



PXL Series LED Drivers

DL-60DU-200P-PXL Specification E1.0



Features

- Suitable for luminaire with protection Class I
- Efficiency: 94.5%(Typ.)
- Function selection:
P: Isolated 3-in-1 dimming 0-10V/PWM/Resistor
- 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.)
DL-60DU-200P-PXL	700VDC	60W	130-200Vdc	0.2-0.43A	0.3A	94.5%

Note:

1. Test conditions for the above parameters: At 100%Load 30 minutes,700 VDC;
2. The maximum output power is 60W ; please refer to the output power Vs. input voltage curve.

Input Specifications

Parameter	Min	Typ.	Max	Notes
DC Input voltage range	500VDC	700VDC	825VDC	
Leakage current	-	-	0.70 mA	IEC 60598-1; 825VDC
Input current	-	-	0.15A	500VDC, 100% load
Inrush current	-	-	140A	700VDC and 25°C cold start

Output Specifications

Parameter	Min	Typ.	Max	Note
Efficiency	92.5%	94.5%	-	@700VDC, 100% load ,I _o =0.3A
Output Voltage Range	130V	-	200V	100%load output voltage range: 140-200Vdc
Open Circuit Voltage	-	-	310V	
Output Current Range	0.2A	-	0.43A	Default current :0.3A
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	100% load@700VDC

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
0-10V Dimming	Absolute Maximum Voltage on the Vdim (+) Pin	0V	-	15V	
	Source Current on Vdim (+)Pin	-	90μA	100μA	
	Safe Operating Voltage	0V	-	12V	
	Dimming Range	0%	-	100%	
	Recommended Dimming Input Range	1V	-	10V	0V can be turned off, but the standby power consumption is greater than 0.5W.
	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%	Full power output at 99% duty cycle
	Turn-on Duty Cycle	6%	8%	10%	
	Turn-off Duty Cycle	4%	5%	6%	
Resistor Dimming	External Resistor Value	10KΩ	-	100KΩ	
	Dimming Range	10%	-	100%	
Timer Dimming	3 modes: Traditional, Self-adaptive Midnight, Self-adaptive Percentage				Set by the programmer

Note:

1. Default setting at factory: dimming mode is 3-in-1 dimming with positive logic and dimming off.
2. The luminaries possibly have afterglow when they are dimming off. Thus the whole luminance test is suggested.
3. Other dimming modes (0-5V dimming, negative logic, non-shutdown, etc.) programmable.

Protection

Protection	description
Output overload protection	recovers automatically after fault load condition is removed.
Output short circuit protection	recovers automatically after fault condition is removed
Over temperature protection	Self-recovering type: when the housing temperature exceeds 90–105°C, the output current decreases and automatically recovers after the abnormal condition is removed.

General Specifications

Parameter	Notes
Operating Temp TA	-40°C - +55°C
Operating Case Temperature	-40°C - +90°C
Operating Case Temp. & Humidity for Warranty	-40°C - +75°C, 10% - 95% RH, no condensation, 5 years warranty.
Storage Temp. & Humidity	-40°C - +80°C, 10% - 95% RH, no condensation.
Vibration	10Hz - 500Hz, 5G 12 min/cycle, X, Y, Z axis 72 min each
MTBF	200,000 hours (MIL-HDBK-217F), Ta=25°C, 230Vac, 80% load
Lifetime	50,000 hours @Tc≤70°C, 230Vac, 80% Load

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	

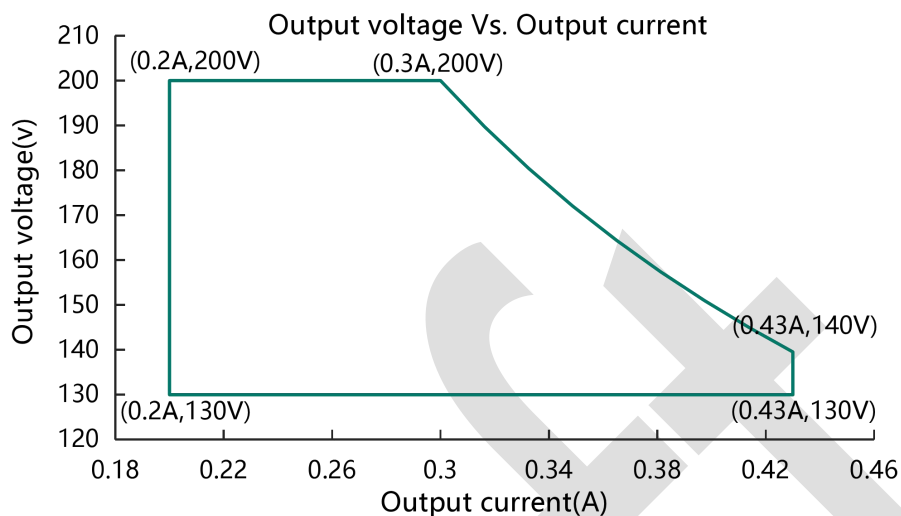
Note:

- 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

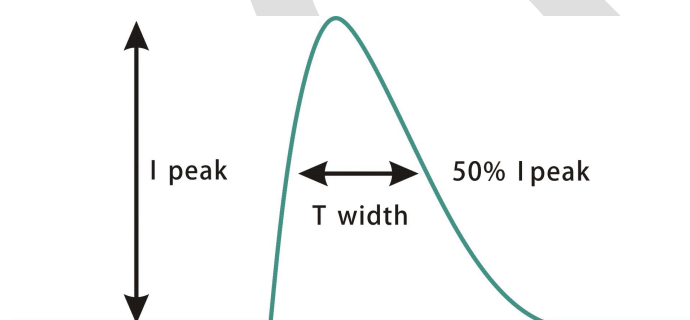
Safety Test Item	UL	CE/CB/ENEC	CCC	Notes
Input-Case/Ground	-	2650Vac	2650Vac	
Input-Dim	-	5300Vac	5300Vac	
Output-Case/Ground	-	1600Vac	1600Vac	
Output-Dim	-	3200Vac	3200Vac	
Dim-Case	-	500Vac	500Vac	
Insulation Resistance	≥10MΩ			
Ground Resistance	≤0.1Ω			

I-V Operating Window



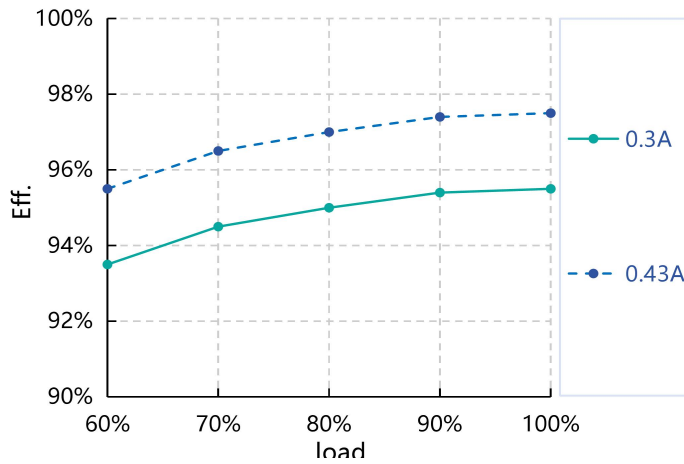
Load	Output							
Output Voltage	130V	140V	150V	160V	170V	180V	190V	200V
Output Current Io_MAX	0.43A	0.43A	0.40A	0.37A	0.35A	0.33A	0.31A	0.3A
Output Power Po_MAX	55W	60W	60W	60W	60W	60W	60W	60W

Inrush current

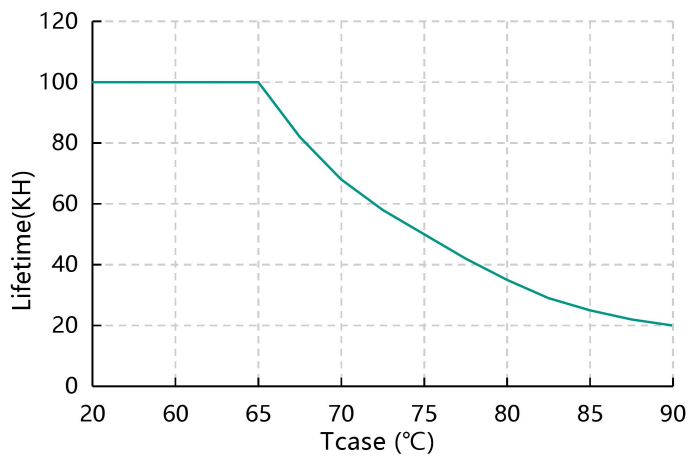


Input Voltage	Peak Current	T(@50% Peak current)
700VDC	130A	180us

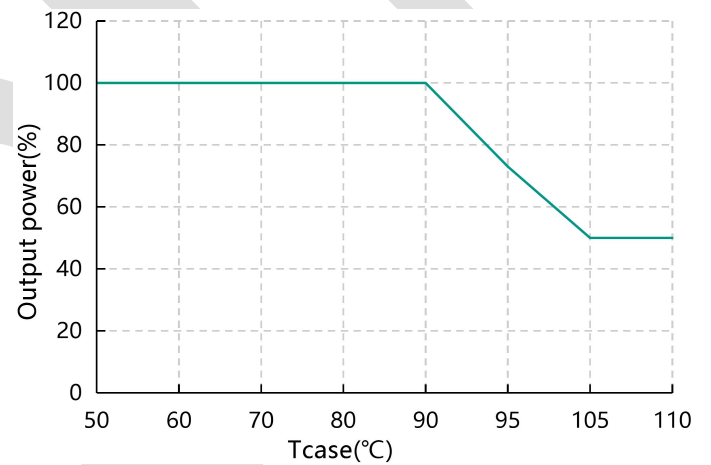
Eff. vs. Load



Lifetime vs. Tcase



Output Power vs. Tcase

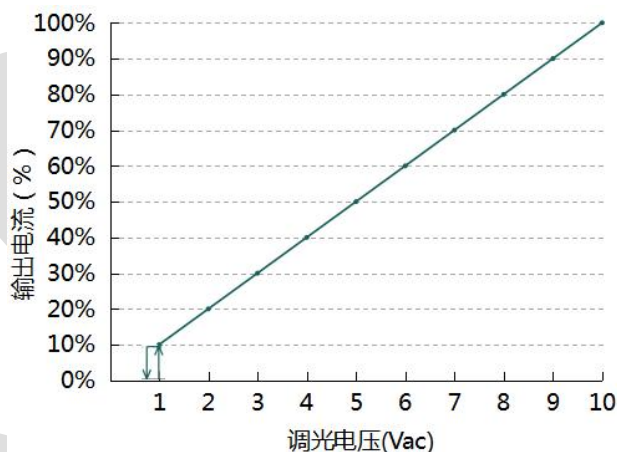
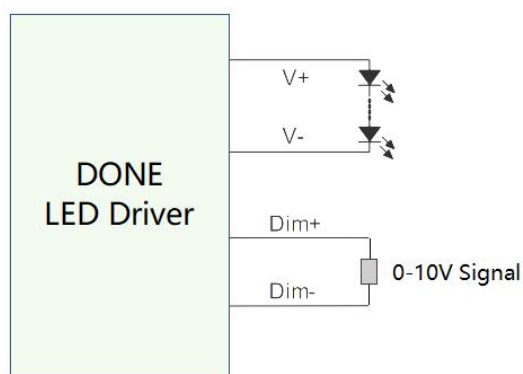


Dimming operation

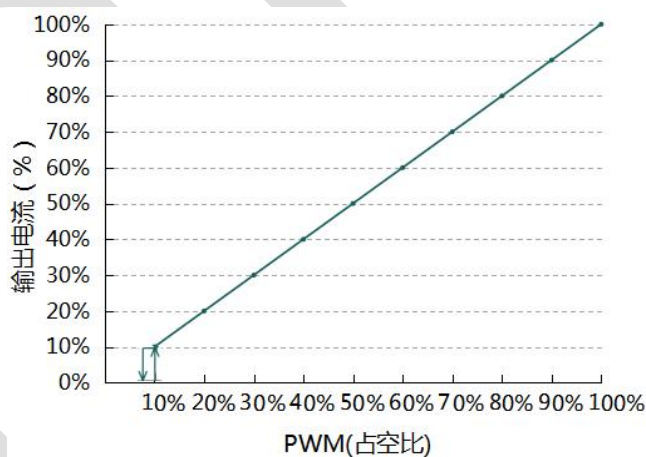
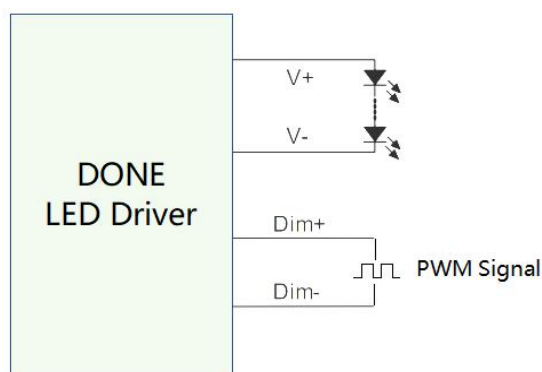
3-in-1 dimming function (P version only)

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

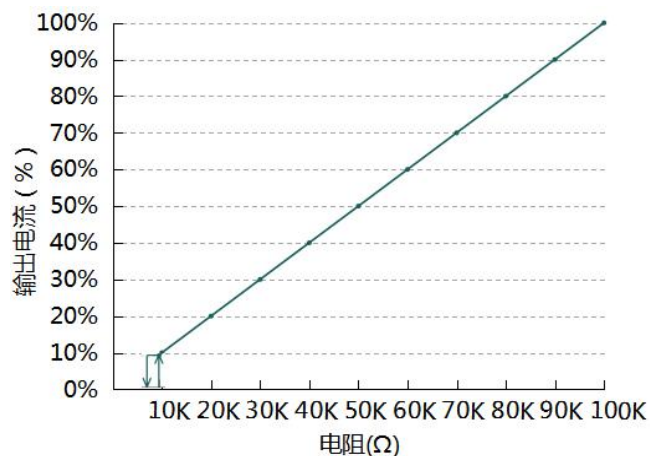
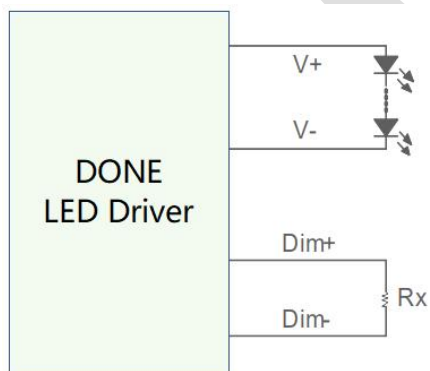
④ 0-10V dimming:



④ PWM dimming:



④ Resistor Dimming:



Programmable Connections

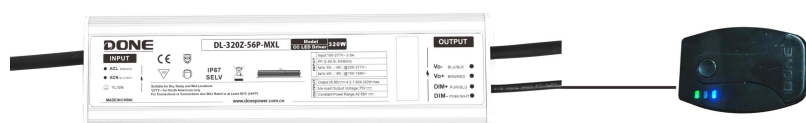
Mode 1



Visual Programming

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

Mode 2

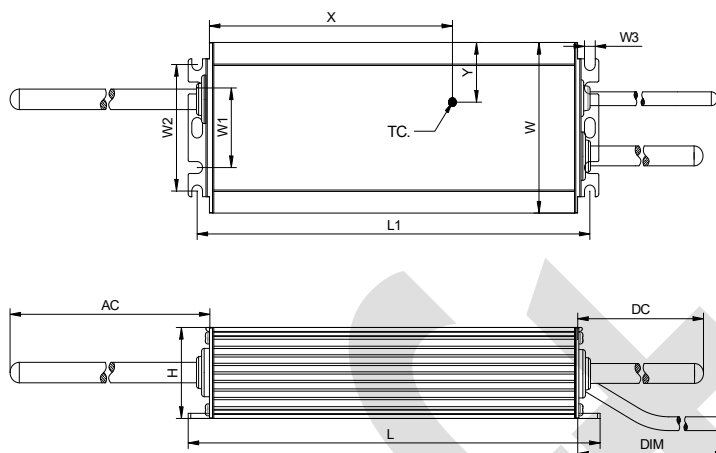


Off-line programmable :

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	145±1	L1	168±1	-	-	X	-
Width	W	50±0.5	W1	28±0.5	W2	4.2±0.2	Y	-
Height	H	32±0.5	-	-	-	-	-	-
Size	L145*H50*W32 (mm)							
Weight	490g							

Line Specification

Type	AC Line			DC Line		DIM Dimming Line		
Line Color	L	N	GND	V+	V-	DIM+	DIM-	Vaux+
	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 3x1.0mm ² OD:7.2mm VDE / CCC / KC / SAA			H05RN-F 2x1.0mm ² OD:6.8mm VDE / CCC / KC / SAA		UL21996 22AWG OD:5.0mm		

Packaging

Packaging Size	L475*W350*H205
PCS/Carton	15PCS/carton

Version

DATE	DESCRIPTION	REV.	CHECK
2026.6.3		E1.0	

SIGNATURE		
EDIT	CHECK	APPROVE