

# APT-CC-VFW MODULES



## Features

- > APT-CC-VFW controllers enable adjustable fixed white control to LED fixtures using DIP switches
- > Integrated between single channel constant current driver and dual CCT LED module, the DC modules are powered directly from the driver
- > The module has 3 DIP switches which allow for 8 different output ratio configurations to be set. These configurations can be calibrated to different CCTs, customizable upon request.

## Ordering Information

Product Code	Description
<b>APT-CC-VFW-wwwww</b>	<b>VFW</b> - DIP switch CCT selection <b>wwwww</b> – Internal code provided by Arkalumen as a simplified configuration code for repeat orders
<b>APT-CC-VFW-E-wwwww</b>	<b>VFW</b> - DIP switch CCT selection <b>E</b> – Extended Temperature Range <b>wwwww</b> – Internal code provided by Arkalumen as a simplified configuration code for repeat orders

## System Architecture

### Design Requirements

1. Color mixing of light is produced by adjusting the intensity ratio between two LED channels. Therefore, the maximum current should be determined by the LED channel with the lower maximum current of the two.
2. The forward voltage of the LED channels should be matched. If there is variability in the forward voltage of the LED channels, the system should be tested for proper operation

Contact Arkalumen for technical support at [support@arkalumen.com](mailto:support@arkalumen.com)

## Operating Conditions

Environmental		
Ambient Temperature, Range	-20 – 55 °C	
Case Temperature, Max.	CC-VFW	85 °C
	CC-VFW-E	100 °C
Material	Polyolefin	

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## Warnings

1. Do not connect/disconnect input or output wiring while powered
2. Follow ESD protection procedures while handling input or output wiring, and programming port
3. Do not attach an AC input to the APT controller; DC input only
4. Use only with a driver providing an isolated DC output (ie. the output has no earth or protective ground reference).
5. Read and respect all voltage, current and power limits outlined in the electrical specifications section of the hardware version being used
6. Carefully follow and check all wiring diagrams in this document for the correct hardware version being used

## Mechanical Specifications

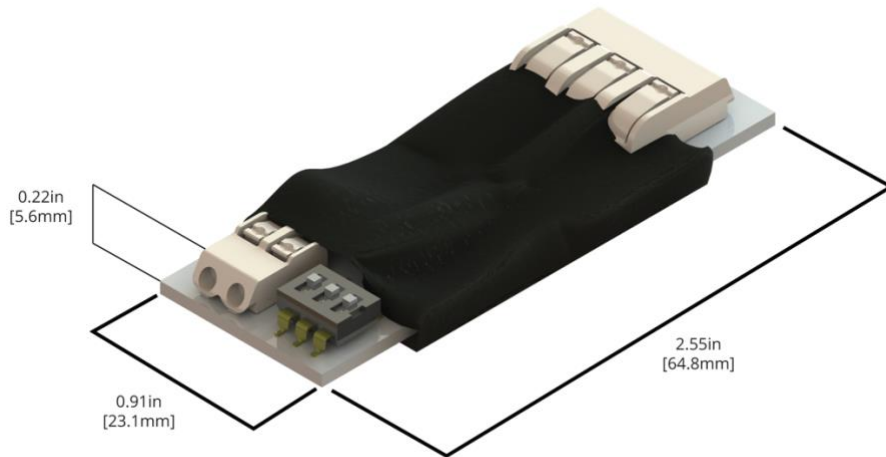


Figure 1 - APT-CC-VFW Adjustable fixed white configuration

### Dimensions

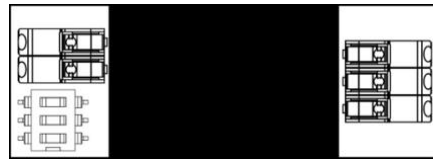
Dimensions (inches)	
Length	2.55
Width	0.91
Height	0.24

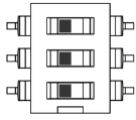
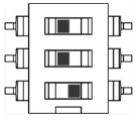
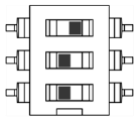
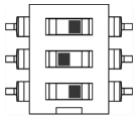
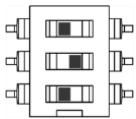
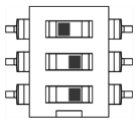
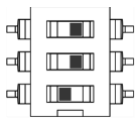
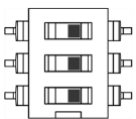
## Wiring Diagrams



Figure 2 - APT-CC-VFW Adjustable fixed white configuration

## DIP Switch Settings



DIP Switch Setting	Ratio 0-100 (%)	DIP Switch Setting	Ratio 0-100 (%)
 0	R0xxx	 4	R4xxx
 1	R1xxx	 5	R5xxx
 2	R2xxx	 6	R6xxx
 3	R3xxx	 7	R7xxx

## Electrical Specifications

### Input

Port	Voltage		Unit	Current		Unit	Power	
	Min	Max		Min	Max		Min	Max
DC IN +/-	12	60	V	5	4,160	mA	-	100 W

### Output

Port	Voltage		Unit	Current		Unit	Power	
	Min	Max		Min	Max		Min	Max
CH1	-	60	V	0	4,155	mA	-	100 W
CH2	-	60	V	0	4,155	mA	-	100 W

## Firmware Configuration

Code	Description	Option	Configuration Trait
<b>R(0-7)(xxx)</b>	<b>xxx</b> – Denotes the ratio output configuration for a specific colour temperature	<b>0-100</b>	CH1 will have this duty cycle and CH2 will have its complement