MXL Series LED Drivers

DL-250H/HK-A/P-MXL Specification V1.1

GUANGDONG DONE POWER TECHNOLOGY CO.,LTD

Features

- Suitable for luminaire with protection Class I and Class II (Specific model)
- Efficiency: 95%(Typ.)
- Function selection:

  A: Adjusted by external potentiometer

  P: Isolated 3-in-1 dimming 0/1-10V/PWM/Resistor, Timer dimming

  H：Class I

  HK：Class II
- Ingress protection rating: IP67
- Input surge protection: DM 6kV, CM 10kV
- All-Around protection: SCP/OTP/OVP
- Warranty: 5 years



Applications

Road lighting

Venue lighting

Floodlight lighting

Landscape lighting

Model list

Model NO.	Input Voltage	Output Power	Output Voltage	Output Current	Default Current	Eff. (Typ.)	THD	PF
DL-250H/HK-357A-MXL	100-277Vac	250W	171-357Vdc	0.5-1.05A	0.7A	95%	≤10%	0.97
DL-250H/HK-357P-MXL				0.11-1.05A				

Note :

1. All parameters are measured at input voltage 230Vac and operation time 30 minutes, and the typical value tested at full load, unless otherwise specified.
2. The maximum output power is 250W ; please refer to the output power vs. input voltage curve.

Input Specifications

Parameter	Min	Typ.	Max	Notes
Input AC Voltage Range	90Vac	220-240Vac	305Vac	Refer to output power vs. input voltage curve
Input Frequency	47Hz	50/60Hz	63Hz	
Leakage Current	-	-	0.70 mA	IEC 60598-1; 240Vac/60Hz
Power Factor(PF)	0.95	0.97	-	230V 50Hz, 100% load
	0.90	-	-	200-277V 50Hz, 70%-100% load
THD	-	7%	10%	230Vac, 100% load
	-	-	20%	200-277Vac, 70%-100% load
Input Current	-	-	1.5A	200Vac , 100%load
Inrush Current	-	-	75A	At 230Vac and 25℃ cold start

Output Specifications

Parameter	Min	Typ.	Max	Note
Efficiency	93%	95%		@230Vac,100% load,Io=0.7A
Output Voltage Range	171V	-	357V	100% load output voltage range: 238-357V
Open Circuit Voltage	-	-	400V	
Output Current Range DL-250H/HK-357A-MXL DL-250H/HK-357P-MXL	 0.5A 0.11A	 - -	 1.05A 1.05A	Default current: 0.7A
Output Current Tolerance	-5%	-	+5%	100% load
Output Current Ripple(PK-AV)	-	5%	10%	100% load, 20 MHz BW
Startup Overshoot Current	-	-	10%	100% load
Line Regulation	-3%	-	+3%	100% load
Load Regulation	-3%	-	+3%	60%-100% load
Turn-on Delay Time	-	-	1.0S	@230Vac,100% load

Note: The output current range is limited by the input and output voltage, please refer to I-V operating window.

Dimming Specifications

Parameter		Min	Typ.	Max	Notes
0/1-10V Dimming	Absolute Maximum Voltage on the Vdim (+) Pin	0V	-	15V	
	Source Current on Vdim (+)Pin	-	90μA	100μA	
	Safe Operating Voltage	0V	-	12V	
	Dimming Range	10%	-	100%	
	Recommended Dimming Input Range	1V	-	10V	0V shutdown, programmable via software
	Turn-on Voltage	0.6V	0.8V	1.0V	Dimming off may result in afterglow, which needs to be verified through the whole luminaire test
	Turn-off Voltage	0.4V	0.5V	0.6V	
PWM Dimming	PWM High Level	9.5V	-	10.5V	
	PWM Low Level	0V	-	0.3V	
	PWM Frequency Range	300Hz	-	2000Hz	
	PWM Duty Cycle	0%	-	99%	
	Turn-on Duty Cycle	6%	8%	10%	
	Turn-off Duty Cycle	4%	5%	6%	
Resistor Dimming	External Resistor Value	0Ω	-	100KΩ	
	Dimming Range	0%	-	100%	

Note:

1. Factory default: three-in-one dimming, 0-10V, positive logic with shutdown function (residual glow may occur after shutdown; full lamp testing required for confirmation).
2. Other dimming modes (e.g., 0-5V voltage, negative logic, no shutdown) are programmable.
3. The dimmer line ends are equipped with 230Vac misconnection protection.
4. Optional 4kV lightning protection available at both ends of the dimmer line.

Protection

Protection	description
Output overload protection	recovers automatically after fault condition is removed
Output short circuit protection	recovers automatically after fault condition is removed
Over temperature protection	Self-recovery type , when the casing temperature is 90-105℃, the output power decreases , recovers automatically after fault condition is removed
Output over-voltage protection	recovers automatically after fault condition is removed

General Specifications

Parameter	Notes
Operating temperature Ta	-40℃ ~ +60℃
Operating case temperature	-40℃ ~ +90℃
Operating case temperature for a 5 year warranty	-40℃ ~ +75℃
Storage temperature,humidity	-40℃ ~ +80℃, 5% ~ 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	whether it meets
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)	

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 reference to RoHS Directive (EU) 2015/863 amending 2011/65/EU.

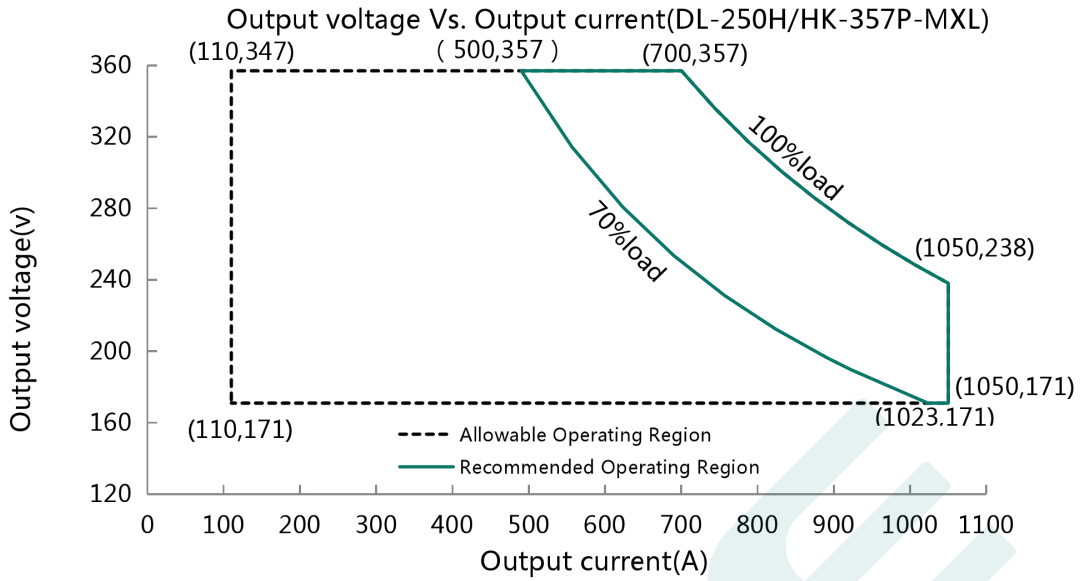
2.The driver is considered as a component that will be operated in combination with the final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

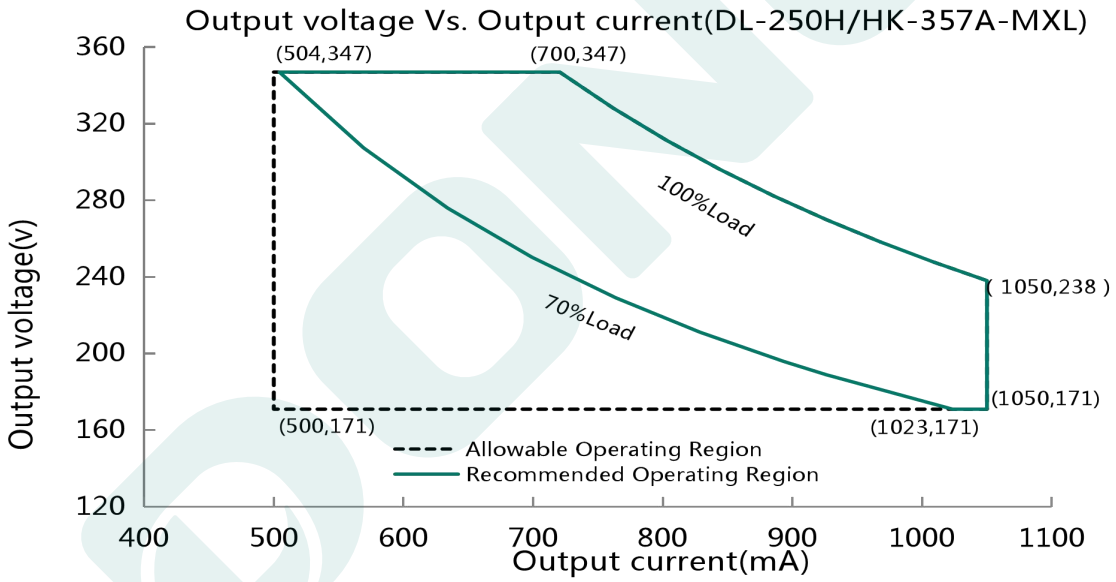
Safety Test Items

DL-250H-A/P-MXL	Input	Output	Dim	Case
Input	/	Reinforced	Reinforced	Basic
Output	Reinforced	/	Reinforced	Basic
Dim	Reinforced	Reinforced	/	Basic
Case	Basic	Basic	Basic	/
Insulation Resistance	≥10MΩ			
Ground Resistance	≤0.1Ω			

DL-250HK-A/P-MXL	Input	Output	Dim	Case
Input	/	Reinforced	Reinforced	Reinforced
Output	Reinforced	/	Reinforced	Reinforced
Dim	Reinforced	Reinforced	/	Basic
Case	Reinforced	Reinforced	Basic	/
Insulation Resistance	≥10MΩ			
Ground Resistance	≤0.1Ω			

I-V Operating Window

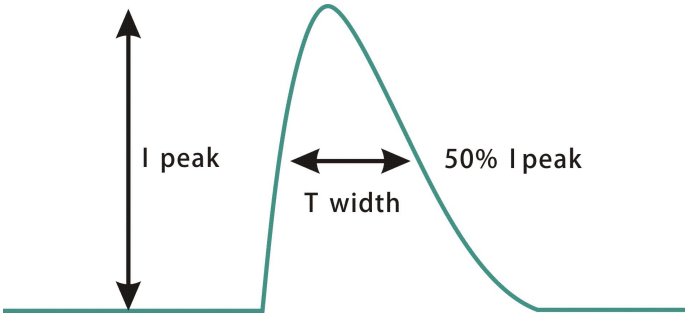




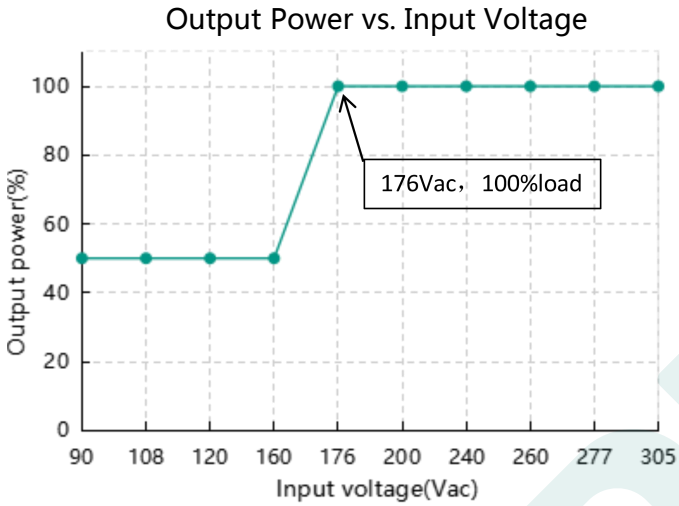
Load	Output								
Output Voltage	171V	200V	228V	250V	263V	278V	294V	333V	357V
Output Current Io_MAX	1050mA	1050mA	1050mA	1000mA	950mA	900mA	850mA	750mA	700mA
Output Power Po_MAX	180W	210W	250W	250W	250W	250W	250W	250W	250W

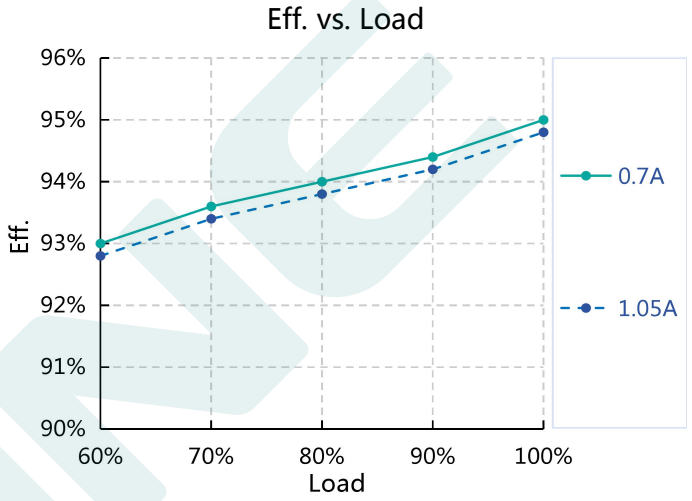
Typical values of each parameter at 25 °C, unless otherwise noted.

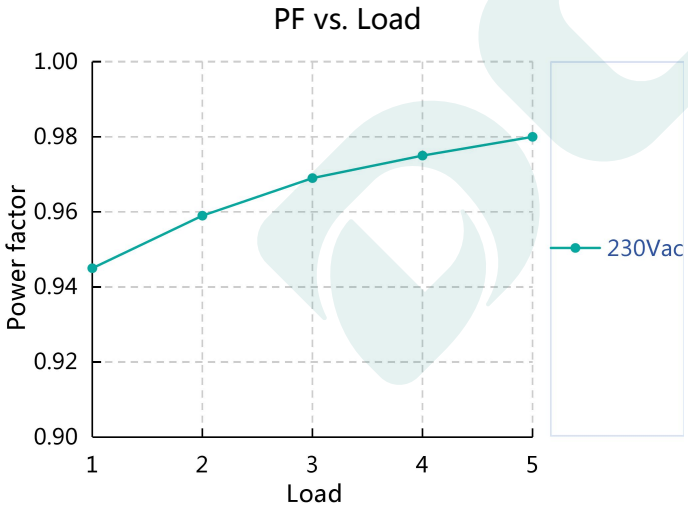
Inrush current

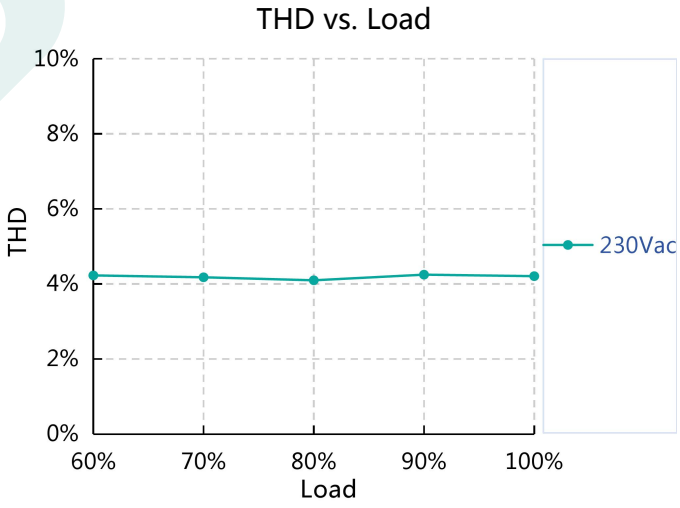


Input Voltage	Peak Vurrent	T(@50% Peak current)
230Vac	75A	90us

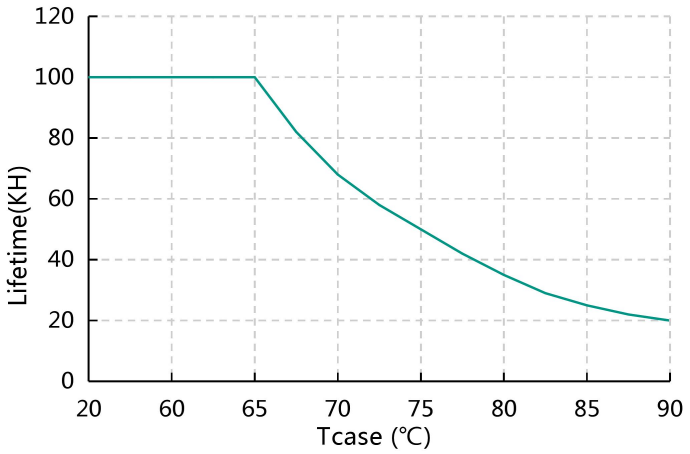




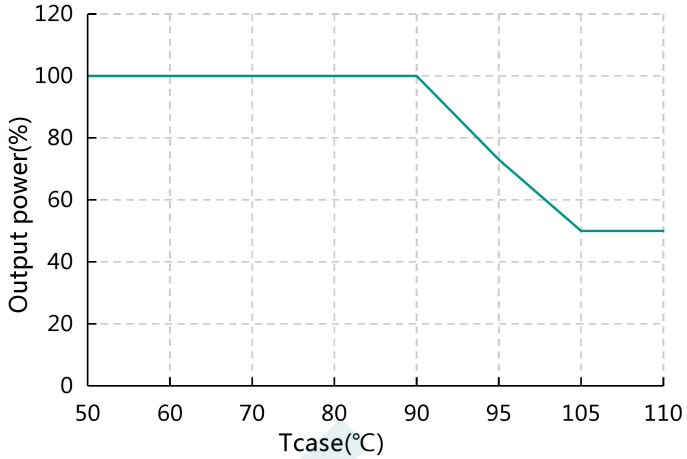




Lifetime vs. Tcase



Output Power vs. Tcase

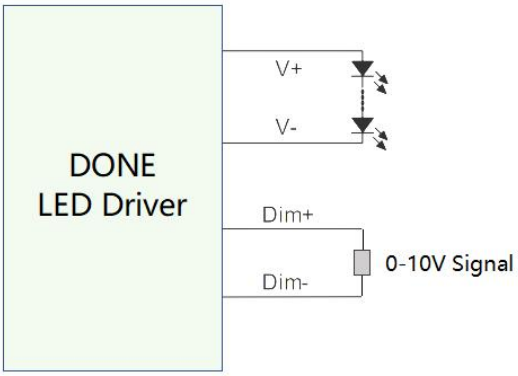


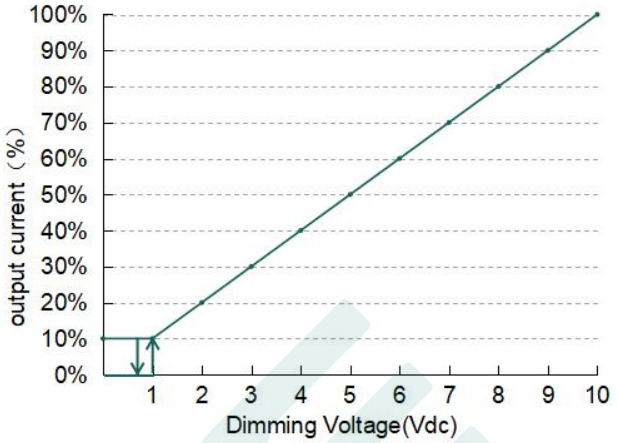
Typical values of each parameter at 25 °C, unless otherwise noted.

3-in-1 dimming function (P version only)

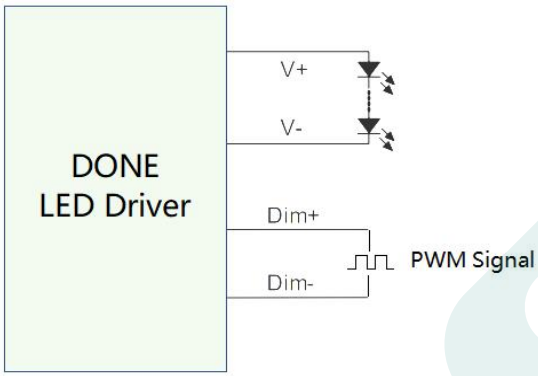
Connect a 0-10V Dimmer or 10V PWM signal or resistor between DIM+ and DIM-

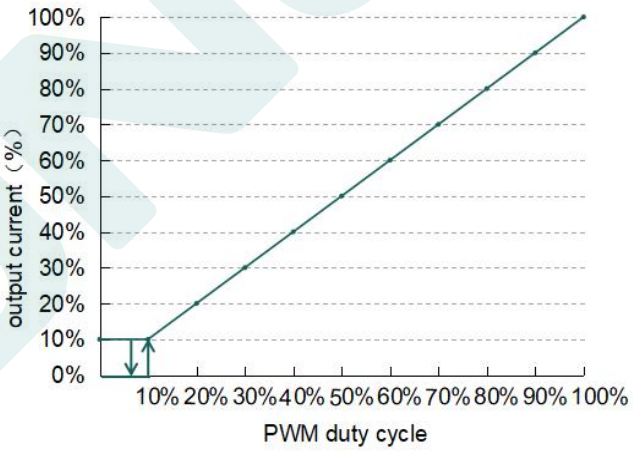
- **0-10V dimming:**



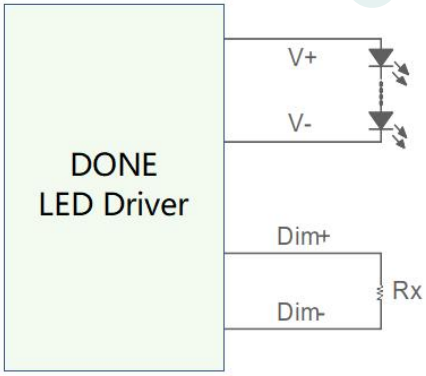


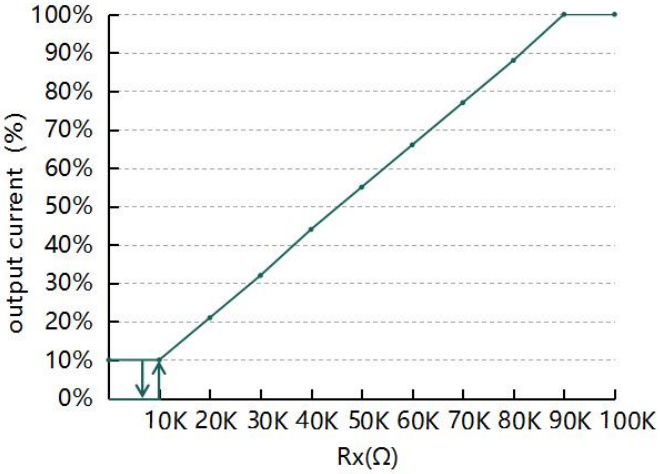
- **PWM dimming :**





- **Resistor Dimming:**





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

Programmable Connections

Mode 1



Visual Programming

1. Set the output current and dimming method parameters through the control signal linet;
2. Timer dimming(Traditional/Self-adaptive midnight/Self-adaptive percentage) are optional. They support up to 6 segments;

Mode 2

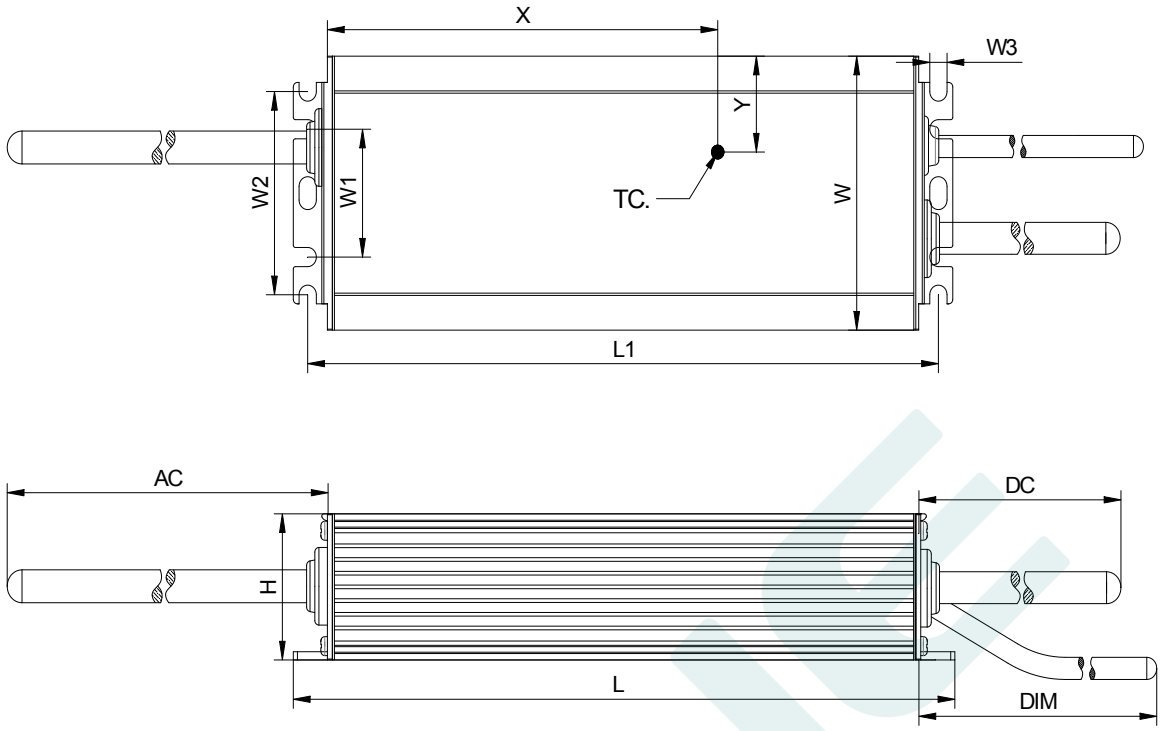


Off-line programmable :

1. Download the configuration file to the programmer;
2. Connect the dimming wire with the programmer, and press the programmer button. If completed successfully, the programmer will give a Beep sound and indicator light turns green to show the programming completed.

For more details, please refer to the “DONE POWER OFFLINE PROGRAMMING TOOL V2.0 “ file.

Mechanical Outline



Installation Size

Type	Symbol	Overall Size (mm)	Symbol	Mounting Hole Size (mm)	Symbol	Screw Hole Size (mm)	Symbol	Tc Point (mm)
Length	L	172±1	L1	165±1	-	-	X	100
Width	W	60±0.5	W1/W2	28/44.5±0.5	W3	4.2±0.2	Y	20
Height	H	37±0.5	-	-	-	-	-	-
Size	L172*W60*H37 (mm)							
Weight	738g							

Line Specification (DL-250H-A/P-MXL)

Type	AC Line			DC Line		DIM Dimming Line (P version only)	
Line Color	L	N	GND	V+	V-	DIM+	DIM-
	Brown	Blue	Yellow/Green	Brown	Blue	Purple	Pink
Exposed Length(mm)	400±15			250±15		270±15	
Strip Length (mm)	50±5			50±5		50±5	
Tinning Length (mm)	10±2			10±2		10±2	
Line Specification	H05RN-F 3x1.0mm² OD：7.2mm VDE / CCC / KC / SAA			H05RN-F 2x1.0mm² OD:6.8mm VDE / CCC / KC / SAA		UL21996 22AWG OD:5.0mm	

Line Specification (DL-250HK-A/P-MXL)

Type	AC Line			DC Line		DIM Dimming Line (P version only)	
Line Color	L	N	⏚	V+	V-	DIM+	DIM-
	Brown	Blue	black	Brown	Blue	Purple	Pink
Exposed Length(mm)	400±15			250±15		270±15	
Strip Length (mm)	50±5			50±5		50±5	
Tinning Length (mm)	10±2			10±2		10±2	
Line Specification	H05RN-F 3x1.0mm² OD：7.2mm VDE / CCC / KC / SAA			H05RN-F 2x1.0mm² OD:6.8mm VDE / CCC / KC / SAA		UL21996 22AWG OD:5.0mm	

Packaging

Packaging Size	L475*W350*H160mm
Package Qty	18PCS/carton

Version

DATE	DESCRIPTION	REV.	CHECK
2026.9.9	initial version	V1.0	
2026.9.27	Adjust Resistor Dimming:	V1.1	

SIGNATURE		
EDIT	CHECK	APPROVE
LYS 2026.09.27 14:30:04 +08'00' WZC 2026.09.27 16:40:55 +08'00'	GZK 2026.09.27 16:58:41 +08'00'	数字签名者：ZHS DN：cn=ZHS, o=DONE, ou=YFZX, email=zhanghongsheng@donepower.com, c=CN 日期：2026.09.28 14:44:14 +08'00'