

# 1 DESCRIPTION AND ORDERING INFORMATION



CTM 109



CTM 112



CTM 119



CTM 119NR

## Description

araya<sup>5</sup> Color Tuning Modules mix five colors of LEDs to deliver tunable and dimmable white light at 90+ CRI and color consistency of <2 MacAdam ellipse across a tuning range of 1650 - 4000K. Light can be dimmed from 100 - 1% while maintaining constant CCT. Gradients of saturated colors from 1 - 100% can be added to color points within the tuning range. araya<sup>5</sup> modules integrate the driver electronics for precise control of current and PWM inputs and LED light output while tuning and dimming. On board closed loop thermal feedback compensates each color channel for thermally induced variations in optical output due to tuning, dimming or ambient temperatures. On board closed loop optical feedback measures the lumen depreciation of each channel and re-balances the color model to ensure color consistency over the 50,000 hour life of the module. An in-line manufacturing process captures the spectral characteristics of each LED under multiple conditions, generating a unique color model for each color tuning module. araya<sup>5</sup> Color Tuning Modules are compatible with traditional 0 - 10V wired controls, and digital protocols including Lutron<sup>®</sup> EcoSystem and DMX / Bluetooth using the optional Lumenetix Digital Control Adapter. For simple deployment, SceneSet<sup>®</sup> allows up to five scenes to be pre-programmed into the module during production and recalled at the venue using a 0 - 10V controller. Commissioning of the module and re-programming of Sceneset<sup>®</sup> is done via the wireless Lumenetix Light Commissioning Tool. The CTM One series features light emitting surfaces (LES) of 9, 12 and 22 mm, and a tuning range of 1650 - 4000K.

## Key Features

- Tunable range: 1650 - 4000K
- Dimmable from 100% - 1% at constant CCT
- Color gamut control: gradients of saturated colors from 1 - 100% can be added to color points
- Integrated driver electronics
- On board thermal and optical feedback for color consistency of <2 MacAdam ellipse over 50,000 hour life
- On board thermal turndown
- In-line spectral capture creates unique color model for each module
- Compatible with 0 - 10V wired controls
- Lutron EcoSystem, DMX / Bluetooth control compatibility via the optional Digital Control Adapter
- Copy and Paste for exact fixture to fixture matching
- SceneSet<sup>®</sup> enables up to five scenes to be preprogrammed and recalled using a 0 - 10V controller
- Commissioning via wireless Light Commissioning Tool
- Three light emitting surfaces (LES): 9, 12 and 22 mm
- Zhaga compliant footprint and front heat sink mounting
- Provisions for reflector mounting



Light Commissioning Tool

## Photometrics and Ordering Codes

	Tunable Range	Wattage	CTM 109		CTM 112		CTM 119 / 119NR		
			Peak Lumens	Ordering Code	Peak Lumens	Ordering Code	Peak Lumens	Ordering Code (CTM 119)	Ordering Code (CTM 119NR)
Specifications*	1650 - 4000K	20W	875	45.007.003.01	1000	45.007.004.01	1200	45.007.002.01	45.007.005.01
		12.5W	600	45.007.011.07	650	45.007.011.05	800	45.007.011.03	45.007.011.01
CRI (Ra) Across Tuning Range		>90							
Dimming		100% to 1% in increments of 1% at constant CCT							
Nominal Color Consistency		<2 MacAdam ellipse (±0.002 Duv from ANSI C78.377-2008 curve)							
Color Consistency Over Life		Calibration maintains original color points over life							
Lumen Maintenance		L70 (70% of initial lumens) at 50,000 hours							

\* Lumen and wattage range is within +/- 10% of the nominal value. Peak efficacy is not necessarily at typical peak lumens.