

Main Features:



- Input Voltage: 180~528Vac or 250~740Vdc
- Output Wattage: Constant Current (without “P”) or Constant Wattage (C.P.) at **320W** with Adjustable Current Setting
- Programmable Method: Wire or Wireless
- High Efficiency: Up to **90%**
- Dimming Function: **0-10V/PWM**
- Auxiliary 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
- Five Year Warranty under Normal Usage Conditions



SPECIFICATION

Model No. ⁽ⁱ⁾	Output Voltage	Programmable Output	OVP	OTP	Case Temperature
	Range	Constant Current Range			
	(Vdc)	(mA) ⁽ⁱ⁾	(Vdc max.)	(°C) ⁽ⁱⁱ⁾	(Tc)
LDD-320D229-1400HH-V	n/a	-	120% Vomax, typ.	Tc ≥ 105 ± 10°C	90C
LDD-320D229P1400HH-V	137 - 305	1050 - 1400	120% Vomax, typ.	Tc ≥ 105 ± 10°C	90C
LDD-320D152P2100HH-V	91 - 229	1400 - 2100	120% Vomax, typ.	Tc ≥ 105 ± 10°C	90C
LDD-320D076P4200HH-V	46 - 114	2800 - 4200	120% Vomax, typ.	Tc ≥ 105 ± 10°C	90C
Note	(i) Pre-set Constant Current Value with dimming				
	(ii) Lower the output current when Tc ≥ 105 ± 10°C; Auto Recovery When Tc ≤ 70 ± 10°C				

Input Spec.	Condition Description	Min.	Normal	Max.	Units
Input Voltage Range	Dedicated High Voltage Input	180	208-480	528	VAC
Input Frequency Range		47	50/60	63	Hz
Input Current	277 VAC/480 VAC input, full load output			1.3/0.75	A
Power Factor	@60% - 100% load		> 0.9		
THD (total harmonic distortion)	@60% - 100% load		< 15		%
Inrush Current	At 277 VAC input, 25°C cold start / At 480 VAC input, 25°C cold start			65 / 70	A
Leakage Current	max @277Vac 60Hz			1.0	mA

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	Startup time at cold start			1.2	s
Auxiliary Power (Vaux)	With 300mA max	-5%	12	+5%	Vdc

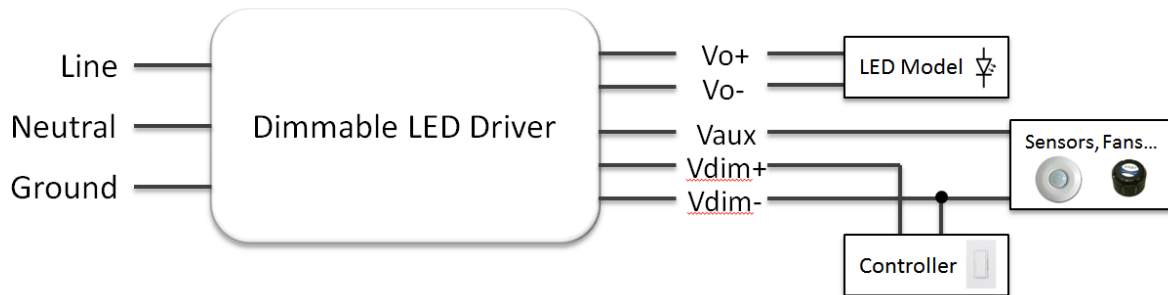
General Spec.	Condition Description	Min.	Normal	Max.	Units
Efficiency	Measured at full load in the thermal balanced condition		92	93	%
MTBF	measured at Tc= 75°C (MIL-HDBK-217F)		≥280,000		Hours
Lifetime	measured at Tc= 75°C		≥100,000		Hours
Operating/Storage Temperature	10%RH~100%RH (See De-rating Curve for more details)	-40/-40		70/85	°C
Dimension (OL/L x W x H)	OL is the overall length with mounting plates	263/236*90*41.5			mm
		10.35/9.29*3.54*1.63			inch
Weight	Net weight without package	3.52/1.6			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 L-N:2kV; LN-PE:4kV (External Surge Protection Device 4K/6K or 6K/10K)
	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

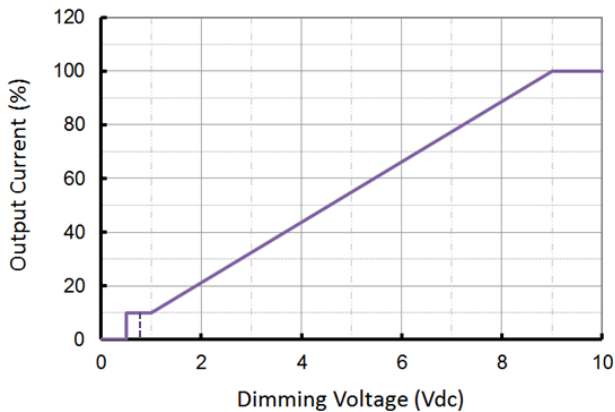
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	200uA	300uA	450uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	10% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	10% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold		0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	0.7V or 7%	
PWM High	3V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		

Dimming Wire

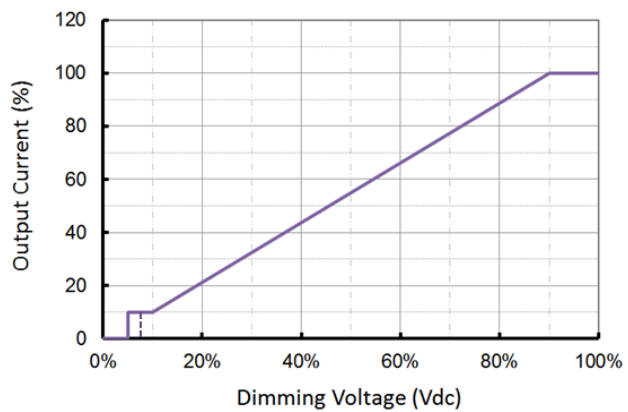


With dim-off (dto)

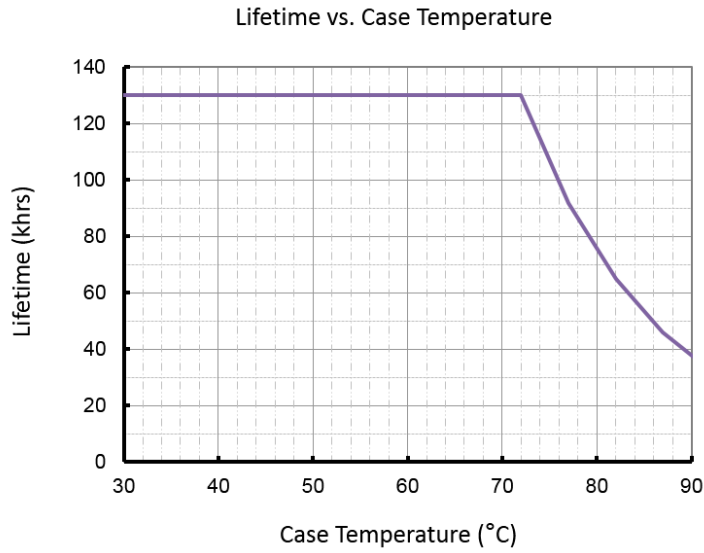
0-10V Dimming Curve



PWM Dimming Curve

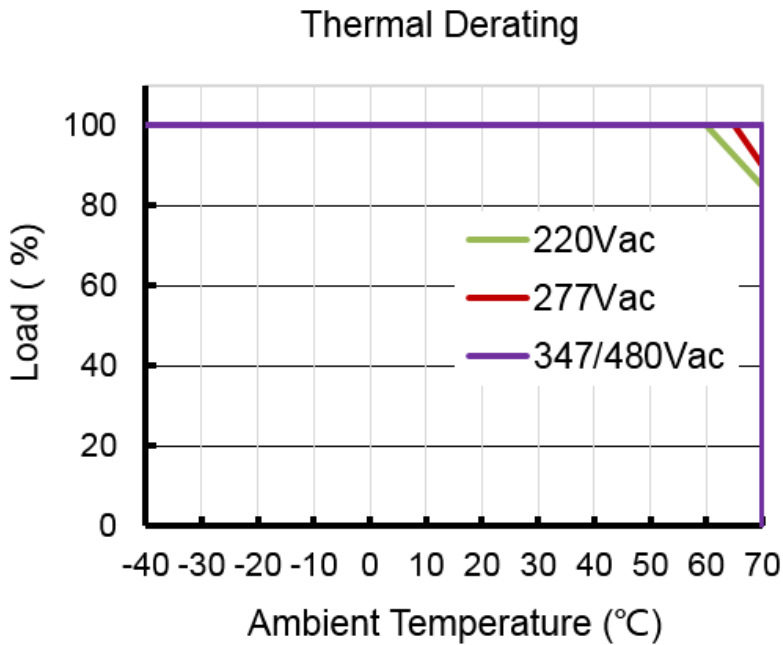


■ Lifetime vs. Case Temperature

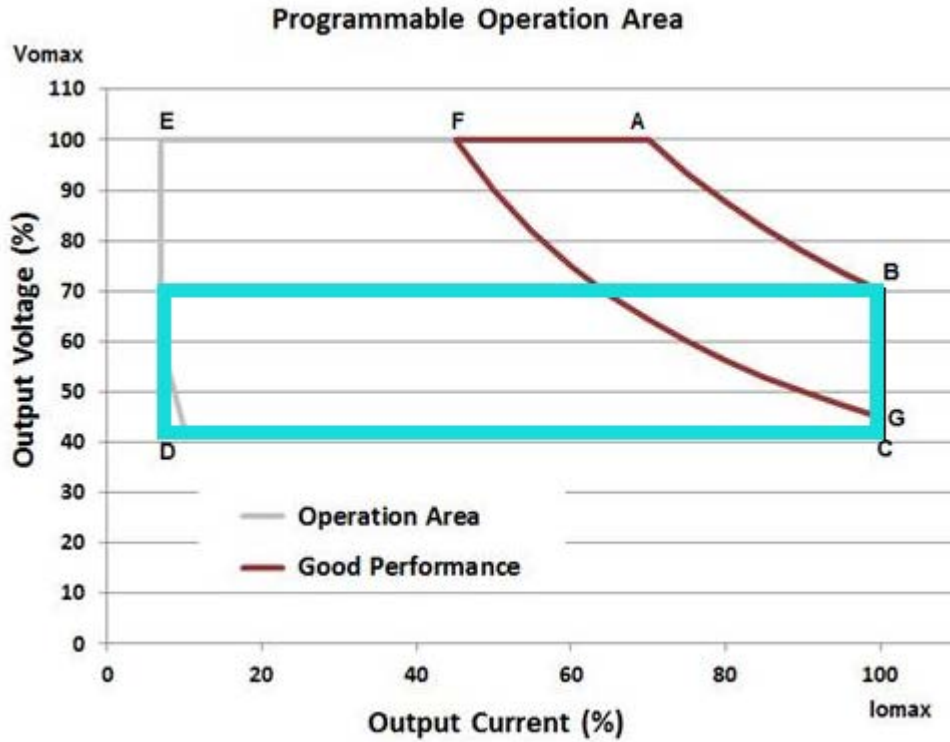


(End of Life: Maximum Failure Rate=10%)

■ De-rating Curve



■ Current vs. Voltage Curve



I_o (mA) V_o (V)	B I_{max}	A V_{max}	F (60% of I at A) (as V_{max})	G (as I_{max}) (60% of V at B)	C (as I_{max}) $V_{min} =$ (60% of V at B)	D (10% of I_{max}) (60% of V at B)	E (10% of I at A) (as V_{max})
LDD-320D229-1400HH-V	1400 229	n/a	n/a	n/a	1400 137	140 137	140 229
Within BCDE Box	C.C.				Constant Current Area		
LDD-320D229P1400HH-V	1400 229	1050 305	630 305	1400 137	1400 137	140 137	105 305
LDD-320D152P2100HH-V	2100 152	1400 229	840 229	2100 91	2100 91	210 91	140 229
LDD-320D076P4200HH-V	4200 76	2800 114	1680 114	4200 46	4200 46	420 46	420 114
On BA Curve Line	Constant Power Area						
Within BAFG Box	Good Performance Area						
Within ABCDE Box	Operational Area						

■ Mechanical Outline (Unit: mm)

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

Tolerance: ± 0.51 mm

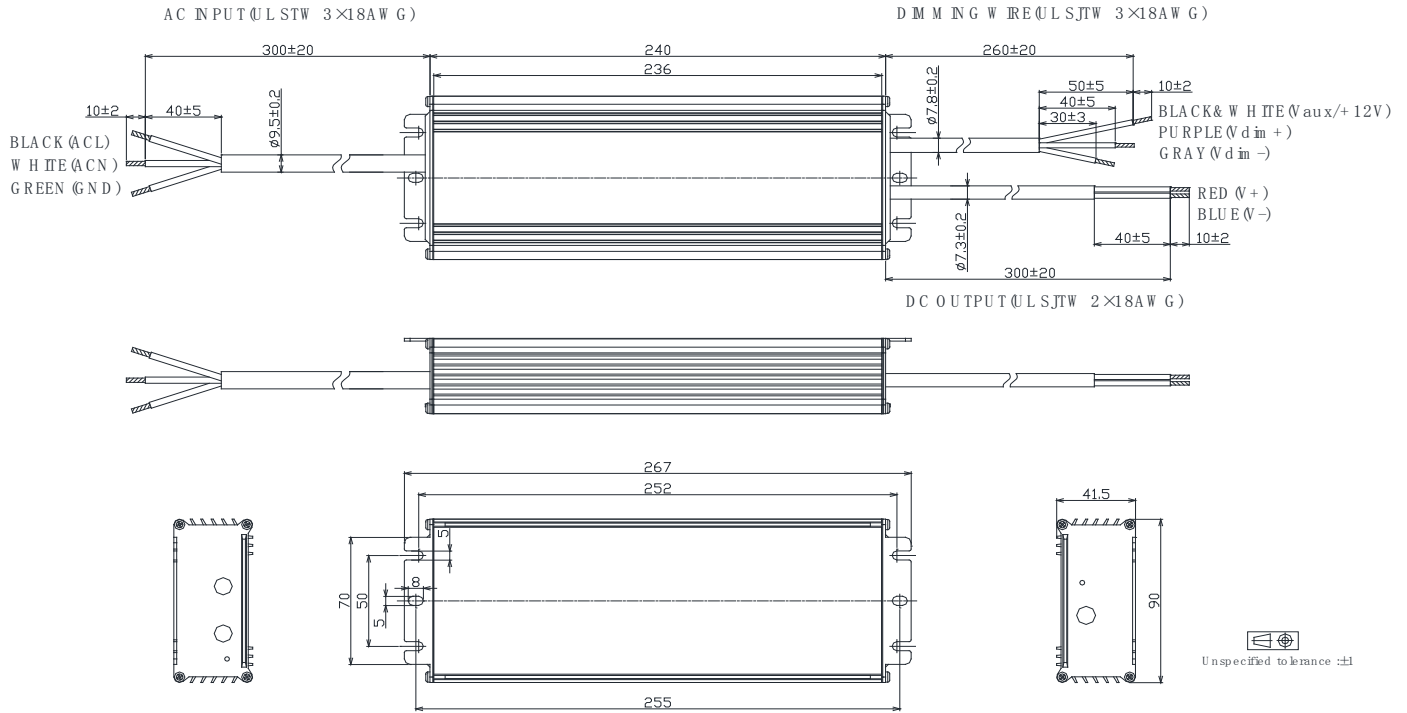


Figure 33, AR7PT

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
12/2/2016	V2a	In Draft Release	/	/
12/7/2016	V2b	Update	De-rating Curve	Removed the high voltage marks
		Add		THD (total harmonic distortion)
		Modify	Measured at full load and 220Vac in the thermal balanced condition	Measured at full load in the thermal balanced condition
5/18/2017		Surge Protection	Line to line 4kV, line to ground 10kV, IEC 61000-4-5	Line to line 6kV , line to ground 10kV, IEC 61000-4-5
		Update	Product image	On page 1