

LTM FAMILIES LINEAR LED COLOR TUNING ARRAYS



Spectral Quality of Daylight
90+ CRI




Broad Tuning Range
1650-8000 K



Color Access
Pastels to Saturates



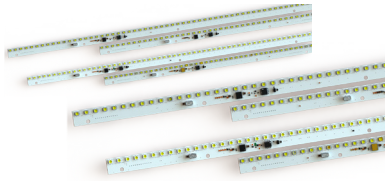
Halogen Dimming
3050 K (100%) – 1800 K (1%)



LED Dimming
100% – 0.1%*



Color Consistency Over Life
Less than 2 SDCM



Tunable Color Linear LED Arrays



araya Logic Module

araya Logic Modules (ALM2 / ALM3) connect to mid-power linear LED arrays (LTM2 / LTM3) that mix five colors of LEDs across a tunable color range of 1650–8000 K. The light can be dimmed from 100–0.1%*. The arrays deliver up to 1000 lm/ft of light at 90+ CRI. The ALM features on-board driver electronics and control logic for precise control of current and PWM while tuning and dimming.

LTM3 with ALM3 — The ALM3 rapidly generates a unique color model on the spot based on the spectral characteristics stored on the connected array, providing precision tuning of the light engine’s full spectrum color output. This enables the replacement of ALM3 as needed, and provides the ability to mix and match the various types of ALM3 with the various lengths of LTM3 array kits. Another key innovation is the ability of ALM3 to receive firmware upgrades over wired RDM/DMX to ensure field compatibility with previously deployed control systems.

Fixture control integration is achieved by packaging Bluetooth LE (for commissioning only) and 0–10 V on-board the ALM. DMX512-A-RDM, Lutron® EcoSystem, Avi-on™ wireless BLE Mesh platform, DALI Type 8 and Legrand® Wattstopper® DLM protocol compatibilities can be achieved via control cards that connect to an expansion port within the ALM.

COMMISSION AND CONTROL EFFORTLESSLY

CONTROL SYSTEM / PROTOCOL	LTM2 & LTM3 (TUNABLE COLOR CONTROL)				NOTES
	1 DIM*	2 CCT	3 SAT	4 HUE	
DMX512-A-RDM ^{1,2}	0.1%	1650–8000 K	Yes	Yes	1. Requires control card connected to ALM. 2. Refer to the separate DMX Lookup Values table for specific programming values and information. 3. Factory setting or RDM command.
0–10 V	~1% ⁴	1650–8000 K	**	**	4. 1-10 V signal dims module to approximately 1%. In-line power relay required to achieve 0% output. 5. Factory setting.
LUTRON ECOSYSTEM ^{6,7}	0.1%	1650–8000 K	N/A	N/A	6. Requires control card connected to ALM. 7. Refer to the separate Lutron EcoSystem Lookup Values table for specific programming values and information. 8. Factory setting.
AVI-ON WIRELESS BLE MESH ⁹	0.1%	1650–8000 K	Yes	Yes	9. Requires control card connected to ALM. 10. Factory setting.
DALI TYPE 8 ¹¹	0.1%	1650–8000 K	N/A	N/A	11. Requires control card connected to ALM. 12. Factory setting.
WATTSTOPPER DLM ¹³	0.1%	1650–8000 K	N/A	N/A	13. Requires control card connected to ALM. 14. Factory setting.

*100–0.1% LED dimming is available for specific modules/arrays when connected to 0.1% dimming-capable digital controls. May be limited to 1% dimming by controller; see control system specification for details.

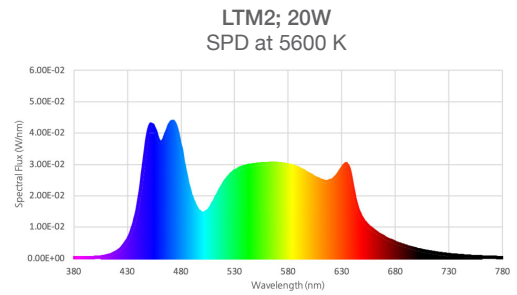
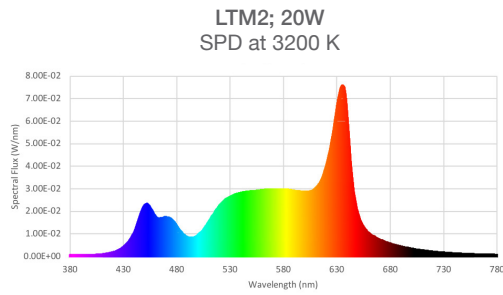
100–1% dimming is available with analog 0–10 V control.

**Two 0–10 V lines can be used to control DIM and CCT independently, or program Scenes—in any combination of DIM, CCT, HUE and SAT—and recall them with five 0–10 V presets.

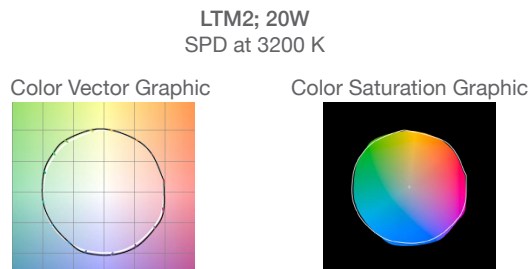
Individual product specifications may vary; please refer to technical data sheets. Bluetooth LE is provided on board for commissioning purposes only.

THE LTM DATA TELLS THE STORY

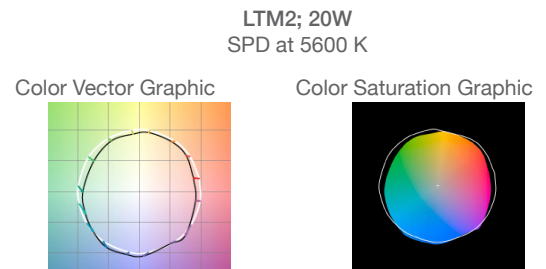
TYPICAL SPECTRAL POWER DISTRIBUTION (SPD) CURVES



TYPICAL TM-30 DATA

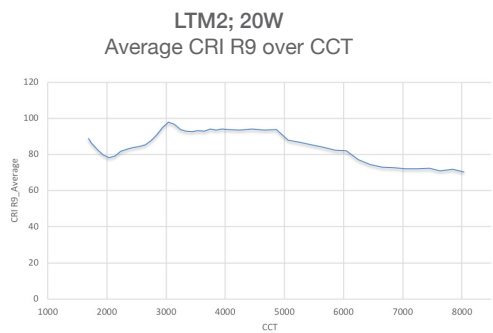
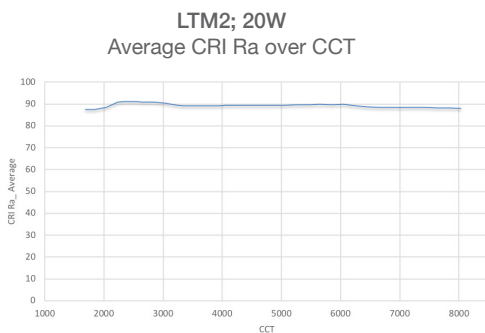
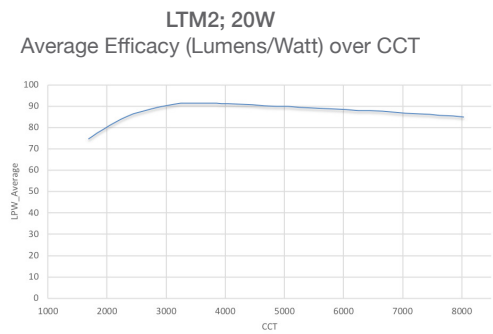
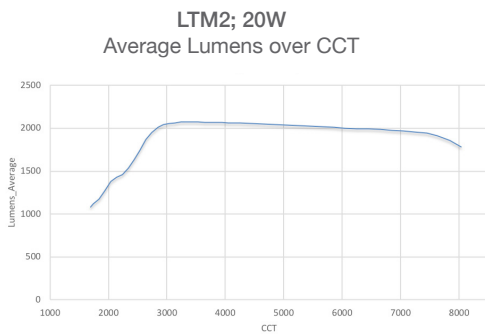


Rf = 90; Rg = 103; CRI Ra = 95



Rf = 82; Rg = 92; CRI Ra = 88

TYPICAL PERFORMANCE GRAPHS



For additional color and performance data, please refer to www.erp-power.com. Specifications may be subject to change without notice.