## ADVANCE

by (signify

**LED Driver** 

### CertaDrive X

CI034C070V048CDX1



Advance CertaDrive X LED drivers are designed to meet basic lighting needs. These drivers are offered with specific voltage-current settings and are, thus, optimized with specifications that are appropriately suited for the application, making LED conversion affordable.

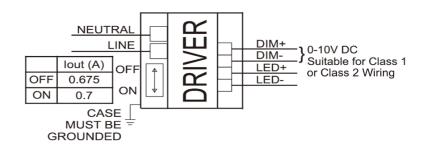
### Specifications

Input Volt. (Vac)	Output Power (W)	Output Volt. (V)	Output Current (A)	Efficiency@ Max. Load and 70°C Case (%)	Max. Case Temp. (°C)	Input Current (A)	Max. Input Power (W)	THD @ Max. Load (%)	Power Factor @ Max. Load	Surge Protection (Ring- Wave, KV)	Envir. Protection Rating	Dim	Dimming Range (with specified dimmers)
120	- 34 2	28-48	0.675/ 0.7A	86	T <sub>life</sub> : 70°C	0.33	- 31.1	<20%	>0.90	2.5	UL damp		10% ~
277				88	T <sub>uL</sub> : 80°C	0.15					& dry		100%

### Enclosure

	In. (mm)
Case Length (S)	11.02 (280)
Case Width (W)	1.18 (30)
Case Height (H)	0.83 (21)
Mounting Length (M)	10.57 (268.6)
Overall Length (L)	11.02 (280)

### Wiring Diagram



### WARNING

Lead-wires are 18AWG 105C/600V solid copper. Install in accordance with national and local electrical code,USE 18AWG Sold and tinned stranded copper wires.





Intertek



LED class 2 output For Dry and Damp Location

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#### Features

- 50,000+ hour lifetime<sup>1</sup>
- Excellent thermal performance
- High power factor & low THD<sup>2</sup>

### **Benefits**

- Enables long life luminaire designs
- Allows operability in indoor (low-bay) ambient conditions
- $\boldsymbol{\cdot}$  Suitable for commercial indoor applications

### Application

- · Indoor linear troffers, pendants
- Office areas
- Retail centers
- Educational facilities

#### **Electrical Specifications**

All the specifications are typical and at 25°C Tcase unless specified otherwise.

### **Product Data**

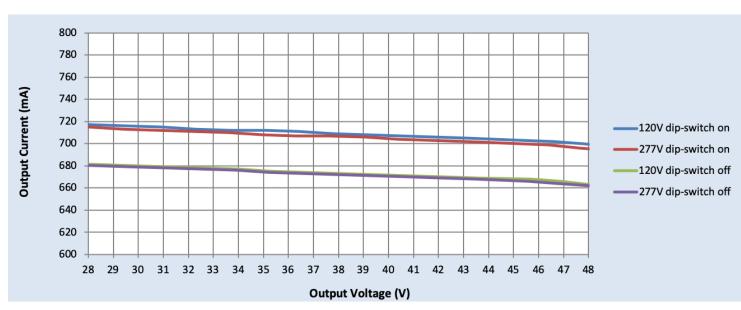
Order Information					
Full Product Code	Cl034C070V048CDX1 (Mid-Pack, 18pcs/Box) 12NC:929001791613				
Line Frequency	50/60Hz				
Min. Mains Voltage Operational	108 Vac				
Max. Mains Voltage Operational	305 Vac				
Output Information					
Maximum Open Circuit Voltage	60Vdc, Class 2 output				
Output Current Ripple (ripple = peak to average / average)	30% max @ max lout				
Output Current Tolerance (at maximum output current)	< 8% <sup>2</sup>				
Protected	Short Circuit protection				
Over Voltage Protection	52V+/-4V Hiccup mode protection				
Features					
0-10V Dimming	See dim curve for detail.				
Environment & Approbation					
Operating Ambient Temp. Range	-20°C to +40°C				
Max Case Temperature (Tcase)	80°C, Tcase Life: 70°C				
Agency Approbations	UL 8750, UL 1310, CSA 250.13, Class P (UL, CSA, ETL)				
Electromagnetic Compliance	FCC 47 Part 15 Class A @277V input, Class B @120V input				
Audible Noise	<20dB Class A				
Weight	0.423Lbs / 0.192kgs				

1. Advance CertaDrive LED drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 35,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTBF modeling.

2. Note: power factor (PF) and total harmonic distortion (THD) may deviate under adverse mains voltage conditions outside nominal operation. Output current (I out) variation includes effects of line and load regulation, temperature variation and component tolerances.

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#### lout Vs. Vout

When designing LED board, please consider LED voltage increases due to cold temperature, forward voltage tolerance and aging to make sure LED voltage is always below 48V. Recommended typical LED voltage at room temperature 43V or below.

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### 0-10V Dimming Curve

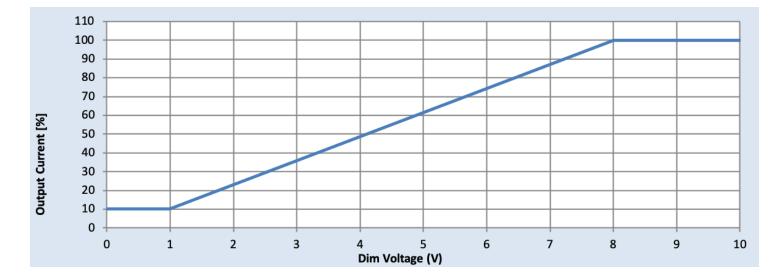
Dimming source current from the driver: 200µA (@ 0<Vdim<8V)

Minimum dim level: 10% of lout

Maximum output voltage on the dimming wires: 12V

### **Approved Dimmer List**

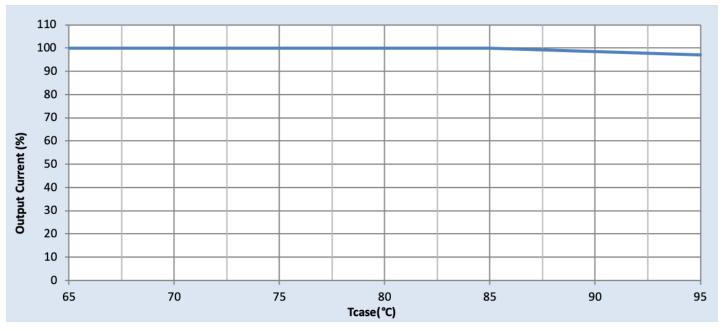
Manufacturer	Manufacturer Part Number		
Lutron	Visit www.lutron.com		
Leviton	IllumaTech IP7 series		
Philips	Sunrise - SR1200ZTUNV		



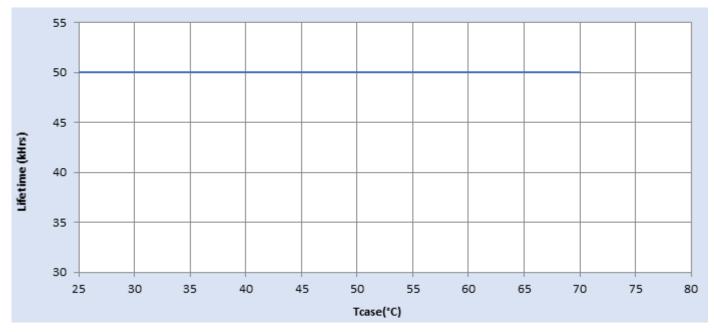
### **Electrical Specifications**

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### **Output Current Vs. Driver Case Temperature**



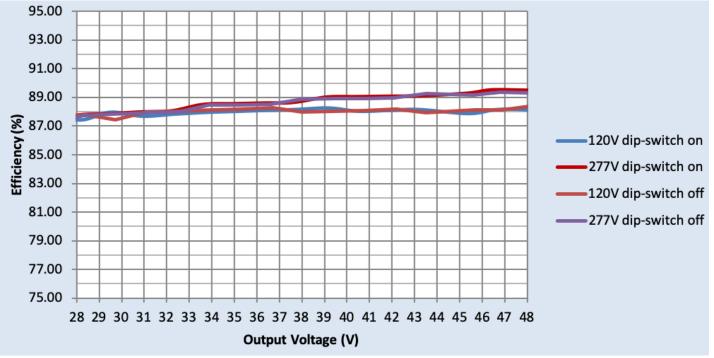
#### Driver Lifetime vs. Driver Case Temperature



### **Performance Characteristics**

Based on measurements on a typical sample at 70  $^{\rm o}{\rm C}$  case. The accuracy of the measurements is within the tolerance of the measurement instruments.

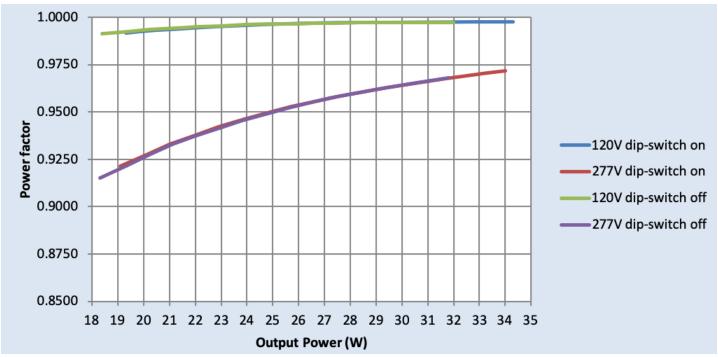
### Efficiency Vs. Output Voltage



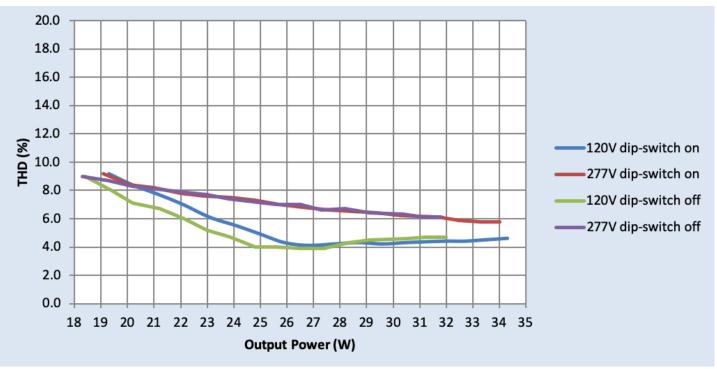
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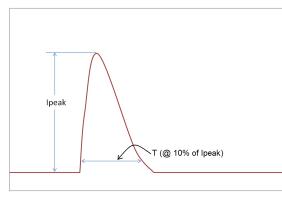
### Power Factor Vs. Output Power



### Total Harmonic Distortion (THD) Vs. Output Power



#### Inrush Current Info



Vin	lpeak	T (@ 10% of Ipeak)		
120 Vrms	9.9A	6.3µS		
277 Vrms	26.5A	6.0µS		

Inrush current is measured at peak of the corresponding line voltage. Source impedance per NEMA 410.

### **Lightning Surge Info**

ANSI Surge Type	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)					
100 kHz Ring Wave (w/t 30Ω)	2.5kV	2.5kV					

#### Isolation

Isolation	Input	Output	0-10V	Enclosure	
Input	-	2xU+1kV	2xU+1kV	2xU+1kV	
Output	2xU+1kV	-	2xU+1kV	500V	
0-10V	2xU+1kV	2xU+1kV	-	2xU+1kV	
Enclosure	2xU+1kV	500V	2xU+1kV	-	

U = Max input voltage

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