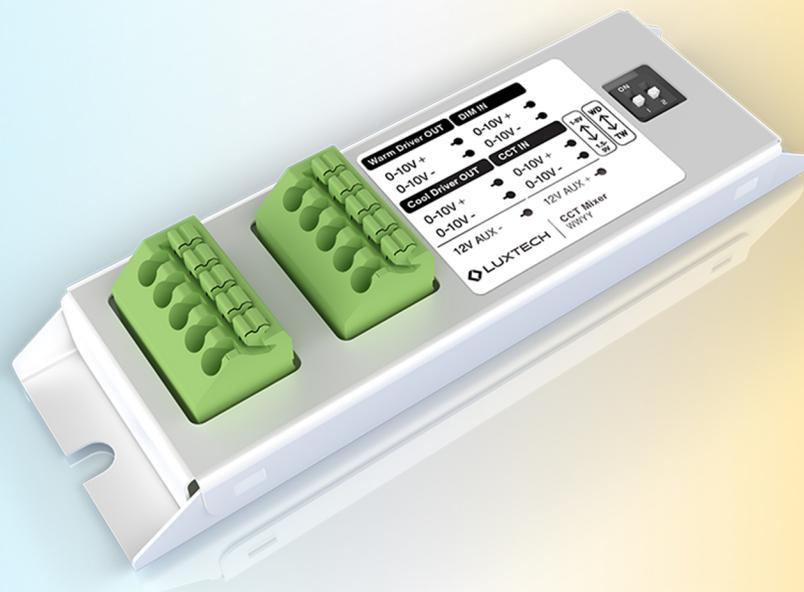


CCT Mixer by LUXTECH gives plug and play tunable white capability to single channel drivers.



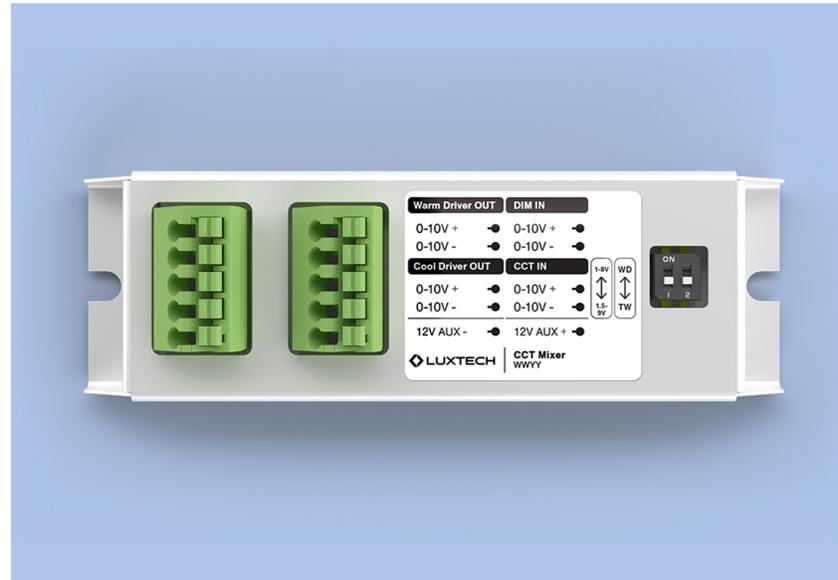
Traditional methods of tunable white control add complexity and system cost.

The adoption of tunable white technology in architectural lighting has been slowed by the additional complexity and costs that typically come with it.

While tunable LED drivers offer the most features and customizability, they are also more complex to configure. They are often limited to 50W of power output despite many architectural fixtures requiring more than 50W per fixture. This results in needing to use multiple drivers per fixture which adds component costs, wiring time, and driver configuration time.

Because of the additional electronics complexity and lower volumes of production compared to single channel drivers, tunable white drivers are affected by supply chain issues frequently, resulting in long lead times

LUXTECH has created a solution that allows fixture OEMs to use their common constant current drivers they already have stocked, and pair them with an external tunable controller that provides tunable white and warm dim capability.

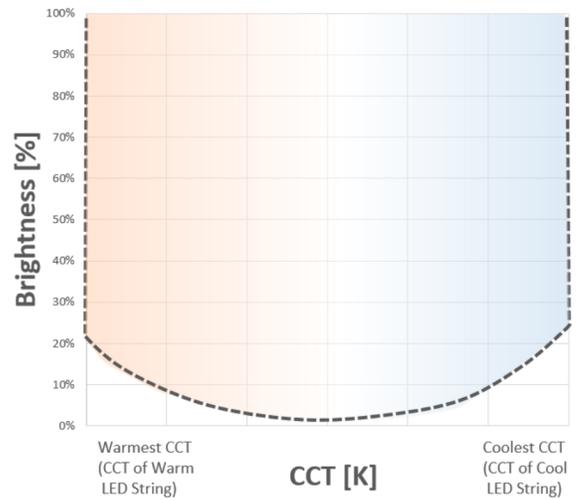


CCT Mixer combines single channel drivers to give plug and play tunable control:

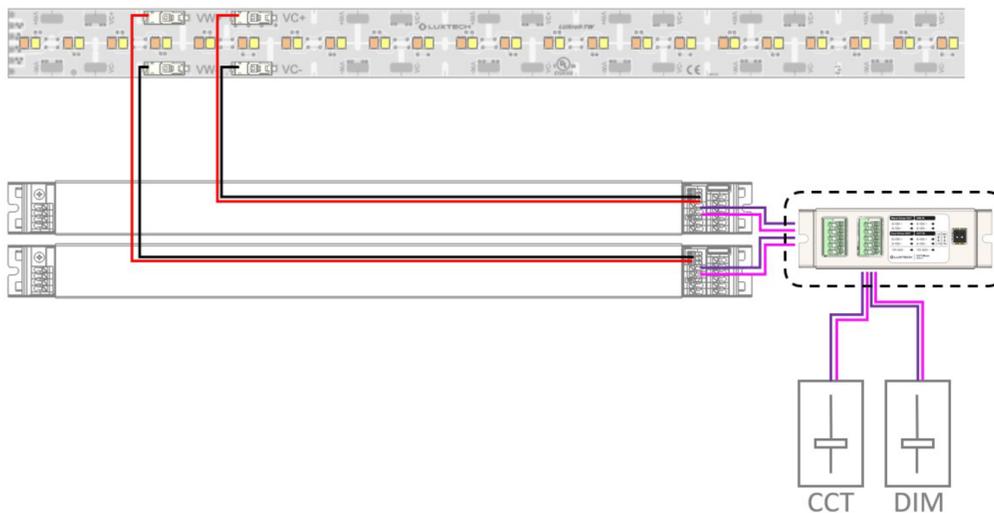
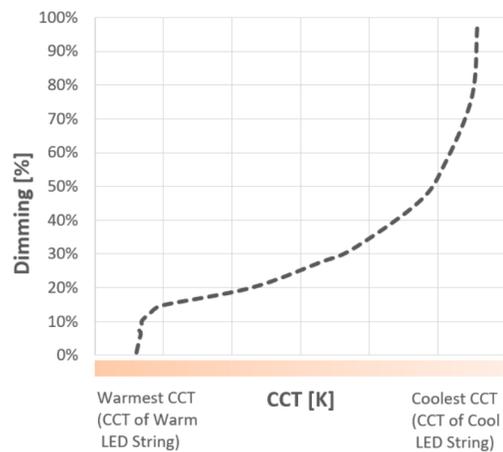
CCT Mixer by LUXTECH acts as a translator for 0-10V control. It receives two 0-10V signals, one for intensity control and one for CCT control. It outputs two 0-10V signals which control the intensity of two single channel constant current drivers. One of these drivers powers a string of cool LEDs, and another a string of warm LEDs in a tunable white LED module. The relative intensity of the two loads determines the CCT of system in addition to the overall intensity.

This is the same logic process that occurs in a two-channel tunable white driver, but by separating out the functional components, the CCT Mixer allows for the use of single channel drivers that are already stocked on the shelf to achieve the same result. Additionally, single channel drivers are often able to deliver up to 100W of power each. When combined with the CCT Mixer, this allows for a longer achievable run lengths and brightness output than typical tunable white drivers can provide. Depending on the driver specifications, a single mixer can control an additional pair of drivers to control even more fixtures or enable longer runs. Because the CCT Mixer is only providing 0-10V signals, its power consumption is not subject to power related failures that occur with devices that split a DC load from a single driver.

Typical Tuning Range



Typical Warm Dim Curve



Plug and Play tunable control:

It's critical to use a logic device like the CCT Mixer or tunable white driver to have proper tunable white control. While it is possible to have separate control and power inputs for warm and cool intensity control, there are significant consequences in doing so. Independent control of CCT and intensity is not possible with this method. This means that only preset scenes can be used accurately - manual control of intensity and color with this method is inaccurate leading to high variation in intensity and CCT differences. By using the CCT Mixer, the control of the warm and cool channels are coupled so that intensity can remain constant throughout changes in color, and color can remain constant throughout changes in intensity. The CCT Mixer has 2 settings controlled by a DIP switch so the user can select between tunable white and warm dim mode. A second DIP switch determines the 0-10V range of the drivers being used which optimizes the tunable performance to the specific drivers. While tunable white drivers require special programming to determine the tunable range, voltage limits, and deratings, the CCT Mixer requires no additional programming, and the achievable CCT range is determined by the CCT of the LEDs on the tunable white LED module.

While typical tunable white driver configuration software allows for more customizability, it also adds additional complexity that is often not required. With the CCT Mixer, it's as simple as powering the device with 12V auxiliary power, wiring the 0-10V signals, and flipping a switch.

The standard tuning range and warm dim curve are displayed in the charts.

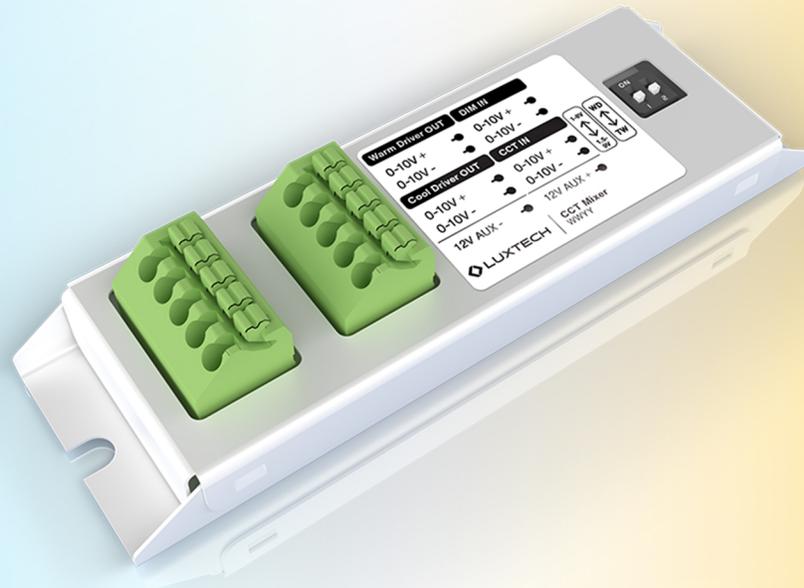
Summary:

CCT Mixer by LUXTECH saves luminaire manufacturers time and money by giving plug and play, programming free tunable white capability to commonly stocked single channel drivers.

Contact your LUXTECH Sales Rep to request a Demo or product sample to try for yourself!

QR Code | SCAN to View Design Resources & Request a Demo.





About LUXTECH:

LUXTECH designs & manufactures versatile, specification-grade LED modules for architectural lighting manufacturers.

“We are a collection of engineers, designers and researchers based out of Philadelphia, PA and proudly work with architectural fixture manufacturers and teams around the world. Besides being inquisitive and inventive thinkers, we are also personable – we make sure our customers’ needs are heard and their expectations exceeded. We believe lighting has the power to define our world: it can elicit a mood, improve appearances, enhance performance, and influence our behavior. By pushing the latest lighting technology and manufacturing exceptionally built modules with the utmost customer care, we believe we can elevate illumination to foster a better world.”

-Graham Merrifield, Senior Applications Manager