

# GLTP-200 circular series

200W 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-200M); DALI dimming (model GLTP-200D)
- Output current adjustable via internal potentiometer
- IP65 design for indoor and outdoor applications
- 5 Years warranty

## Application:

- Industrial LED lighting



DIM  
 M: Time, 0-10V(10-100%), PWM

6kV  
4kV

IP  
65

CC  
+ CP

PFC

## DESCRIPTION

GLTP-200 series is especially designed for industrial lighting applications. This series takes constant power design, 0-10V and PWM dimming. The output adapts wide load range and 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 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-200X036	200	14 ÷ 36	4.00 ÷ 7.14	5.55 ÷ 7.14	14 ÷ 36VDC / 5.56A	91%	0.99	0.96
GLTP-200X062	200	21 ÷ 62	3.33 ÷ 4.76	3.23 ÷ 4.76	21 ÷ 54VDC / 3.70A	92%	0.99	0.96

## Notes:

	X = V	X = M	X = D
1.	Example: GLTP-200V036 Output current adjustable	Example: GLTP-200M036 Output current adjustable dimming function (0-10V, PWM)	Example: GLTP-200D036 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.		

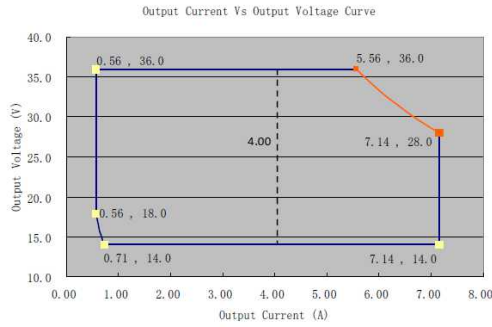
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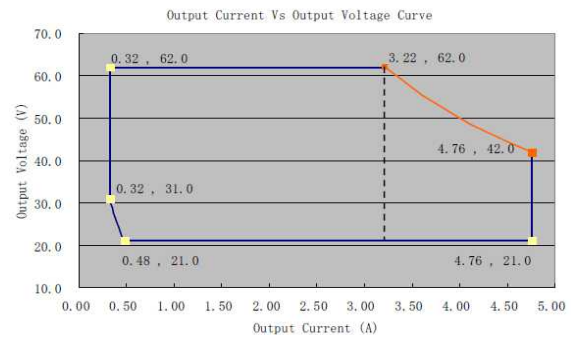


## OPERATING AREA I-V

GLTP-200X036



GLTP-200X062



## INPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
<b>INPUT VOLTAGE</b>	90VAC	100 ÷ 277VAC	305VAC	-
<b>INPUT FREQUENCY</b>	47Hz	50/60Hz	63Hz	-
<b>LEAKAGE CURRENT</b>	-	-	0.75mA	277VAC/50Hz
<b>INPUT AC CURRENT</b>	-	-	2.8Amax	100-277VAC & full load
<b>INRUSH CURRENT</b>	-	-	75A	230VAC, full load
<b>POWER FACTOR</b>	0.95	0.96	-	230VAC, full load
<b>THD</b>	-	-	15%	115-277VAC, 70 ÷ 100% load

## OUTPUT SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
<b>OUTPUT CURRENT TOLERANCE</b>	-5% I <sub>SET</sub>	-	+5% I <sub>SET</sub>	Full load
<b>OUTPUT CURRENT SETTING RANGE (I<sub>SET</sub>)</b>				
GLTP-200X036	4.00A	-	7.14A	-
GLTP-200X062	3.22A	-	4.76A	-
<b>OUTPUT CURRENT SETTING RANGE WITH CONSTANT POWER</b>				
GLTP-200X036	5.56A	-	7.14A	-
GLTP-200X062	3.22A	-	4.76A	-
<b>TOTAL OUTPUT CURRENT RIPPLE (PK-PK)</b>	-	-	10%	230VAC & full LED load, ripple is different with difference LED load
<b>STARTUP OVERTHOOT CURRENT</b>	-	-	10%	115 ~ 277VAC & 100% load, load is LED
<b>NO LOAD OUTPUT VOLTAGE</b>				
GLTP-200X036	-	-	50V	-
GLTP-200X062	-	-	80V	-
<b>LINE REGULATION</b>	-	-	1%	25°C ± 10°C ambient temperature, input voltage changes from 115VAC to 277VAC
<b>LOAD REGULATION</b>	-	-	3%	25°C ± 10°C ambient temperature, 230 VAC input load changes from 50% to 100%
<b>TURN-ON DELAY TIME</b>				
	-	-	3s	115VAC, full load
	-	-	0.5s	230VAC, full load

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## ⊙ GENERAL SPECIFICATIONS

PARAMETER	Min.	Typ.	Max.	Notes
<b>EFFICIENCY AT 115VAC</b>				
GLTP-200X036				25°C ambient temperature, full load
$I_o = 5.56A$	87%	89%		
$I_o = 7.14A$	87%	89%	-	
GLTP-200X062				
$I_o = 3.22A$	89%	91%		
$I_o = 4.76A$	88%	90%		
<b>EFFICIENCY AT 230VAC</b>				
GLTP-200X036				25°C ambient temperature, full load
$I_o = 5.56A$	89%	91%		
$I_o = 7.14A$	88%	91%	-	
GLTP-200X062				
$I_o = 3.22A$	90%	92%		
$I_o = 4.76A$	90%	92%		
<b>EFFICIENCY AT 277VAC</b>				
GLTP-200X036				25°C ambient temperature, full load
$I_o = 5.56A$	89%	91%		
$I_o = 7.14A$	89%	91%	-	
GLTP-200X062				
$I_o = 3.22A$	90%	92%		
$I_o = 4.76A$	90%	92%		
<b>MTBF</b>	-	200 000 hours	-	230VAC, 80% load (MIL-HDBK-217F)
<b>LIFETIME</b>	-	50 000 hours	-	230VAC, 100% load, 70°C case temperature, refer to lifetime VS Tc curve for details
<b>OPERATING CASE TEMPERATURE FOR SAFETY T<sub>cS</sub></b>	-40°C	-	+85°C	-
<b>OPERATING CASE TEMPERATURE FOR SAFETY T<sub>cW</sub></b>	-40°C	-	+70°C	-
<b>STORAGE TEMPERATURE</b>	-40°C	-	+85°C	Humidity: 20% to 95% RH
<b>DIMENSIONS (Dx H)</b>	φ191 x H74.8mm			-
<b>NET WEIGHT</b>	2280 ± 50g / pcs.			-
<b>PACKAGE (L x W x H)</b>	500 x 410 x 240mm; 8pcs/ctn			-

## ⊙ DIMMING

PARAMETER	Min.	Typ.	Max.	Notes	
<b>0-10V ABSOLUTE MAXIMUM VOLTAGE ON THE V<sub>DIM</sub> (+) PIN</b>	0V	-	10V	-	
<b>0-10V SOURCE CURRENT ON THE V<sub>DIM</sub> (+) PIN</b>	-	-	2mA	-	
<b>DIMMING OUTPUT RANGE</b>	GLTP-200X036 GLTP-200X062	10% I <sub>MAX</sub>	-	100% I <sub>MAX</sub>	-
	GLTP-200X036 GLTP-200X062	0.71A 0.48A	-	7.14A 4.76A	
<b>DA, DA HIGH LEVEL</b>	9.5V	16V	22.5V	Applicable to GLTP-200D, dimming off	
<b>DA, DA LOW LEVEL</b>	-6.5V	0V	6.5V		
<b>RECOMMENDED DIMMING RANGE FOR 0-10V</b>	0V	-	10V	Default 0-10V / 10V PWM Dimming	

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<b>PWM<sub>IN</sub> HIGH LEVEL</b>	9.7V	-	10V
<b>PWM<sub>IN</sub> LOW LEVEL</b>	0V	-	0.3V
<b>PWM<sub>IN</sub> FREQUENCY RANGE</b>	250Hz	-	1000Hz
<b>PWM<sub>IN</sub> DUTY CYCLE</b>	1%	-	99%

## © SAFETY STANDARDS

SAFETY CATEGORY	COUNTRY / TERRITORY	STANDARDS
<b>CCC</b>	China	GB19510.1
		GB19510.14
<b>CE</b>	Europe	EN61347-1
		EN61347-2-13
<b>CB</b>	CB Countries	IEC61347-1
		IEC61347-2-13
<b>UL</b>	USA	UL8750
		UL1310 (Class 2 Power Units)
		UL1012
<b>CUL</b>	Canada	CSA C22.2 No.250.13-12
		CSA C22.2 No.223-M91 (Power Supplies with Extra-Low Voltage Class 2 Outputs)
<b>KC</b>	South Korea	K61347-1
		K61347-2-13
		K62384
<b>PSE</b>	Japan	J61347-1
		J61347-2-13
<b>SAA</b>	Australia	AS/NZS IEC61347-2-13
		AS/NZS IEC61347.1

## © EMC STANDARDS

EMC CATEGORY	COUNTRY / TERRITORY	STANDARDS
<b>CCC</b>	China	GB17743
		GB17625.1
<b>CE</b>	Europe	EN55015
		EN61000-3-2
		EN61000-3-3
		EN61547
<b>KC</b>	South Korea	K61547
		K00015
<b>PSE</b>	Japan	J55015
<b>FCC</b>	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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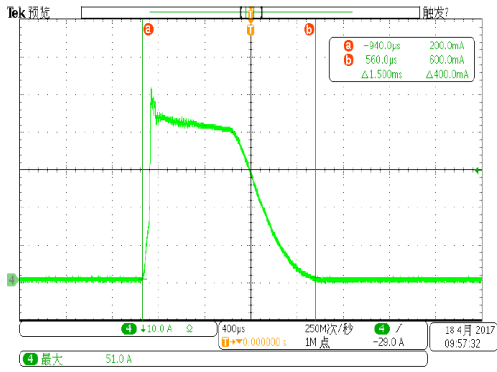
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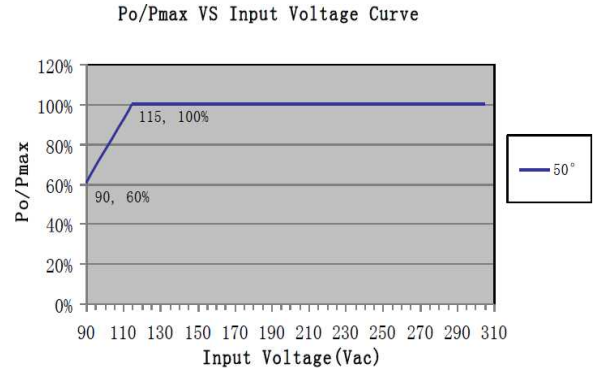
## ◎ DALI STANDARDS

IEC 62386-101, -102, -207

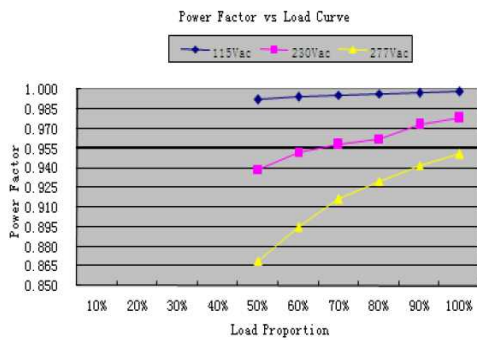
### ◎ INRUSH CURRENT WAVEFORM



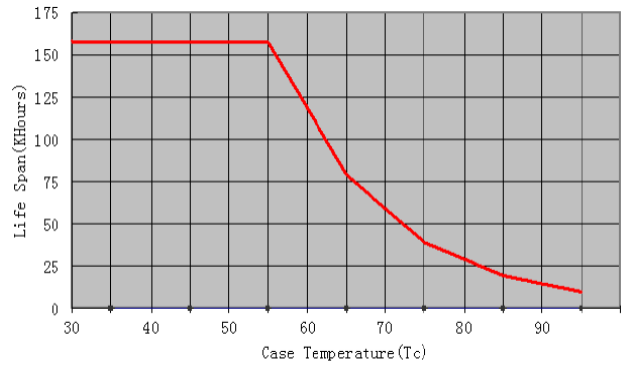
### ◎ $P_O / P_{MAX}$ VS. INPUT VOLTAGE CURVE



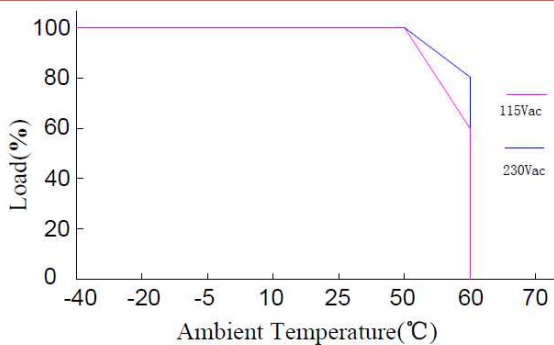
### ◎ POWER FACTOR vs. LOAD CURVE



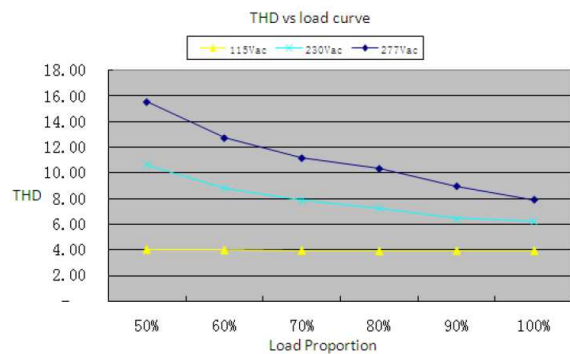
### ◎ LIFETIME vs. CASE TEMPERATURE CURVE



### ◎ DERATING CURVE



### ◎ THD vs. LOAD CURVE



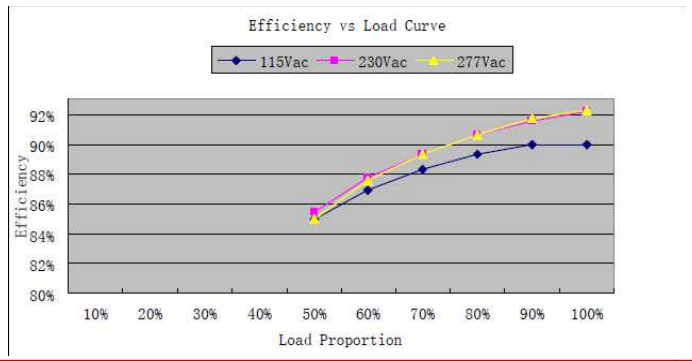
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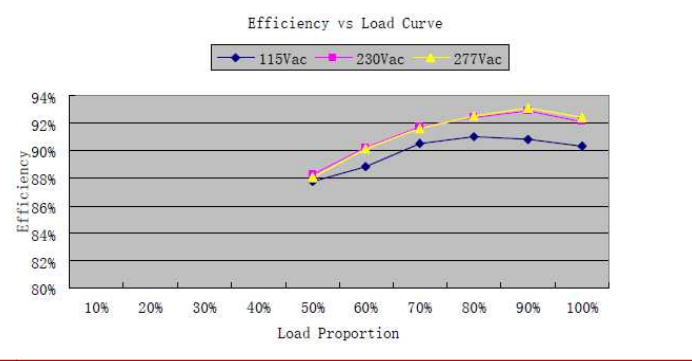


## © EFFICIENCY vs. LOAD CURVE

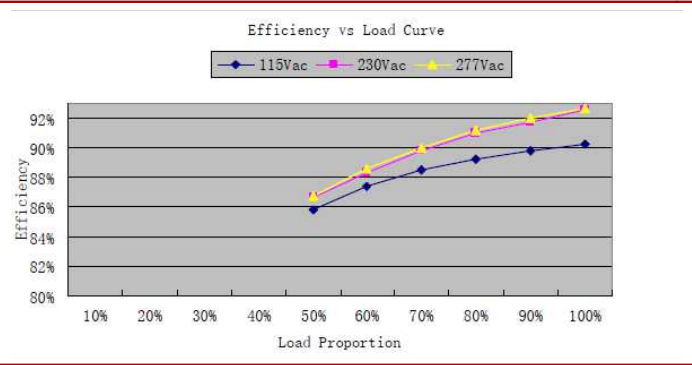
**GLTP-200X036 (Vin = 115VAC)**



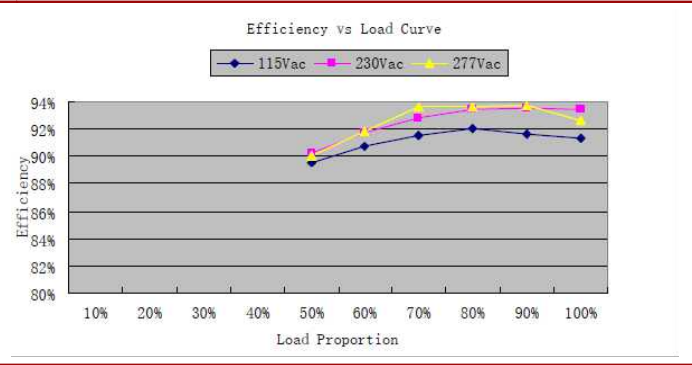
**GLTP-200X036 (Vin = 230VAC)**



**GLTP-200X062 (Vin = 115VAC)**



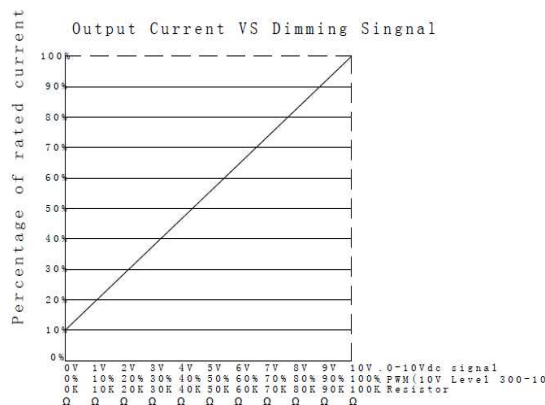
**GLTP-200X062 (Vin = 230VAC)**



## © PROTECTIONS

PARAMETER	NOTES
<b>OVER TEMPERATURE PROTECTION</b>	Decreases output current, returning to normal operation after over temperature is removed. The max. Derating could be 20%.
<b>SHORT CIRCUIT PROTECTION</b>	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.
<b>OVERT VOLTAGE PROTECTION</b>	Run into protection mode when output voltage exceeds limit and return to normal operation when the fault condition is removed.

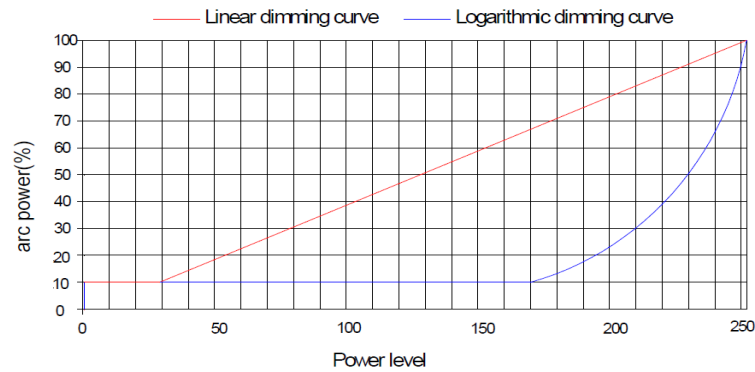
## © 0-10V / PWM DIMMING



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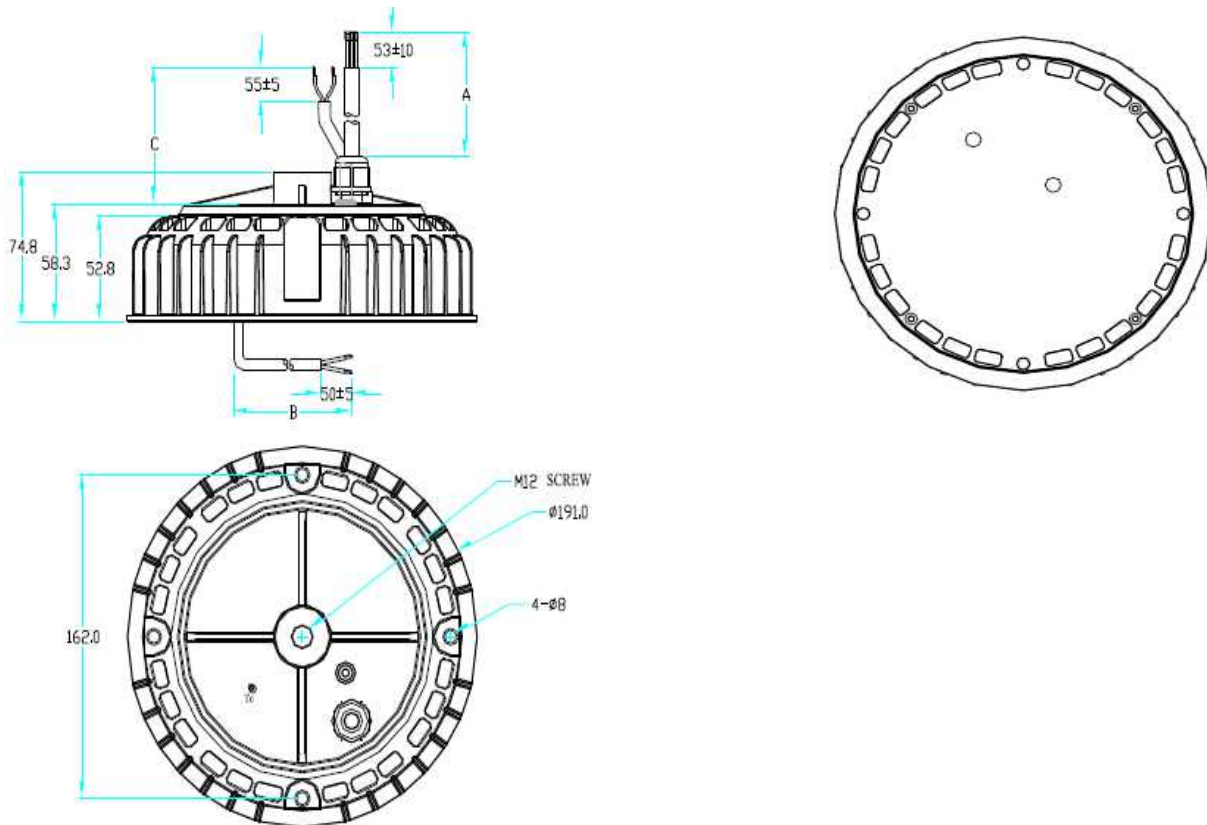
## © DALI DIMMING



Note: Factory Default Output Logarithmic Curve

## © MECHANICAL SPECIFICATIONS

### GLTP-200M and GLTP-200D type



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

NOTE: GLTP-200V HAS NO DIMMING WIRE