

350W High Line Input Programmable LED Driver

350GTH系列规格书

V1.1

2022/8/17

Powerland Signatures				Customer Approval Signature
Prepared	Checked	Approved	Marketing	

Please return us one copy of the document with your approval signature.

请客户确认签字后回传我司此规格承认书。

Powerland Technology Inc.

南京博兰得电子科技有限公司

12F Building A No.6 Yongzhi Road, Qinhuai District, Nanjing, China.

南京市秦淮区永智路6号A栋12层

Email: sales@powerlandtech.com Phone: +86-25-85582306

Features

- Dimming port programming without driver power on
- CC/CV hybrid output
- High efficiency (Max 94%), active power factor correction
- Ultra low THD at light load
- Isolated 0~10V/ PWM/Rset dimming, Dim to off option
- 12V/200mA AUX Output
- CE
- IP65



Description

350W LED Drivers offers digital programmable drivers with wide-range adjustable output current, together with 12V/200mA auxiliary output (optional) for smart lighting.

The output current of this series are programmable, and designed for 0-10V/PWM/Rset dimming applications.

Model Name Definition

350	GTH	36-54	CV	(G)	-XX
Rated Output Power	Series name	Output voltage range	Constant current and constant voltage output	Options: Output with FG line	Options

Specifications

Part Number	Max. Output Power	Programmable Current Region@CC	Output Voltage Range	Programmable Voltage Region@CV	Efficiency @277VAC
350GTH36-54CV(G)	350W	3.89-9.72 A	36-54V	36-54V	93%
350GTH54-80CV(G)	350W	2.59-6.48A	54-80V	54-80V	94%
350GTH80-140CV(G)	350W	1.75-4.38A	80-140V	80-140V	94%
350GTH140-233CV(G)	350W	1-2.5A	140-233V	140-233V	94%
350GTH233-375CV(G)	350W	0.6-1.5 A	233-375V	233-375V	94%

Note: Efficiency value is typical value.

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input AC Voltage	249 Vac	-	528 Vac	
Input DC Voltage	350Vdc	-	746Vdc	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	0.75 mA	At 277Vac / 60Hz input , grounding effectively
Input AC Current	-	-	0.83A	Measured at full load and 480 Vac input.

	-	-	1.43A	Measured at full load and 277 Vac input.
Inrush Current	-	-	35A	At 277Vac input, 25°C cold start,
PF	0.9	-	-	At 277-480Vac, full load
THD	-	-	20%	

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%Io set	-	5%Io set	At 25°C and full load condition
Total Output Current Ripple (pk-pk)	-	-	20%Io max	At 25°C and full load condition, 20 MHz BW
Startup Overshoot Current	-	-	20%Io max	At 25°C and full load condition
No Load Output Voltage	-	58V	-	350GTH36-54CV(G) only
Line Regulation	-	-	±1%	Measured at full load
Load Regulation	-	-	±1%	
Turn-on Delay Time	-	0.8 s	1.5 s	Measured at 277Vac input.
Temperature Coefficient of Io set	-0.06%/°C	-	0.06%/°C	Case temperature = 0°C ~Tc max
12V Auxiliary Output Voltage	11V	12 V	15 V	
12V Auxiliary Output Source Current	0 mA	-	200 mA	Return terminal is "Dim--"
OTP Tc(Note1)	85°C	90°C	100°C	Output current will drop to 50% lowest, or shut down.
SCP				Hiccup mode, latch

Note:12V cannot be connected in parallel.

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Standby power	-	-	1 W	Measured at 277Vac/50Hz; Dimming off
MTBF	-	234,000 Hours	-	Measured at 277Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK- 217F)
Lifetime	-	80,000 Hours	-	Measured at 400Vac input, 80%Load and 75°C case temperature; See lifetime vs. Tc curve for the details
Operating Case Temperature Tc(Note1)	-40°C	-	90°C	
Operating Ambient Temperature Ta	-40°C	-	50°C	At 277-480Vac input.
Storage Temperature	-40°C	-	+85°C	Humidity: 5%RH to 100%RH
Dimensions Inches (L × W × H) Millimeters (L × W × H)	10.31 × 3.31 × 1.54 262 × 84.1 × 39			
Net Weight	-	1.5kg	-	

Note1:There are three points could be maximum Tc point, depending on different Vac input and Vdc output. These three points(Tc,Tc1,Tc2) position are shown in below mechanical drawing.

Dimming Specifications

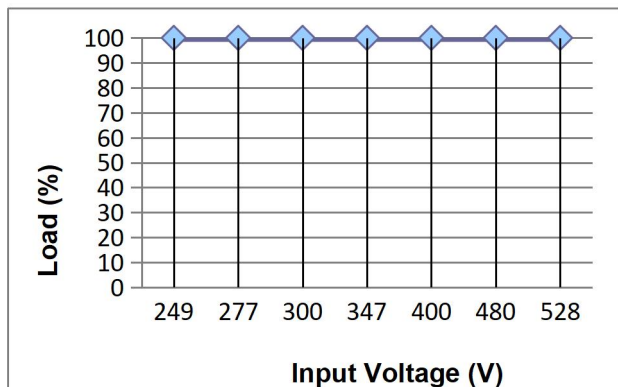
Parameter	Min.	Typ.	Max.	Notes
Absolute Maximum Voltage on the Vdim (+) Pin	-1 V	-	15 V	
Source Current on Vdim (+)Pin	90 uA	100 uA	110 uA	
Dimming Output Range	10%Io set	-	Io set	80%Io max ≤ Io set ≤ 100%Io max
	8%Io max	-	Io set	Io set < 80%Io max
Recommended Dimming Input Range	0 V	-	10 V	Default 0-10V dimming mode.
Dim off Voltage	0.3 V	0.5 V	0.8V	
Dim on Voltage	0.5V	0.7 V	1 V	
Hysteresis	-	0.2 V	-	
PWM_in High Level	9.8 V	10V	10.2 V	PWM is disabled default, please inform us if need this function enable.
PWM_in Low Level	-0.3 V	-	0.6 V	
PWM_in Frequency Range	200 Hz	-	3 KHz	
PWM_in Duty Cycle	1%	-	100%	
PWM Dimming off	3%	5%	7%	
PWM Dimming on	5%	7%	9%	

Safety &EMC Compliance

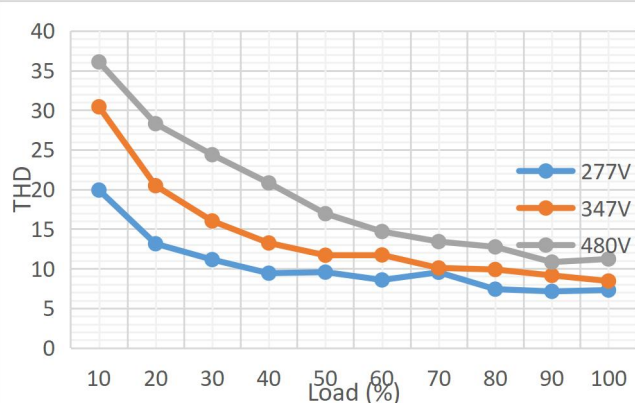
Safety Category	Standard
UL/CUL	UL8750,CAN/CSA-C22.2 No. 250.13-12
EMI Standards	Notes
FCC Part 15	ANSI C63.4:2009 Class B
	This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired Operation.
EMS Standards	Notes
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4	Electrical Fast Transient / Burst-EFT: level 3, criteria A
EN 61000-4-5	Surge Immunity Test: AC Power Line: line to line 4 kV, line to earth 6 kV
EN 61000-4-6	Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8	Power Frequency Magnetic Field Test
EN 61000-4-11	Voltage Dips
EN 61547	Electromagnetic Immunity Requirements Applies To Lighting Equipment

Performance Curve

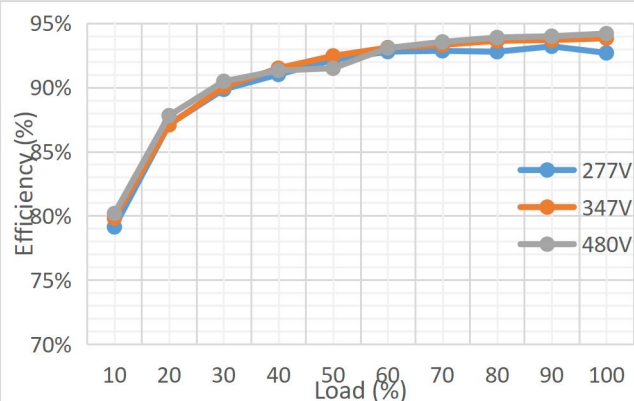
Input Voltage Derating Curve



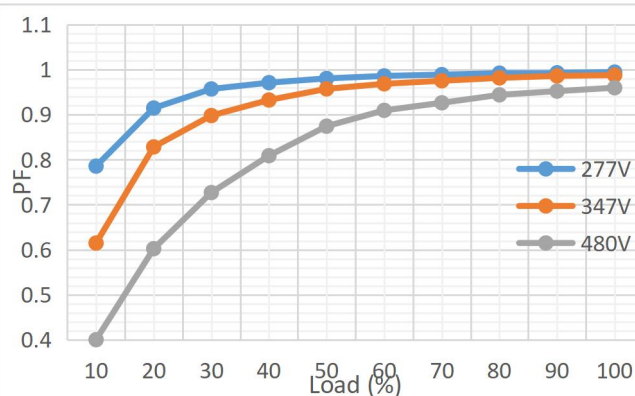
Total Harmonics Vs Different Loads



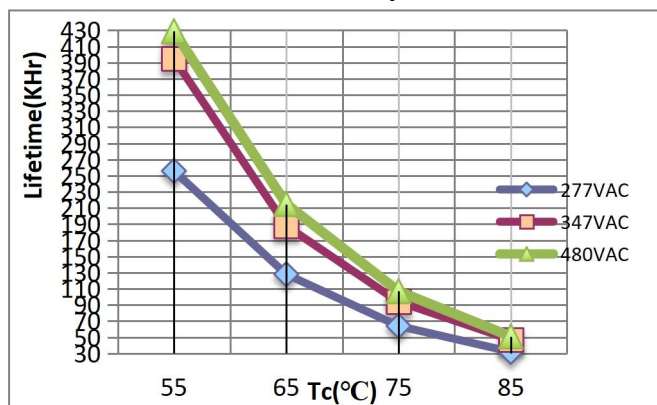
Efficiency Vs Different Loads



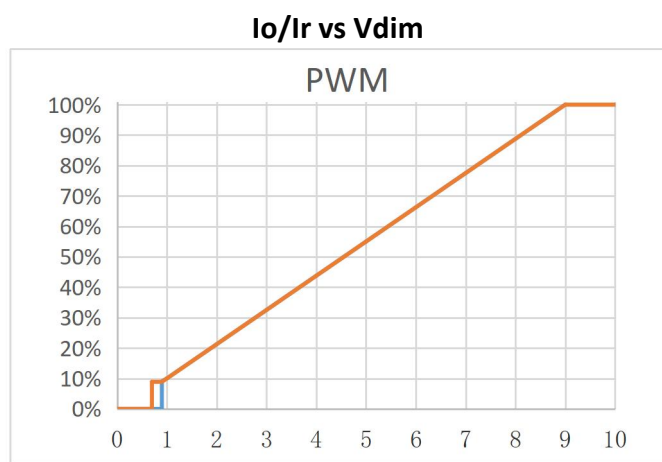
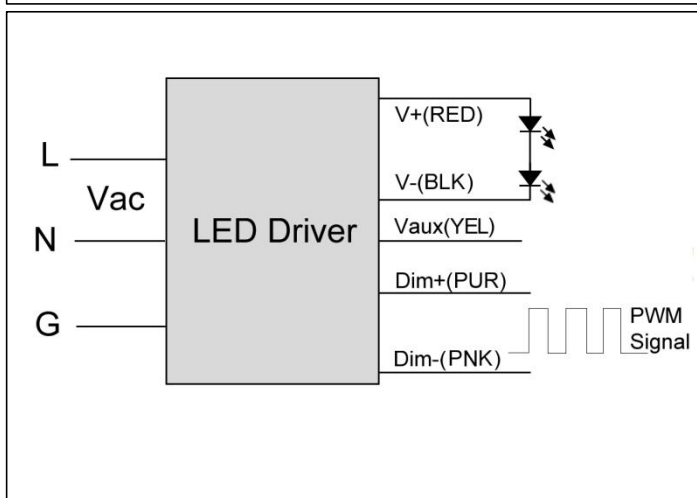
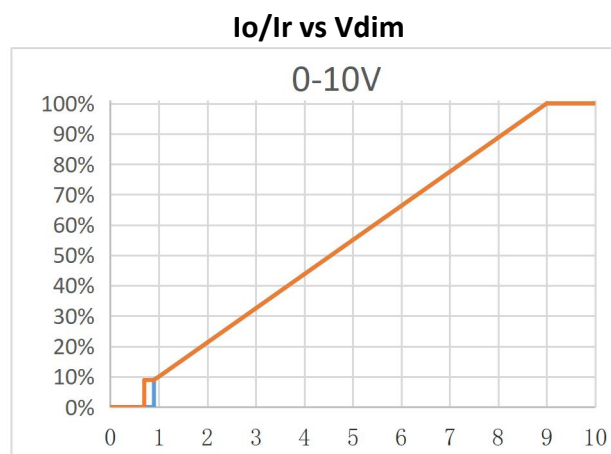
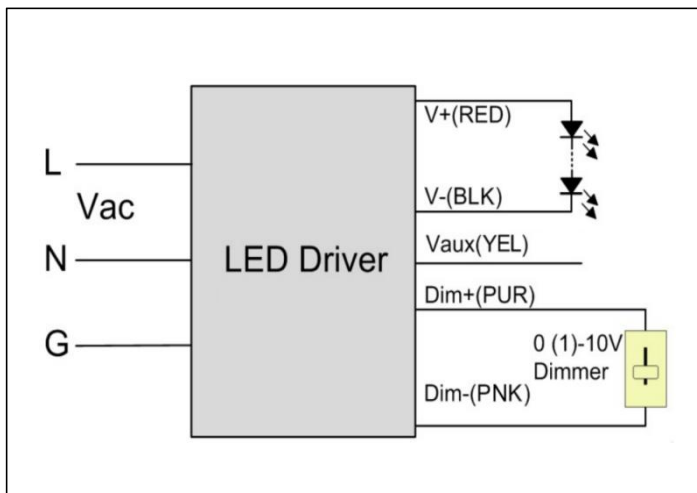
Power Factor Vs Different Loads



Life Vs Shell Temperature



0-10V Analog Dimming & PWM Dimming

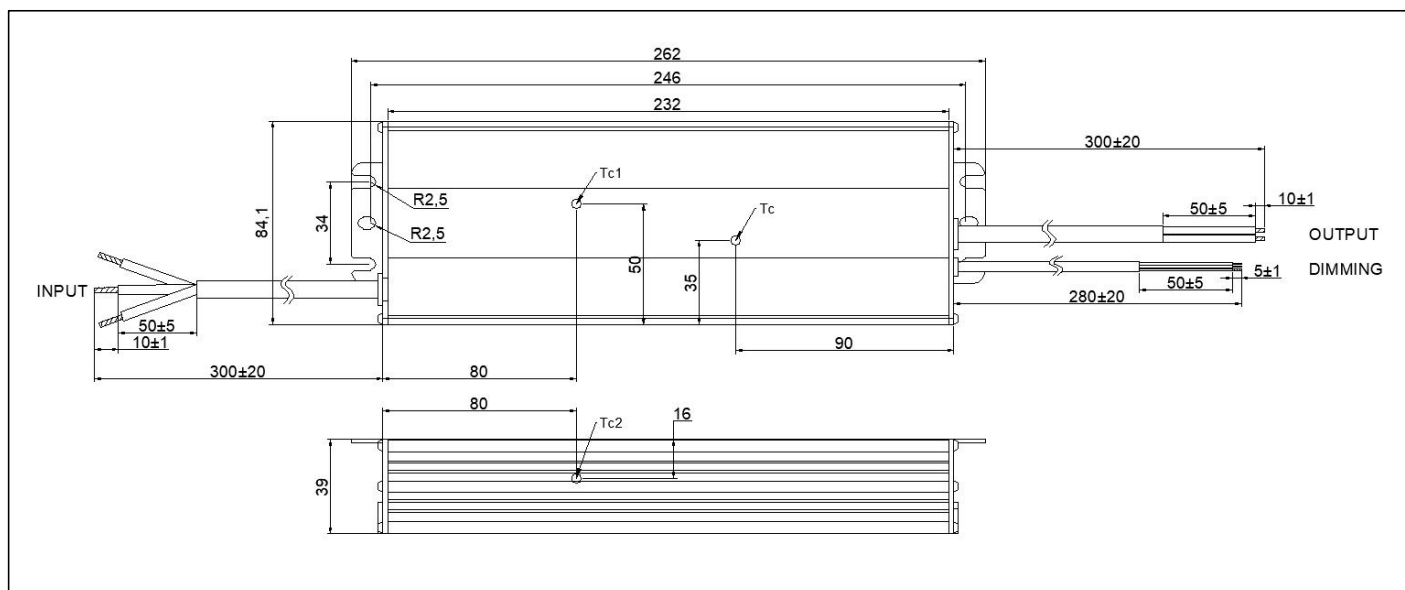


Note2: This curve is the data measured above 80% full load voltage. When the output voltage is smaller, the current value and the corresponding voltage of dimming entering the clamping point will advance.

Programming wiring diagram



Mechanical Specification



Revision History

Change Date	Rev.	Description of Change		
		Item	From	To
2022.4.16	V1.0			
2022.8.17	V1.1	Delete 350GTH24-36CV(G) model		
		Update MECHANICAL SPECIFICATION		Add Tc1 and Tc2