PXL Series LED Drivers

DL-150Z-B-PXL Specification V1.0

GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

Features



- Non-isolated design, surge protection residual voltage <2kV
- Suitable for luminaire with protection Class I
- Efficiency :97%(Typ.)
- Isolated dimming: 0/1–10 V/PWM/Res
- Auxiliary output: 12Vdc, 200mA
- Standby power consumption: ≤0.5 W
- Function selection:

  P：Programmable 3-in-1 dimming

  X：Programmable 3-in-1 dimming + Auxiliary + DIP switch power

  U：Programmable 3-in-1 dimming + Auxiliary + DIP switch power + Photosensor supported
- Ingress protection rating: IP20
- Input surge protection: DM 6kV, CM 6kV
- All-Around protection: SCP/OTP/OVP
- Warranty: 5 years

Applications

Road lighting

Industrial lighting

Municipal lighting

c UL us LISTED E479166

Class P

Model list

Model NO.	Input voltage	Output power	Output voltage	Output current	Default current	Eff. (Typ.)	THD	PF
DL-150Z-B300P-PXL DL-150Z-B300X-PXL DL-150Z-B300U-PXL	100-277Vac	150W	180-300Vdc	100-750mA	500mA	97%	≤10%	0.97

Note :

1. Test conditions for the above parameters: At 100%Load 30 minutes,230 Vac;
2. The maximum output power is 150W ; please refer to the output power Vs. input voltage curve.

Typical values of each parameter at 25 °C, unless otherwise noted.

Input characteristics

Parameter	Min	Typ.	Max	Notes
Input AC voltage range	90Vac	-	305Vac	Refer to output power Vs. input voltage derating curve
Input frequency	47Hz	50Hz	63Hz	
Standby Power (X/U version only)	-	-	0.5W	230Vac/50Hz;dim-to-off
Leakage current	-	-	0.75 MIU	UL 8750; 277Vac/60Hz
	-	-	0.70 mA	IEC 60598-1; 270Vac/60Hz
Power factor(PF)	0.95	0.97	-	230Vac/50Hz;100% load
	0.90	-	-	100-277Vac/50-60H , 70%-100%load
THD	-	8%	10%	230Vac , 100% load
	-	-	20%	100-277Vac/50-60Hz;70%-100%load
Maximum input current	-	-	1.8A	100% load
Inrush current	-	-	95A	At 230Vac and 25℃ cold start

Output characteristics

Parameter	Min	Typ.	Max	Note
Efficiency	91.0%	93.0%	-	@120Vac , 100% load , Io=500mA
Efficiency	94.5%	96.5%	-	@230Vac , 100% load , Io=500mA
Efficiency	95.0%	97.0%	-	@277Vac , 100% load , Io=500mA
Output voltage range	180Vdc	-	300Vdc	100%load output voltage range: 200-300Vdc
Open circuit voltage (P version)	-	-	450Vdc	
Open circuit voltage (X/U version)	-	-	350Vdc	
Output current range	100mA	-	750mA	Default current:500mA
Output current tolerance	-5%	-	+5%	100% load
Output Current Ripple(PK-AV)	-	5%	10%	100% load , 20 MHz BW
Line regulation	-3%	-	+3%	100% load
Load regulation	-5%	-	+5%	
Turn-on delay time	-	-	1.0S	100% load@230Vac
Auxiliary Output Voltage	10.8V	12.0V	13.2V	Return terminal is "DIM-"
Auxiliary Output Current	-	-	200mA	

Typical values of each parameter at 25 °C, unless otherwise noted.

Dimming characteristics

Parameter		Min	Typ.	Max	Notes
0/1-10V Dimming	Absolute Maximum Voltage on the Vdim (+) Pin	-	-	15V	
	Source Current on Vdim (+)Pin		100μA	115μA	
	Safe operating voltage	0V	-	12V	
	Dimming range	10%	-	100%	
	Recommended dimming input range	1V	-	10V	Driver can be dimmed off at 0V and be set via programming software.
	Turn-on voltage	0.9V	1.0V	1.1V	Dimming off may result in afterglow, which needs to be verified through the whole luminaire test
	Turn-off voltage	0.7V	0.8V	0.9V	
PWM Dimming	PWM in high level	9.5V	-	10.5V	
	PWM in low level	0V	-	0.3V	
	PWM in frequency range	300Hz	-	2000Hz	
	PWM in duty cycle	0%	-	99%	
	Turn-on duty cycle	9%	10%	11%	
	Turn-off duty cycle	7%	8%	9%	
Resistor Dimming	External resistor value	10KΩ	-	100KΩ	
	Dimming range	10%	-	100%	
Dip Switch Port SW+	Adjustable current range	100mA	-	750mA	Programmable via software
	Default: Level 1	-	10KΩ	-	Output Level (50%)
	Default: Level 2	-	20KΩ	-	Output Level (60%)
	Default: Level 3	-	39KΩ	-	Output Level (70%)
	Default: Level 4	-	82KΩ	-	Output Level (80%)
Photosensor Port OP+	Turn-on Voltage	2.0V	3.0V	3.2V	Default: 5S action; Time/Voltage/Dimming level can be set via software
	Turn-off Voltage	0V	1.0V	1.2V	

Typical values of each parameter at 25 °C, unless otherwise noted.

Protection

Parameter	Description
Output short circuit protection	Recover automatically after fault condition is removed.
Over temperature protection	Self-recovery type, when the casing temperature is 90-105℃, the output current decreases, and recovers automatically after fault condition is removed.
Output over-voltage protection	Recover automatically after fault condition is removed.

Environmental

Categories	Parameter
Operating temperature Ta	-40℃ ~ +50℃@100-200Vac -40℃ ~ +60℃@200-277Vac
Operating case temperature	-40℃ ~ +90℃
Operating case temperature for a 5 year warranty	-40℃ ~ +75℃
Storage temperature,humidity	-40℃ ~ +80℃, 10% ~ 95% RH
Resistant to vibration	10Hz ~ 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	200,000 hours (MIL-HDBK-217F), Ta=25℃, 230Vac, 80% load
Lifetime	50,000 hours @Tc≤75℃, 230Vac

Safety

Safety Categories	Area	Standards	Approved
CCC	China	GB/T 19510.1, GB/T 19510.213	√
CE	Europe	EN 61347-1, EN 61347-2-13	√
ENEC		EN 62384	√
CB	CB member state	IEC 61347-1, IEC 61347-2-13	√
SAA	Australia	AS/NZS 61347.1, AS/NZS 61347.2.13	√
UL	USA	UL 8750	√
CUL	Canada	CSA C22.2 No.250.13	
EAC	Russia	ГОСТ IEC 61347-1-2019 ГОСТ IEC 61347-2-13-2013	
BIS	India	IS 15885(PART 2/SEC 13)	

Typical values of each parameter at 25 °C, unless otherwise noted.

EMC

EMI/EMS Categories	Area	Standards	Approved
CCC	China	GB/T 17743, GB 17625.1	√
CE	Europe	EN IEC 55015 EN 61547 EN IEC 61000-3-2;3-3;4-5	√
EAC	Russia	ГОСТ IEC 61547-2013 ГОСТ CISPR 15-2014 ГОСТ IEC 6100-3-2-2017 ГОСТ IEC 6100-3-3-2015	
FCC	USA	FCC Part 15 Subpart B	√

1.Our products comply with the RoHS Directive (EU) 2015/863 Revision 2011/65/EU.

2. The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

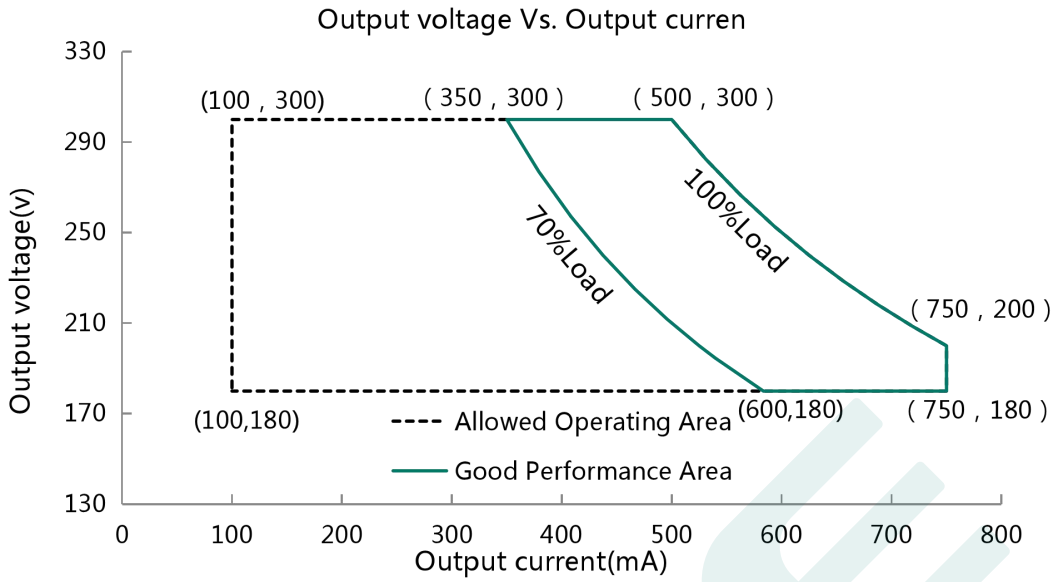
3. LED module: Insulation withstand voltage >2500V.

Safety Test Items

DL-150Z-B-PXL	Input	Output	Dimming	Case
Input	/	/	Reinforced	Basic
Output	/	/	Reinforced	Basic
Dimming	Reinforced	Reinforced	/	Basic
Case	Basic	Basic	Basic	/
Insulation Resistance	≥10MΩ			
Ground Resistance	≤0.1Ω			

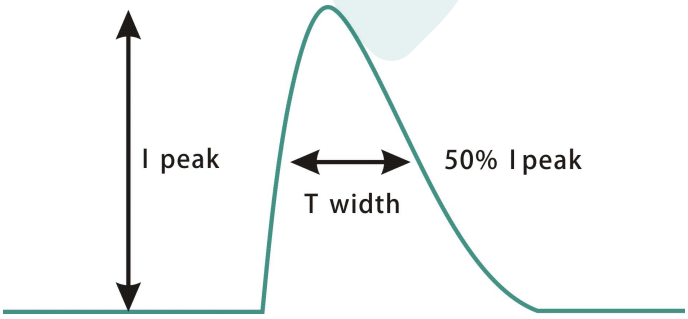
Typical values of each parameter at 25 °C, unless otherwise noted.

I-V Working area



Load	Output								
Output Voltage	180V	190V	200V	210V	220V	230V	240V	260V	300V
Output Current Io_MAX	750mA	750mA	750mA	710mA	680mA	650mA	630mA	580mA	500mA
Output Power Po_MAX	135W	142W	150W	150W	150W	150W	150W	150W	150W

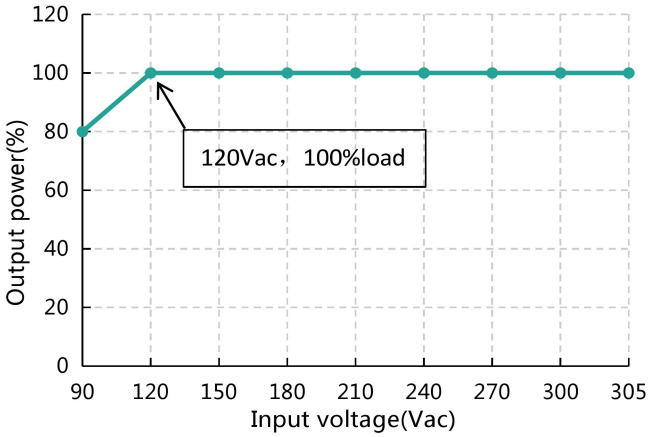
Inrush current



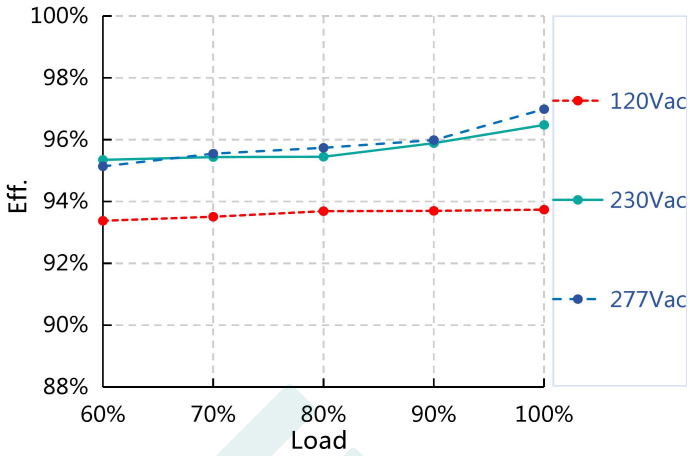
Input voltage	Peak current	T(@50% Peak current)
120Vac	45A	130us
230Vac	95A	145us
277Vac	115A	155us

Typical values of each parameter at 25 °C, unless otherwise noted.

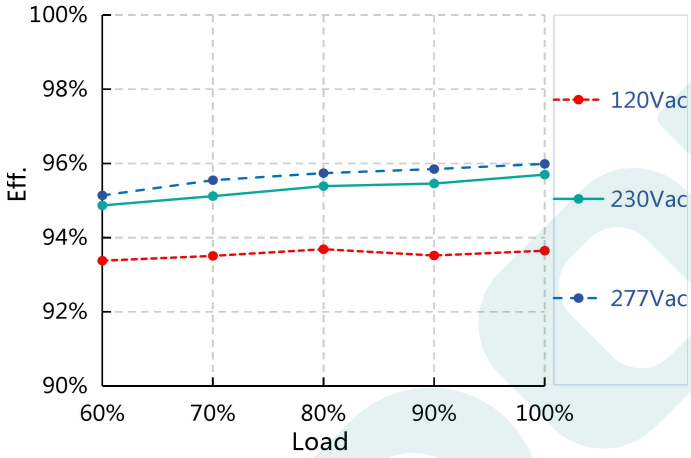
Output power vs. Input voltage



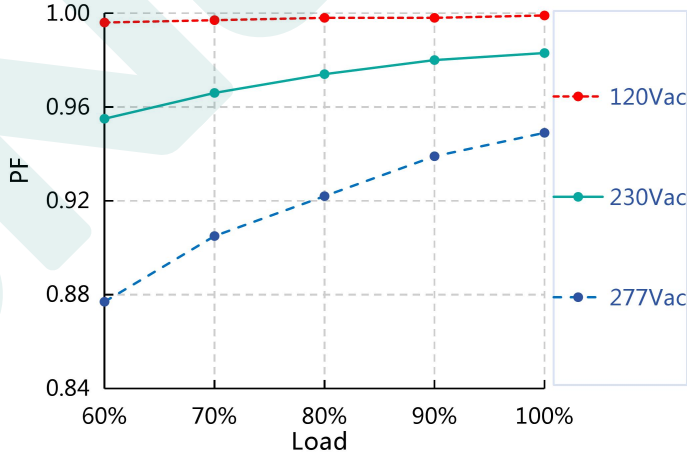
Eff. vs. Load (Io=500mA)



Eff. vs. Load (Io=750mA)

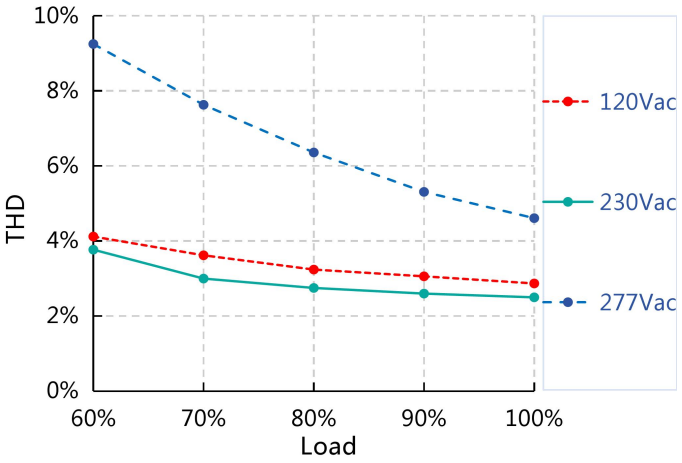


PF vs. Load

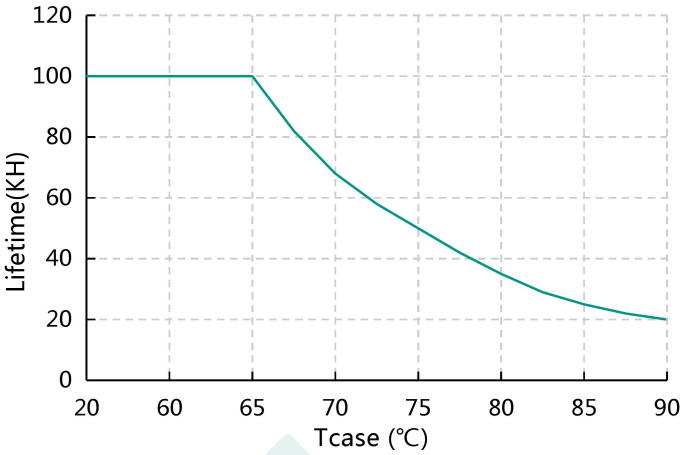


Typical values of each parameter at 25 °C, unless otherwise noted.

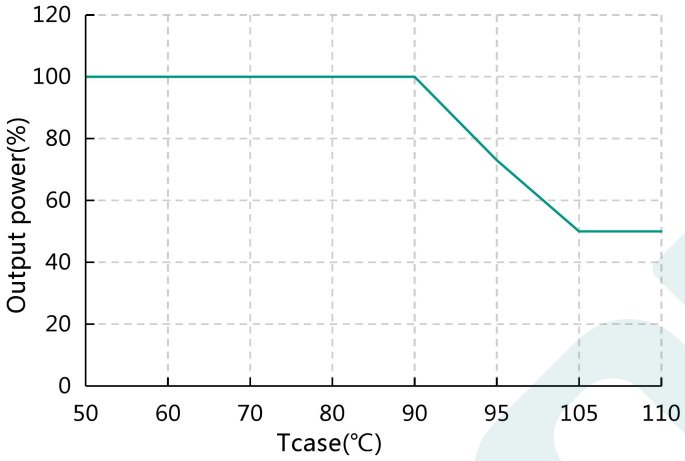
THD Vs. Load



Lifetime Vs. Tcase



Output power Vs. Tcase



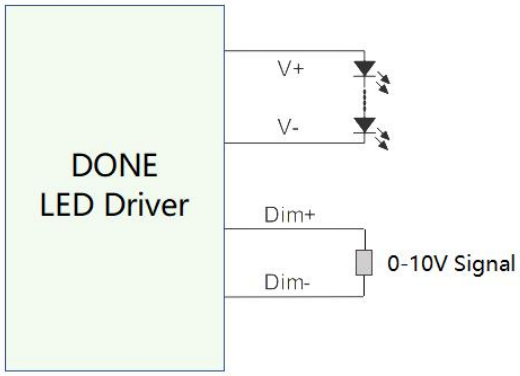
Typical values of each parameter at 25 °C, unless otherwise noted.

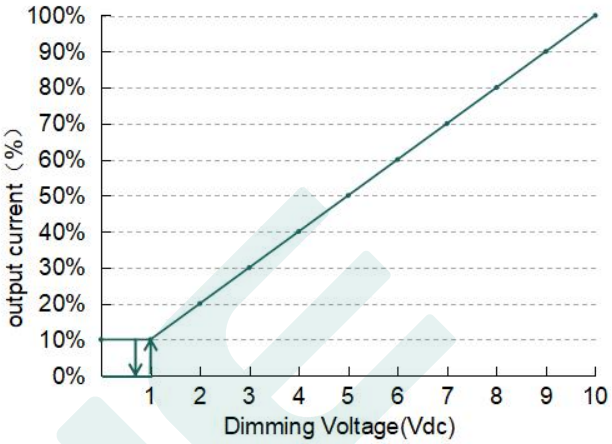
Dimming operation

3-in-1 dimming function

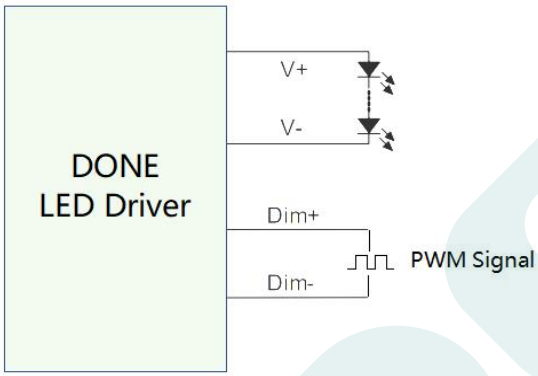
Connect a 0-10V Dimmer or 10V PWM signal or resistor between DIM+ and DIM-

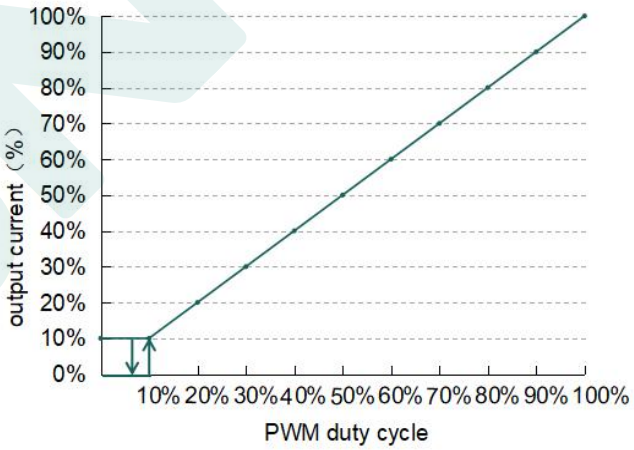
- **0-10V dimming:**



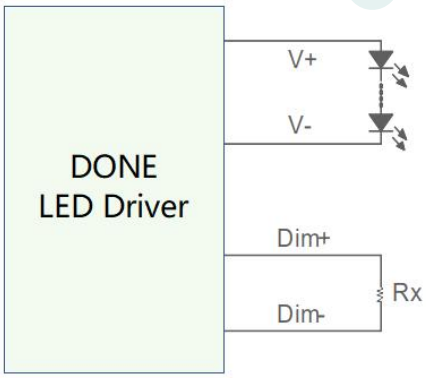


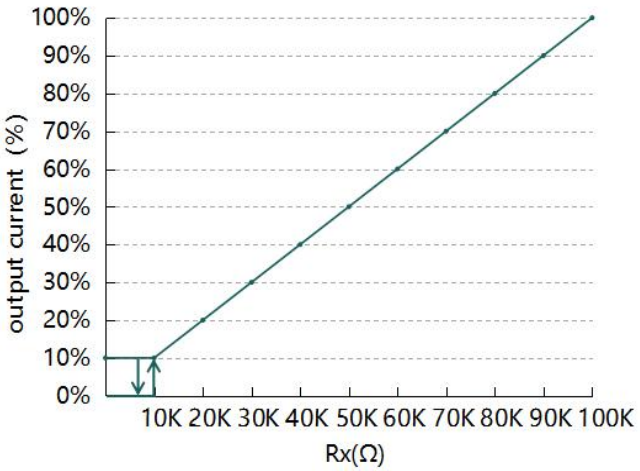
- **PWM dimming :**





- **Resistor Dimming:**





Typical values of each parameter at 25 °C, unless otherwise noted.

Programmable Connections

Mode 1



Visual Programming

1. You can configure output parameters and output current.
2. After completing the setup, click the "Save" button to download the driver to the offline application – driver setup complete.

Mode 2



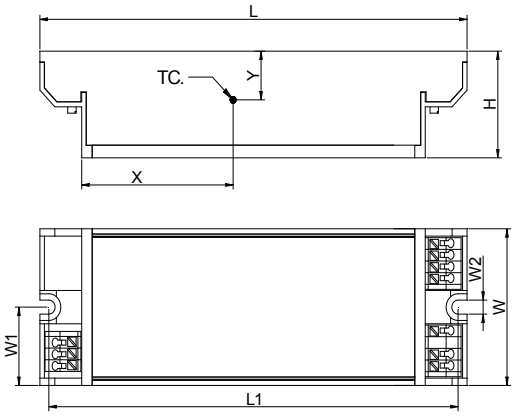
Off-line programmable :

1. Download the program to the programmer;
2. Connect the dimming wire with the programmer, press the programmer button , the programmer will give you a Beep and indicator light turns green to tell you the installation completed.

For more details,Please see the “DONE POWER OFFLINE PROGRAMMING TOOL V2.0 “ file.

Typical values of each parameter at 25 °C, unless otherwise noted.

Mechanical Size Drawing



Wiring Instructions

Version	Input terminal				Output terminal				Functional terminals			
	L	N	/	G	LED+	LED-	/	SW+	DIM+	DIM-	Vaux+	OP+
P	BLK	WHT	/	GRN	RED	BLK	/	/	PUR	PNK	/	/
X	BLK	WHT	/	GRN	RED	BLK	/	/	PUR	PNK	WHT	BRN
U	BLK	WHT	/	GRN	RED	BLK	/	GRY	PUR	PNK	WHT	BRN

Installation Size

Type	Reference No.	Overall Size (mm)	Reference No.	Mounting Hole Size (mm)	Reference No.	Screw Hole Size (mm)	Reference No.	Tc Point (mm)
Length	L	143±1	L1	137±1	-	-	X	40
Width	W	47±0.5	W1	23.5±0.5	W2	4.2	Y	11
Height	H	32±0.5	-	-	-	-	-	-
Size	L143*W47*H32 (mm)							
Weight	350g							

Packaging

Packaging	L320*W210*H180mm
Package Qty	18PCS/carton

Typical values of each parameter at 25 °C, unless otherwise noted.

Version

DATE	DESCRIPTION	REV.	CHECK
2026.10.19	Initial version	V1.0	JH 2026.10.22 20:15:09 +08'00' LYF 2026.10.23 08:24:08 +08'00'

MANUFACTRUER		
EDIT	CHECK	APPROVE
LYS 2026.10.22 09:39:48 +08'00' LSH 2026.10.22 11:17:52 +08'00'	GZK 2026.10.22 11:41:41 +08'00'	数字签名者：ZHS DN：cn=ZHS, o=DONE, ou=YFZX, email=zhanghongsheng@donepower.com, c=CN 日期：2026.10.23 13:49:50 +08'00'