCY AT 277VAC				
GLTP-160X036				25°C ambient temperature, full load
I _o = 4.44A	89%	91%	-	
I _o = 5.71A	88%	90%		
GLTP-160X062				
I _o = 2.58A	90%	91.5%		
I _o = 3.80A	90%	91.5%		
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 Tc curve for details
OPERATING CASE TEMPERATURE FOR SAFETY T_{CS}	-40°C	-	+85°C	-
OPERATING CASE TEMPERATURE FOR WARRANTY T_{CW}	-40°C	-	+70°C	-
STORAGE TEMPERATURE	-40°C	-	+85°C	Humidity: 20% to 95% RH
DIMENSIONS (D x H)	φ152 x H69.3mm			-
NET WEIGHT	1350 ± 100g / pcs.			-
PACKAGE (L x W x H)	460 x 390 x 200mm; 8pcs/ctn			-

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Ⓢ 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-160X036	10% I _{MAX}	-	100% I _{MAX}	
	GLTP-160X062				
	GLTP-160X036	0.57A	-	5.71A	
	GLTP-160X062	0.38A	-	3.80A	
DA, DA HIGH LEVEL		9.5V	16V	22.5V	<i>Applicable to GLTP-160D, dimming off</i>
DA, DA LOW LEVEL		-6.5V	0V	6.5V	
RECOMMENDED DIMMING RANGE FOR 0-10V		0V	-	10V	<i>Default 0-10V / 10V PWM Dimming</i>
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
BIS	India	IS 15885(PART 2 / SEC 13)
CUL	Canada	CSA C22.2 No.250
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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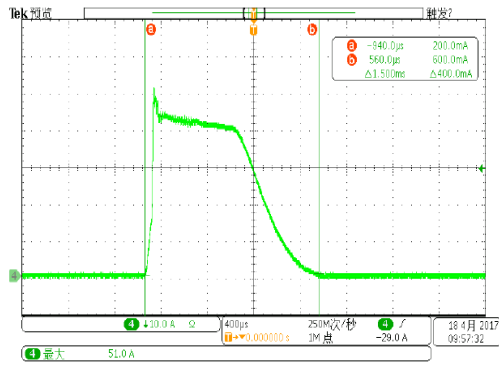
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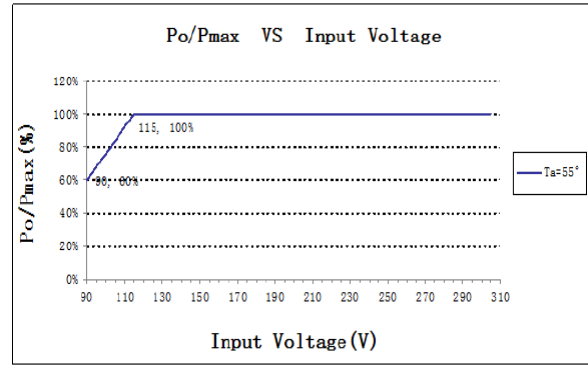
◎ DALI STANDARDS

IEC 62386-101, -102, -207

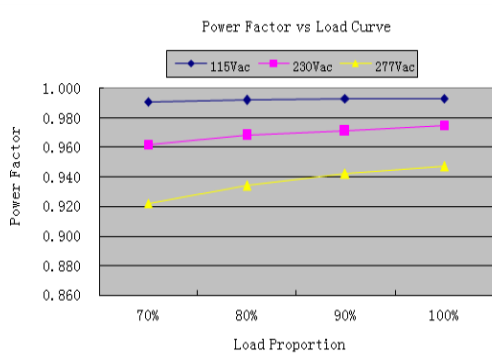
◎ INRUSH CURRENT WAVEFORM



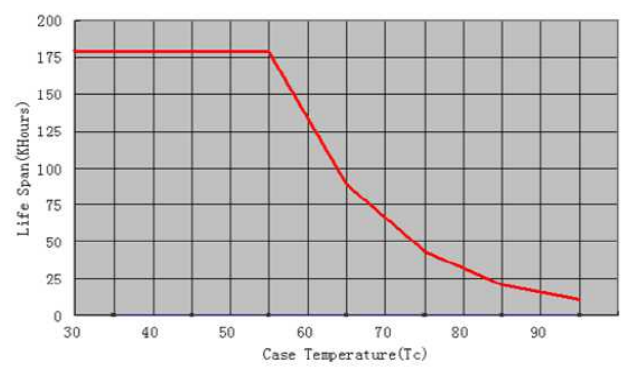
◎ P_o / P_{MAX} VS. INPUT VOLTAGE CURVE



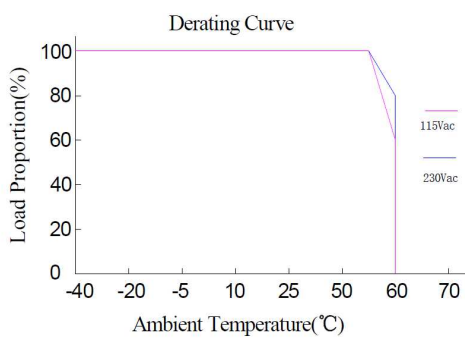
◎ POWER FACTOR vs. LOAD CURVE



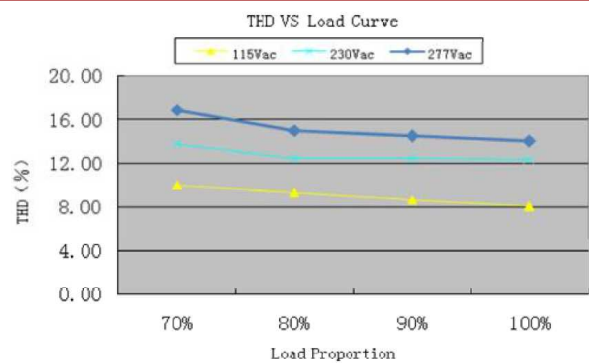
◎ LIFETIME vs. CASE TEMPERATURE CURVE



◎ DERATING CURVE



◎ THD vs. LOAD CURVE



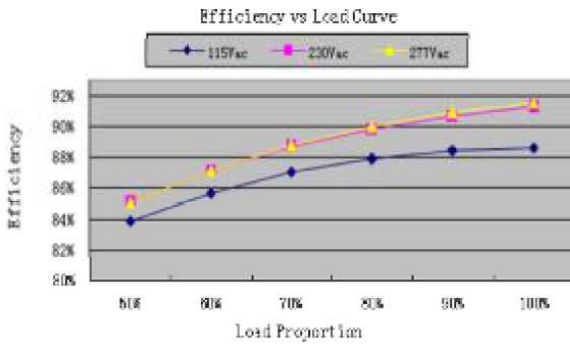
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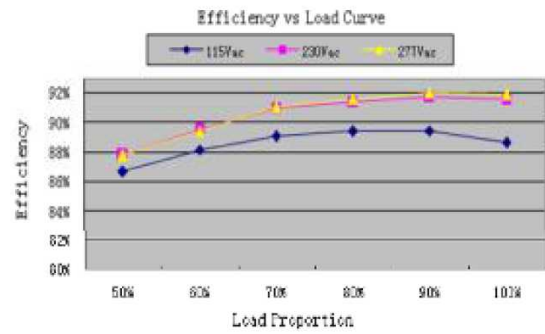


© EFFICIENCY vs. LOAD CURVE

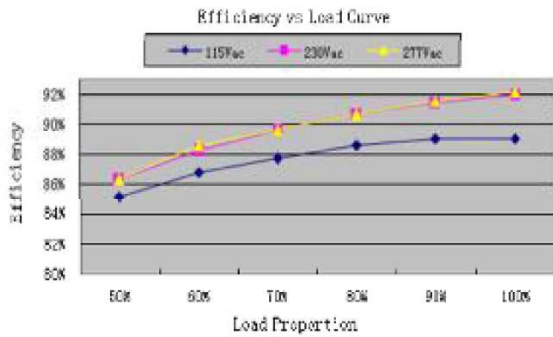
GLTP-160X036 (5.71 A)



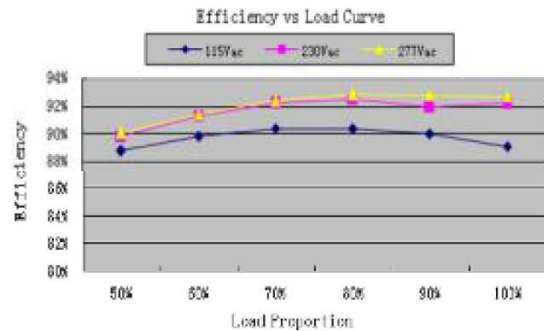
GLTP-160X036 (4.44A)



GLTP-160X062 (3.8A)



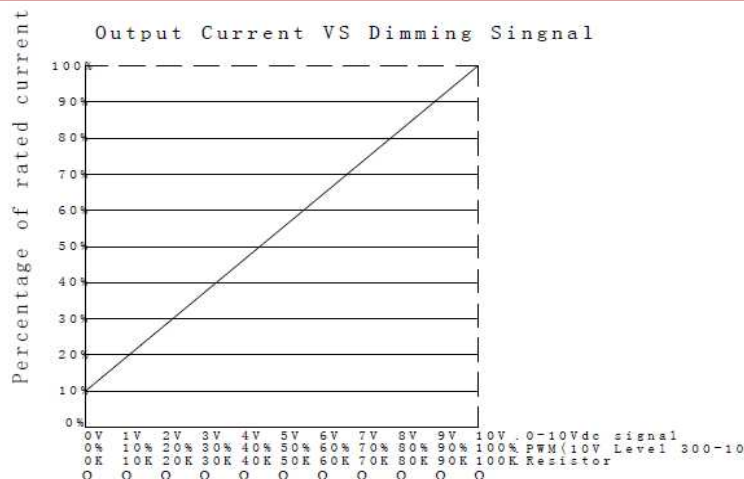
GLTP-160X062 (2.58A)



© 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.

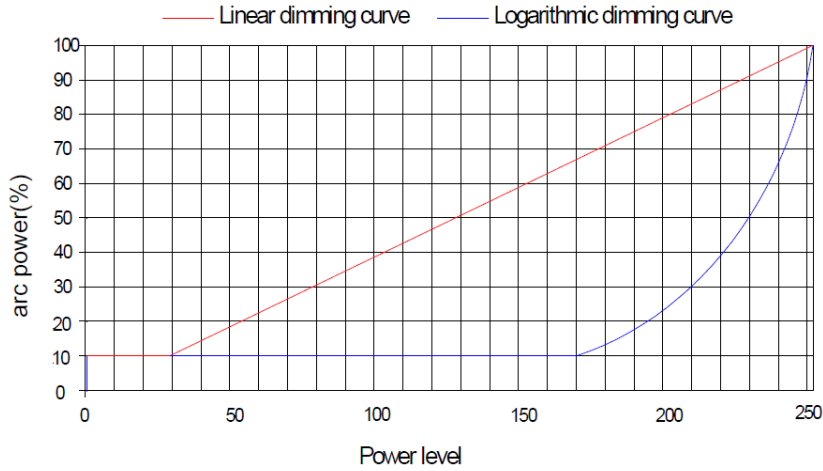
© 0-10V / PWM DIMMING



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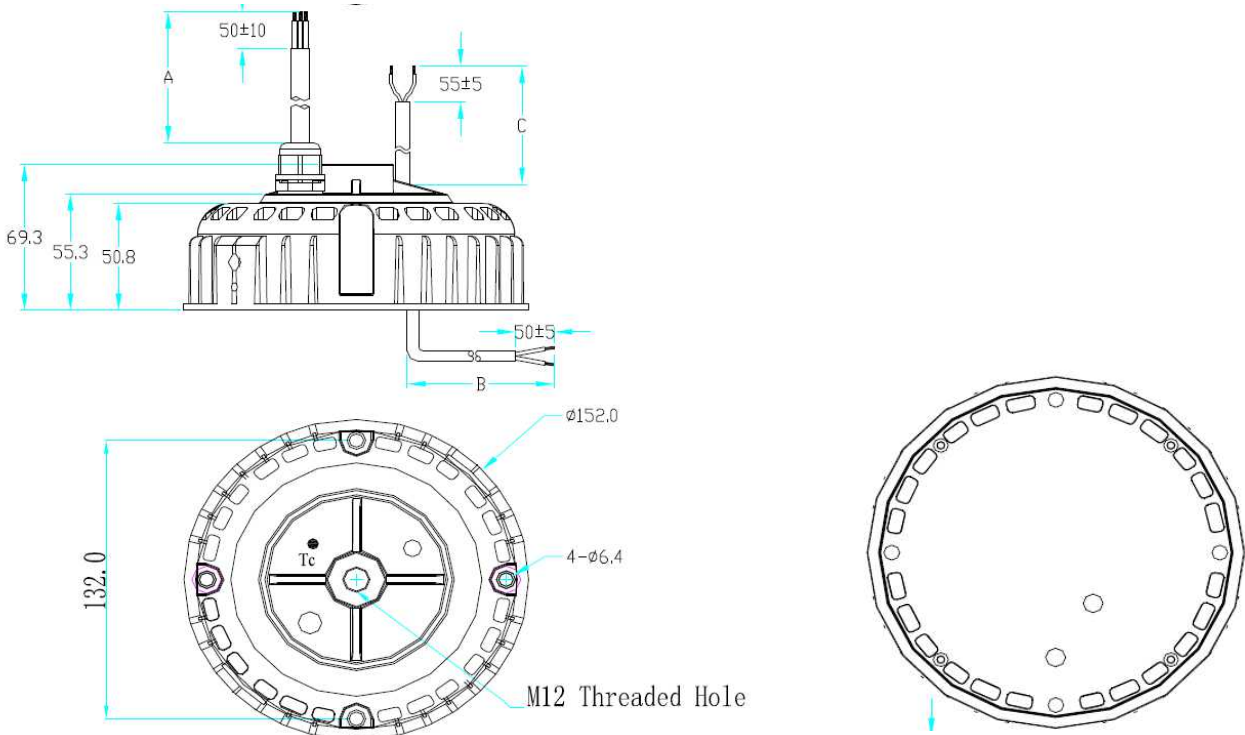
© DALI DIMMING



Note: Factory Default Output Logarithmic Curve

© MECHANICAL SPECIFICATIONS

GLTP-160M type



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

NOTE: GLTP-160V HAS NO DIMMING WIRE