

## Main Features:



- Input Voltage: 90~305Vac or 127~420Vdc
- Output Wattage: Constant Wattage (C.P.) at **40W** with Adjustable Current Setting
- Programmable Method: NFC Wireless
- High Efficiency: Up to **88%**
- Dimming Function: **0-10V**
- Auxiliaire Voltage : **12Vaux** with **300mA**
- Lightning Protection: Built-in Surge Protector at 10KV/5KA
- Reliability Protection: OVP, SCP, OTP
- Safety Regulation: Complies with UL8750 & EN61347
- **Type TL and HL** Program Certified from UL
- **Class P** UL standard for retrofit kit
- Waterproof Rating: IP67
- Seven Year Warranty @  $T_c \leq 75^\circ\text{C}$



## SPECIFICATION

Model No. <sup>(i)</sup>	Output Voltage Range	C.P. Programmable	OVP	OTP	Case Temperature
	$V_{min} - V_{max}$	Output C.C. Range			
	(Vdc)	(mA) <sup>(i)</sup>	(Vdc max.)	(°C) <sup>(ii)</sup>	(Tc)
<b>LDD-040D058P0700-U-V</b>	34 - 80	500- 700	120% $V_{Omax}$ , typ.	$T_c \geq 105 \pm 10^\circ\text{C}$	90°C
<b>LDD-040D038P1050-U-V</b>	23 - 57	700- 1050	120% $V_{Omax}$ , typ.	$T_c \geq 105 \pm 10^\circ\text{C}$	90°C
<b>LDD-040D029P1400-U-V</b>	17 - 38	1040- 1400	120% $V_{Omax}$ , typ.	$T_c \geq 105 \pm 10^\circ\text{C}$	90°C
Note	(i) Pre-set Constant Current Value with dimming				
	(ii) Lower the output current when $T_c \geq 105 \pm 10^\circ\text{C}$ ; Auto Recovery When $T_c \leq 70 \pm 10^\circ\text{C}$				
	(iii) Temperature sensor input (NTC) to protect the LED light engine (optional)				

Input Spec.	Condition Description	Min.	Normal	Max.	Units
Input Voltage Range	Universal Input	90	100-277	305	VAC
Input Frequency Range		47	50/60	63	Hz
Input Current	120 VAC/220 VAC input, full load output			<b>0.4/0.22</b>	A
Power Factor	@60% - 100% load		>0.9		
Inrush Current	At 230 VAC input, 25°C cold start / At 277 VAC input, 25°C cold start			66 / 90	A
THD (total harmonic distortion)	@60% - 100% load		<15		%
Leakage Current	max @277Vac 60Hz			0.001	A

Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5				
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Output Spec.	Condition Description	Min.	Normal	Max.	Units
Current Accuracy			±5		%
Ripple Current	At 100%-60% Load. The result differs according to different LED load characteristic.			5	% Ip-p (Io)
Overshoot/Undershoot	% of Iout max & LED load			10	%
Turn-On Delay	Measured at 110 VAC/220 VAC input and Full Load			1.2	S
Auxiliary Power (Vaux)	With 300mA max	-5%	12	+5%	Vdc

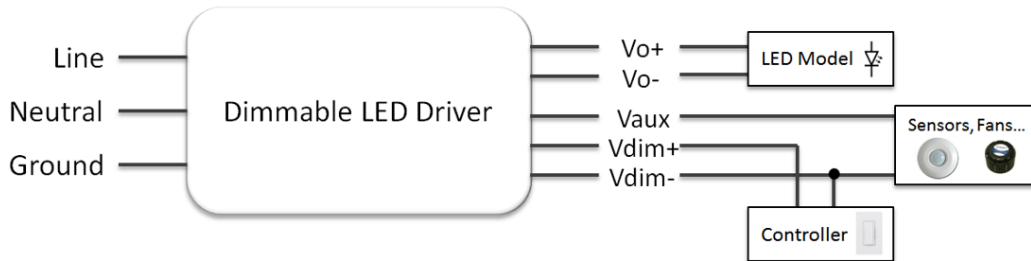
General Spec.	Condition Description	Min.	Normal	Max.	Units
Efficiency	Measured at full load and 220Vac in the thermal balanced condition.		88		%
MTBF	measured at Tc= 75°C (MIL-HDBK-217F)		≥320,000		Hours
Lifetime	measured at Tc= 75°C		≥100,000		Hours
Operating/Storage Temperature	10%RH ~ 100%RH (See De-rating Curve for more details)	-40/-40		70/85	°C
Dimension (OL/L x W x H)	OL is the overall length with mounting plates	158/131 x 68 x 33.5			mm
		6.22/5.16 x 2.66 x 1.32			inch
Weight	Net weight without package	1.32/0.60			lb/kg

Safety & EMC Compliance	Category	Condition Description
Safety Regulations	UL8750	Light Emitting Diode(LED) Equipment for Use in Lighting Products
	UL1012	Power Unit Other Than Class 2
	IEC 61347-1	Lamp Controlgear Part 1: General and Safety Requirements
	IEC 61347-2-13	Lamp Controlgear Part 2-13: Particular Requirement for d.c. or a.c. Supplied Electronic Controlgear for LED Modules
	CE	Europe: EN 61347-1, EN61347-2-13
EMI Standards	IEC 55015	Conducted emission test & Radiated emission test
	IEC 61000-3-2	Harmonic current emissions; Class C (≥75% load)
	IEC 61000-3-3	Voltage fluctuations & flicker
	FCC Part 15	Class B
EMS Standards	IEC 61000-4-2	Electrostatic discharge (ESD)
	IEC 61000-4-3	Radio frequency electromagnetic field susceptibility test (RS)
	IEC 61000-4-4	Electrical fast transient (EFT)
	IEC 61000-4-5	Surge immunity test (Line to line 4kV, line to ground 10kV)
	IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
	IEC 61000-4-8	Power frequency magnetic field test
	IEC 61000-4-11	Voltage dips
	IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

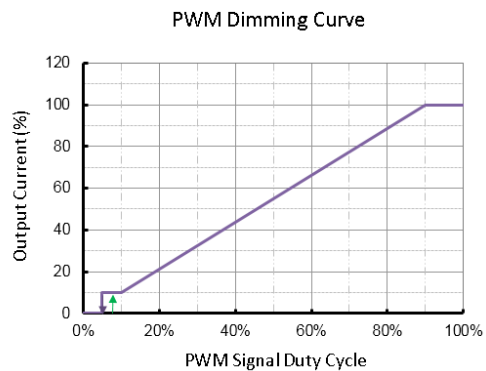
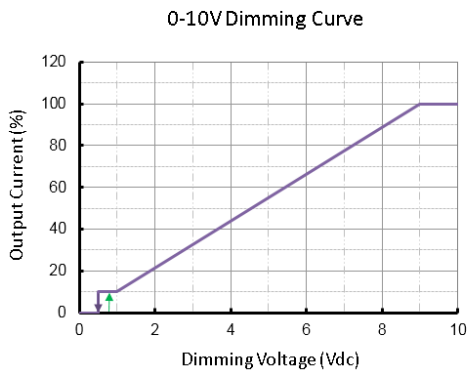
## ■ Dimming Curve

Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	100uA	150uA	200uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold	0.4V or 4%	0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	0.7V or 7%	0.8V or 8%
PWM High	3.8V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		

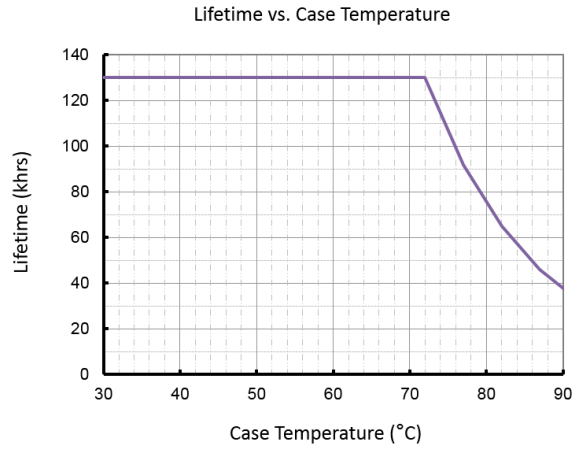
Dimming Wire



With dim-off (dto)

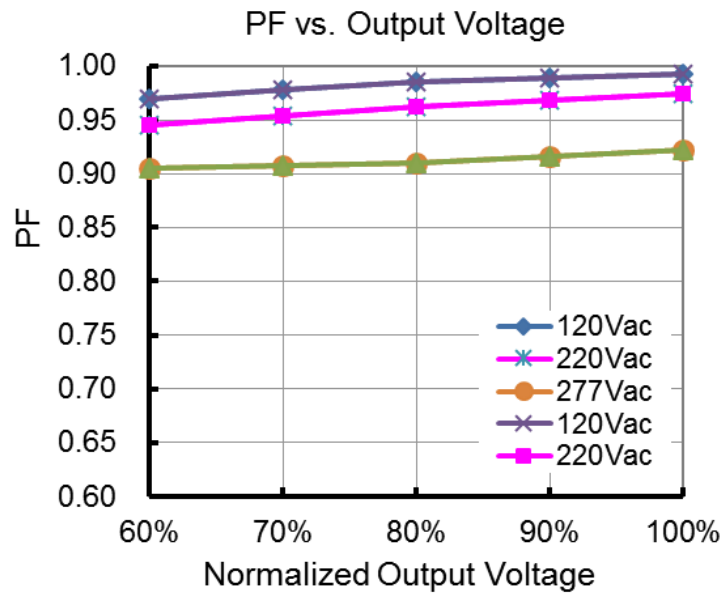


## ■ Lifetime vs. Case Temperature

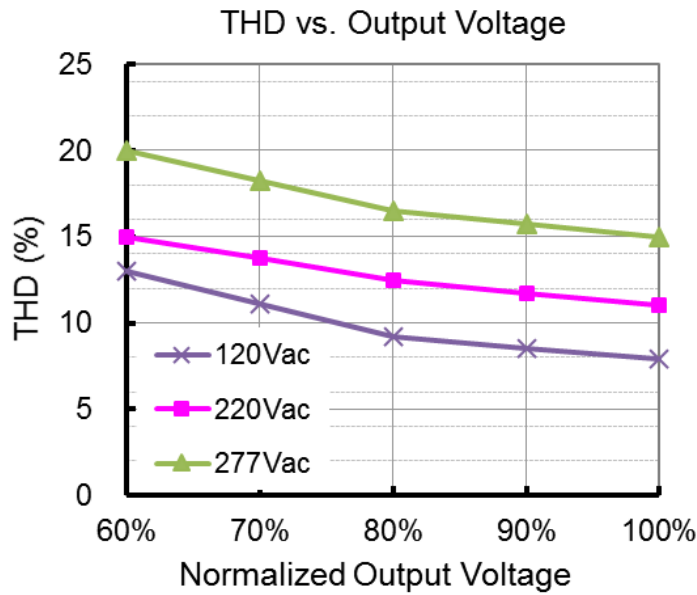


(End of Life: Maximum Failure Rate=10%)

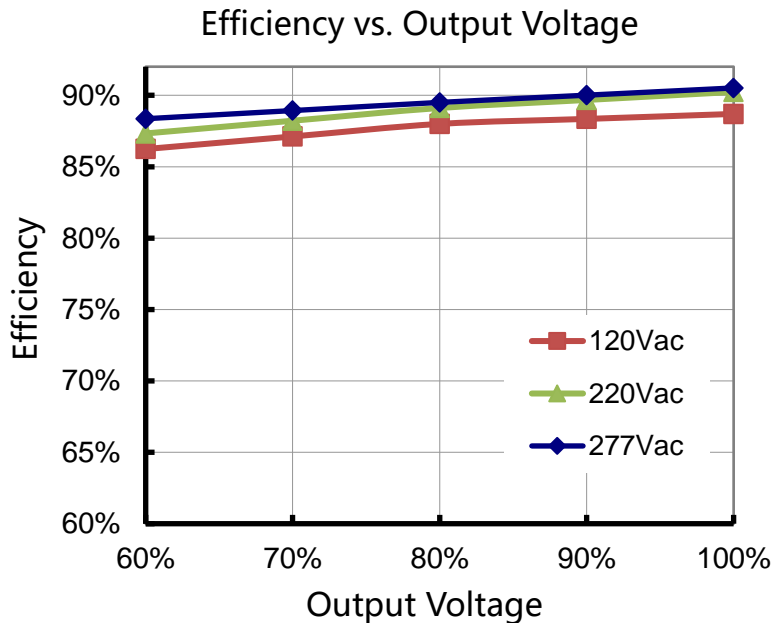
## ■ Power Factor vs. Load



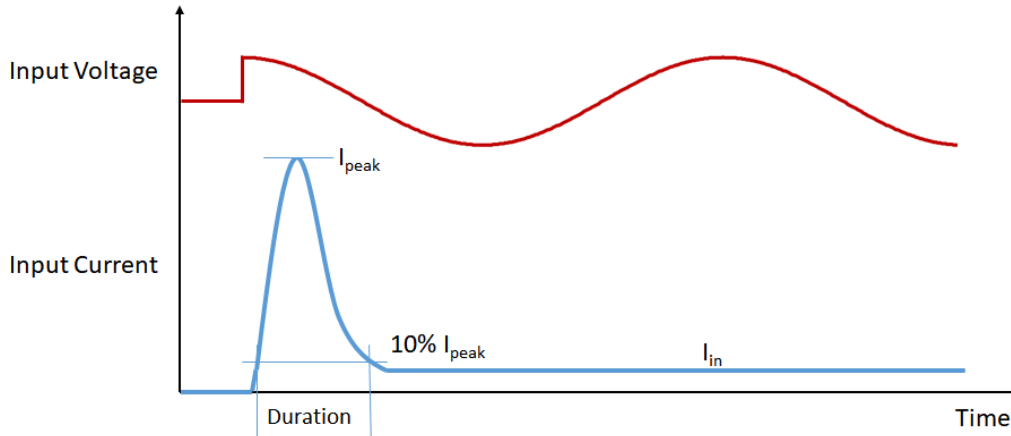
## ■ THD vs. Load



## ■ Efficiency vs. Load (1.05A model)



## ■ Inrush Current

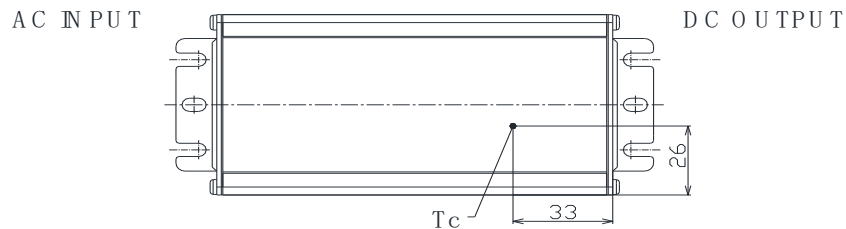


Input Voltage	I <sub>peak</sub>	Duration
120Vac	37A	820us
220Vac	66A	820us
277Vac	90A	760us

## ■ Dielectric Strength

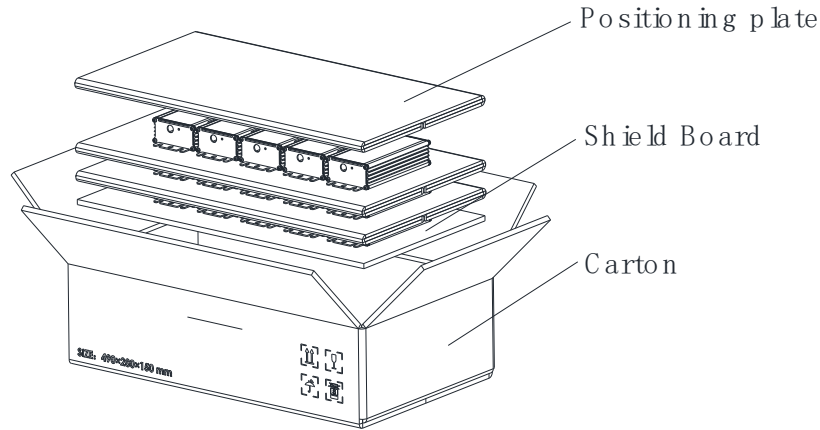
Unit: Vac	Input	Output	Dimming	Case
Input	-	3750	3750	1554
Output	3750	-	1554	1554
Dimming	3750	1554	-	1554
Case	1554	1554	1554	-

## ■ T<sub>c</sub> Point

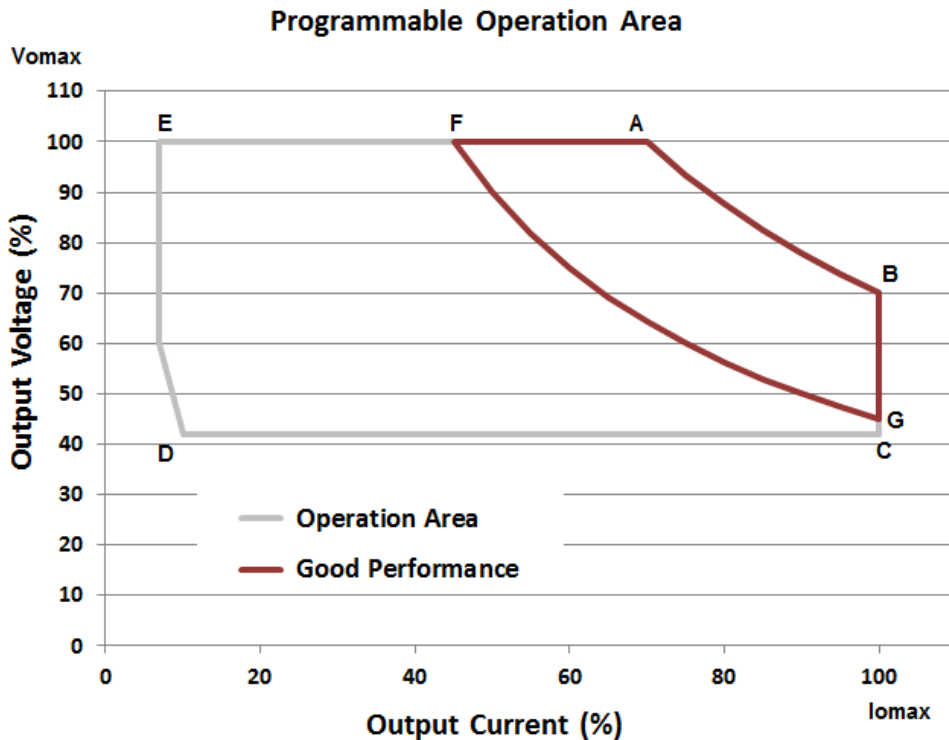


## ■ Packaging Information

Typical Carton Dimension(L×W×H)	490×280×150 mm
Positioning plate	3pcs/carton
Shield Board	1pcs/carton
LED Drivers	15pcs/carton



## ■ Current vs. Voltage Curve



$I_o$ (mA)   $V_o$ (V)	<b>B</b> $I_{max}$	<b>A</b> $V_{max}$	<b>F</b> (60% of I at A)   (as $V_{max}$ )	<b>G</b> (as $I_{max}$ )   (60% of V at B)	<b>C</b> (as $I_{max}$ )   $V_{min} =$ (60% of V at B)	<b>D</b> (10% of $I_{max}$ )   (60% of V at B)	<b>E</b> (10% of I at A)   (as $V_{max}$ )
LDD-040D058P0700-U-V	700   58	500   80	300   80	700   35	700   35	70   35	50   80
LDD-040D038P1050-U-V	1050   38	700   57	420   57	1050   23	1050   23	105   23	70   57
LDD-040D029P1400-U-V	1400   29	1040   38	630   38	1400   18	1400   18	140   18	105   38
On <b>BA</b> Curve Line	Constant Power Area						
Within <b>BAFG</b> Box	Good Performance Area						
Within <b>ABCDE</b> Box	Operational Area						



## ■ Mechanical Outline (Unit: mm)

Note: Dimensions in millimeters, where 25.4 mm = 1 inch

Tolerance:  $\pm 0.51$  mm

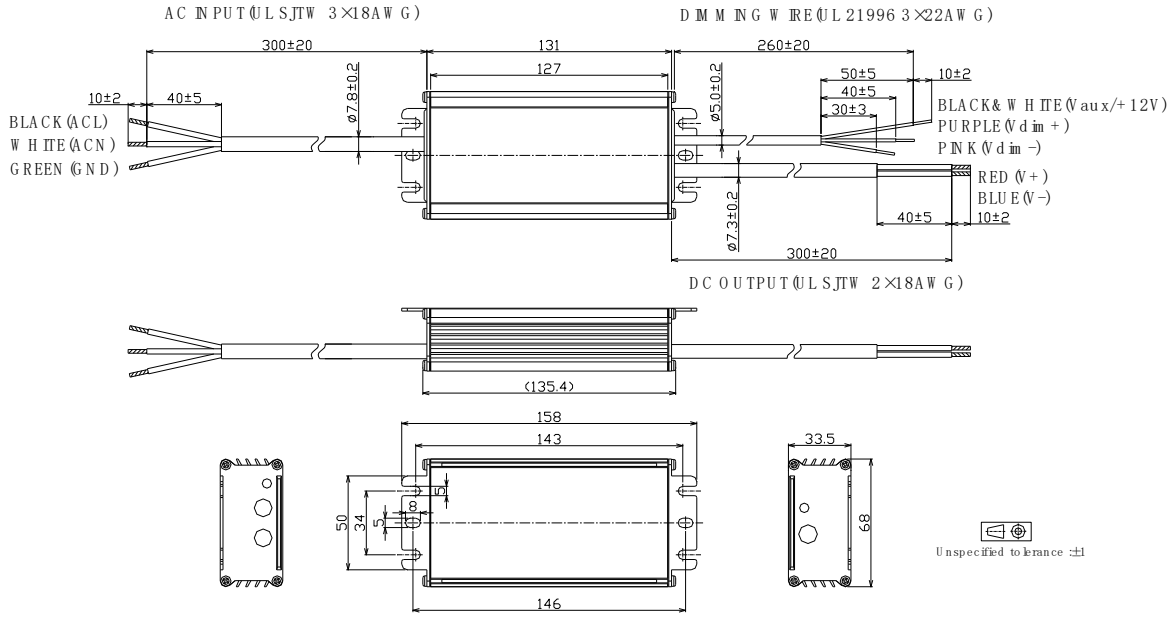


Figure 32, AR6PT

**Safety Note:** Please make sure the output cable does not connect to dimming cable or the cables of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor.

**Revision**

Date	Rev.	Description of Change		
		Item	Old	New
10/20/2022	V2a	In Draft Release	/	/
01/07/2023	V2b	In Draft Release	/	/