

1 DESCRIPTION AND KEY FEATURES

2016 IES PROGRESS REPORT SELECTION • 2016 LFI INNOVATION AWARDS CATEGORY WINNER • 2016 LUX AWARDS HIGHLY COMMENDED • 2016 EDISON REPORT TOP TEN MUST SEE LIST



araya⁵ Tunable Color Round LED Arrays



araya⁵ Logic Modules

Description

araya⁵ Logic Modules (ALM) connect to tunable color high-power round LED arrays that mix five colors of LEDs to deliver tunable and dimmable white light at 90+ CRI* with color consistency of <2 MacAdam ellipse across a tuning range of 1650 - 8000K. The ALM is connected to one LED array via low-cost ribbon cables, and features on-board driver electronics and the araya⁵ control logic for precise control of LED light output while tuning and dimming. On board closed loop thermal feedback compensates each color channel for thermally induced variations in light output due to dimming or changes in 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 LED array. A patented in-line manufacturing process captures and stores the spectral characteristics of each LED on the array, rapidly generating a unique color model for each array. Delivered light can be dimmed from 100 - 1% in increments of 1% at constant CCT. Gradients of saturated colors from 1 - 100% can be added to color points within the tuning range. The Zhaga-compliant LED arrays are compatible with traditional 0 - 10V wired controls, feature on-board Bluetooth Low Energy (BLE), and can access DMX512-A-RDM or Lutron[®] EcoSystem inputs via an optional accessory board that connects to an electrically isolated expansion port within the ALM. For simple deployment, SceneSet[®] allows up to five scenes to be pre-programmed into the LED array during production and recalled at the venue using a 0 - 10V recommended dimmer or via Bluetooth. Commissioning of the LED array and the re-programming of Sceneset is done via the wireless araya⁵ Tunable Color 2.0 iOS app that connects to the embedded Bluetooth radio.

Key Features

- Tunable range: 1650 - 8000K
- 90+ CRI*
- 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 and araya⁵ logic
- On board thermal and optical feedback for color consistency <2 MacAdam ellipse over 50,000 hour life
- In-line spectral capture and storage creates unique color model for each Zhaga-compliant LED array, resulting in consistent CRI and CCT across all arrays
- On-board thermal turndown
- Compatible with 0 - 10V wired controls
- DMX512-A-RDM or Lutron EcoSystem control accessibility via optional accessory board that connects to an electrically isolated compartment within the ALM
- On-board Bluetooth Low Energy (BLE)
- Copy and Paste for exact fixture to fixture matching
- SceneSet enables up to five scenes to be preprogrammed and recalled using a 0 - 10V recommended dimmer or via Bluetooth
- DMX slots set by RDM or via wireless araya⁵ Tunable Color 2.0 iOS app



araya⁵ Tunable Color 2.0 iOS App

2 ORDERING INFORMATION

Photometrics and Ordering Codes (Round LED Array Kits)¹

	Tunable Range	LES ³	Typical Peak Lumens ⁴	Nominal Wattage (±10%)	Ordering Code
Specifications ²	1650 - 8000K	31.6 mm	5000	60W	80.002.007.01
		19.7 mm	3000	50W	80.002.006.01
			2000	30W	80.002.005.01 ⁵
			1500	23W	80.002.004.01
			1200	18W	80.002.003.01
		12.6 mm	2000	30W	80.002.002.01
	9.6 mm	1500	20W	80.002.001.01	
CRI (Ra) Across Tuning Range	>90*				
Dimming	100% to 1% in increments of 1%				
Nominal Color Consistency	<2 MacAdam ellipse (±0.002 Duv from C78.377-2008 ANSI curve)				
Color Consistency Over Life	Calibration maintains original color points over life				
Lumen Maintenance	L70 (70% of initial lumens) at 50,000 hours				

1. Kits include round LED array and araya⁵ Logic Module with on-board 0-10V and Bluetooth LE only, and do not include DMX512-A-RDM or Lutron[®] EcoSystem compatibility. They do not include ribbon cables, power cable assembly or control cable assembly (see below for required accessory ordering specifications).

2. Specifications are within +/- 10% of the nominal value. Peak efficacy is not necessarily at typical peak lumens.

3. LES = Light Emitting Surface.

4. Peak lumen values are listed for modules measured at the LED source only, and can be significantly reduced by the composition of the secondary optical path.

5. Available Summer 2017.

* From 2000 - 6000K

Required Accessories (Ordered Separately)

Quantity	Description	Part Number
1	18" long jacketed/round 16-pin ribbon cable (16-pin Tyco Connector at one end, 20-pin JST connector at other end) (for connecting ALM to round array)	28.700.003.03
1	18" long flat 16-pin ribbon cable (16-pin Tyco Connector at one end, 20-pin JST connector at other end) (for connecting ALM to round array)	28.030.002.02
1	24" long 2-wire ALM power cable assembly	28.030.001.01
1	24" long 7-wire ALM control cable assembly	28.002.002.01
1	DMX512-A-RDM Accessory Board	80.003.001.01
1	Lutron Accessory Board	80.003.002.02