



Universal QUAD Mode LED Driver

The DRW-A4D series of compact LED drivers offers universal input voltages (120/230/277V), patent pending, quad mode dimming and superior performance for compact lighting fixtures, such as downlights, tracklights/spotlights and wall sconces where small form factor, flexibility in dimming control and input voltage requirements are critical factors.

Product Offering

Power: 15 / 21 / 30 W
 Universal Input: 120 / 220-240 / 277 V (50/60 Hz)
 Output: 350 / 500 / 700 mA (30-42 V)
 Quad Mode Dimming: Leading and Trailing edge Phase Cut, 0/1 – 10V, PWM
 IP rating: IP65



Features and Benefits

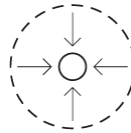
Universal Input	One fixture design that works across all major countries' AC voltages (120 / 220-240 / 277V), simplifying design and SKU reduction
Quad Mode Dimming	One fixture design that works across all major dimming methods, phase cut (LE/TE), 0-10V and PWM, simplifying design and SKU reduction
Compact Size	Specifically designed to fit in small lighting fixtures
Deep Dimming	Excellent dimming performance to less than 1% with stable light output
5 Year Warranty	Backed by the industry leading warranty of 5 years gives confidence in long term reliability and maintenance free operation



Universal Input



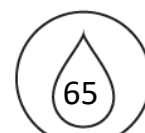
Quad-Mode Dimming



COMPACT SIZE



DEEP DIMMING



IP RATING



5 YEAR WARRANTY





Input Characteristics

Specification item	Value	Condition
Nominal Input Voltage Range AC	120 – 277 VAC	
Nominal Input Voltage Range AC	108 – 305 VAC	Operational range
Maximum Input Current @120V	0.14 A (15W) 0.21 A (21W) 0.28 A (30W)	Full output power @ 120V Input Voltage
Maximum Input Current @230V	0.08 A (15W) 0.11 A (21W) 0.15 A (30W)	Full output power @ 230V Input Voltage
Maximum Input Current @277V	0.07 A (15W) 0.09 A (21W) 0.13 A (30W)	Full output power @ 277V Input Voltage
Input Frequency	50 / 60 Hz	Performance range
Power Factor with Full Load	> 0.9	Full output power @ 120 / 230 / 277V Input Voltage
Efficiency @ 120V	87% (15W) 86% (21W) 85% (30W)	Full load @ 120V Input Voltage
Efficiency @ 230 / 277V	87% (15W) 88% (21W) 89% (30W)	Full load @ 230V / 277V Input Voltage
THD with Full Load	< 25% (15W) < 25% (21W) < 25% (30W)	Full load @ 120V / 230V / 277V Input Voltage
Maximum Inrush Current	< 10 A	At 120 – 277V input 25°C cold start at 100% conditions. For more details in the attached graph
No-load Power Consumption	< 0.5 W	
Start-up Time	< 0.5 s	





Output Characteristics

Specification item	Value	Condition
Rated LED Output Power	11 – 15W (15W)	
	15 – 21W (21W)	
	21 – 30W (30W)	
Nominal LED Output Current	350 mA (15W)	
	500 mA (21W)	
	700 mA (30W)	
LED Output Current Tolerance	±5%	
LED Output Voltage Range DC	30 – 42 VDC	
Output Current Ripple LF	< 10%	< 2KHz
Output P _{st} LM	< 0.5	
Output SVM	< 0.4	

Dimming Characteristics

Specification item	Value	Condition
Dimming Protocol	1. Leading Edge Phase-Cut	All 4 dimming protocols supported at input voltages @
	2. Trailing Edge Phase-Cut	
	3. 0/1 – 10V	
	4. PWM	
Dimming Range	1% - 100%	

