

# Current Tuning Controller

(CTC

Rev 4-5-2018

Electrical Specifications		
Max Operating Power:	100W (Power = input voltage x driver output current)	
Input Voltage Range:	15 to 56 VDC <b>Note:</b> Connect only one driver output channel per CTC, minimum output must also be within this range	
Max Input Current:	2.5A, not to exceed max operating power	
Operating Current:	I5mA of input current is used to power internal control circuits, in addition to LED Array current  Note: Not recommended for use with drivers which: have 1% dimming, dim below I5mA, or dim-to-off capability unless the minimum current allowed or programmed meets the following equation: (Minimum dimming %) > (15mA / max current)	
Output Frequency:	32kHz	
Loading Specifications:	LED Array I and 2 must have the same forward voltage and current characteristics and the same number of LEDs in series and parallel. The array voltage must be within the CTC Input Voltage Range.	

### **Dimming Characteristics**

Parallel Dimming Control Capability:	Multiple drivers and CTCs may be connected in parallel to a sinking type dimmer as long as the total current sourced does not exceed the dimmer's maximum capacity
Max Dimming Source Current:	ImA
Dimmer Compatible With:	Use with sink-style dimmers. Some low/high end trim adjustment may be required. Compatible with:  1. HCS NX system 2. Lutron NTFTV, NFTV, DVTV, DVSTV 3. Wattstopper ADF1 20/277
Dimmer Not Compatible With:	I. Pass & Seymour PS 010 120V 2. Lutron NTSTV 3. Leviton IP710, AWSMT-7, AWRMG-7 3. Wattstopper CD4FB 4. Lightolier V2000FAMU 5. Synergy ISDBC 120/277
Max Dimming Voltage:	12 VDC
Protection at Dimming Output:	Isolated digital transformer
Functional Dimming Input Range:	Dimmer voltage >8.5Vdc forces 100% input current to output LED Channel   Dimmer voltage <1.5Vdc forces 100% input current to output LED

Environmental Specifications		
Operating Temperature: (Measured at Tc Point)	-20°C – +50°C	
Storage Temperature:	-40°C – +90°C	
Humidity:	5% – 95%	
Mechanical Spec	cifications	
Length:	4.16" (105.66mm)	
Width:	1.392'' (35.36mm)	
Height:	0.947" (24.07mm)	
Mounting:	Inside fixture (with tape) or ½" knockout (with Mounting Adapter)	
Wire Connections:	Push in type, accepts 14-20AWG solid/stranded wire	
Lifetime:	Calculated Lifetime > 50,000 Hours @ rated ambient	

(Contains no electrolytic capacitors)

1.6 oz (45.4g)

A 1	٠ ،	•
App	IICat	ions

- White Light Mixing (Color tuning)
- Directional Mixing (Up/Down ratio tuning)
- Warm Dimming

Weight:

 Circadian Rhythm Control (requires scheduling-control dimmer)

### Overview

- Class 2 operation
- 15V minimum, 2.5A max
- Two LED Array outputs
- Push-in connectors
- Mount inside fixture or on a J-box
- 0-10V dimming with isolated inputs







Part	Model	Description
93060818	CTC	Current Tuning Controller
93066006-01	CTC-M	Mounting Adapter
		Class 2:1 IS/Canada

Safety Cert.	Standard
UL/CSA:	CSA C22.2 No. 250.13-14 & UL 8750
Hazardous Substance:	RoHS Compliant



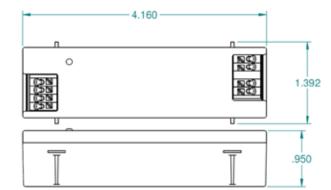


# Current Tuning Controller

(CTC

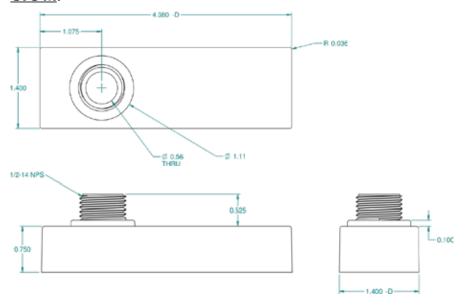
### **Dimensions**

### CTC:

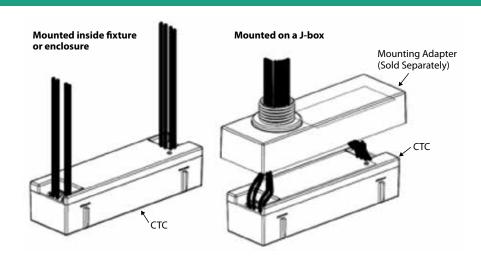


Note: The CTC needs to be appropriately secured in the luminaire per end user requirements.

### CTC-M:



### Mounting





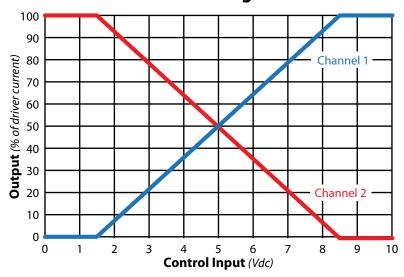


## **Current Tuning Controller**

(CTC

### **Tuning Characteristics:**

## **Current Tuning Profile**



Minimum undimmed current for driver		
Dim to Off	Not Recommended	
1%	1500mA	
5%	300mA	
10%	I50mA	
Other	(Minimum dimming %) > (15mA / max current)	

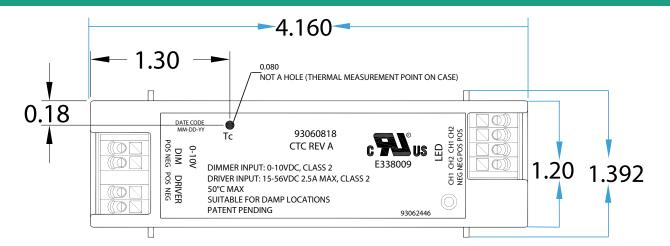
**Note:** The CTC needs to be appropriately secured in the luminaire per end user requirements.

#### LED Array Status, based on 0-10V input voltage

0-10V Dim Control	LED Ch I Output	LED Ch2 Output
High (~8.5V)	High (~100% output)	Low (~0% output)
Low (~1.5V)	Low (~0% output)	High (~100% output)

<sup>\*</sup> For tunable white application use highest CCT on Ch1. See wiring diagram 1. \* For dim to warm application use highest CCT on Ch1. See wiring diagram 2.

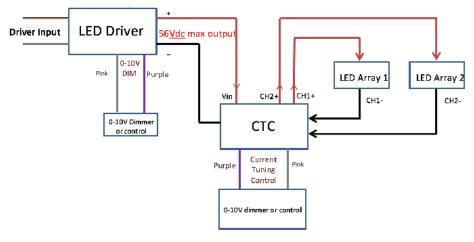
## Tc Point Location:





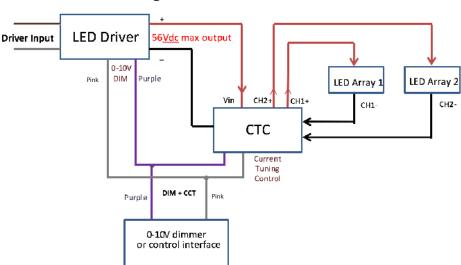
### **Controlling CTC and LED driver independently:**

- 1st Wall Dimmer connects to Driver and controls brightness (intensity).
- 2nd Wall Dimmer connects to CTC and controls color balance.



### Using one common dimmer for CTC and LED Driver together:

 Use a single Wall Dimmer connected to both Driver and CTC to create a Warm Dimming fixture



### **Connector Descriptions:**

