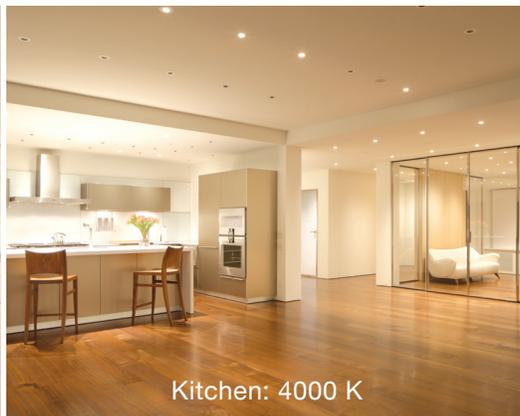# bianco™
ERP DRIVER INSIDE

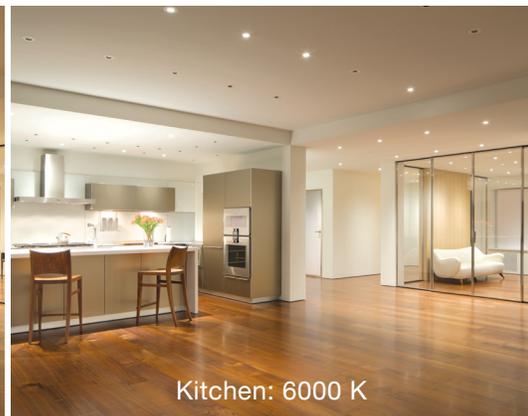# araya™
ERP DRIVER INSIDE

LIGHT FOR LIFE®

White, tunable white, and tunable color LED light engines with integrated universal AC input drivers—to recreate and control the highest quality of light, and access a rich gamut of pastels and saturated colors to unveil new design frontiers.

Kitchen: 1650 K

Kitchen: 4000 K

Kitchen: 6000 K

Bedroom and Bathroom: Violet
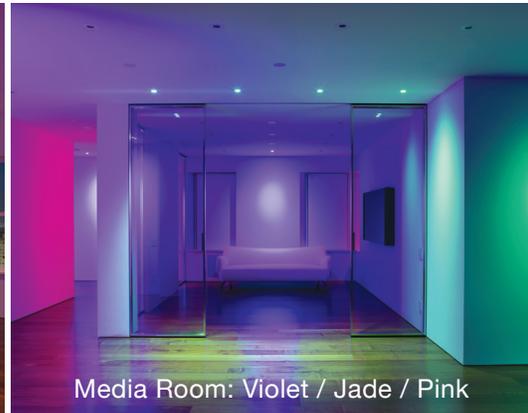
Bedroom: Lavender; Bathroom: 1650 K

Bedroom and Bathroom: 2700 K

Living Room: Violet / Pink

Living Room: Magenta / Violet / 2700 K

Media Room: Violet / Jade / Pink

Private Residence in San Francisco, illuminated by luminaires containing Araya tunable color light engines.
. Fixtures by LF Illumination. DMX controls by Lutron®. Architect: Wesley Wei. Lighting Designer: Eve Quellman.

ERP
POWER + LIGHT™

bianco™
ERP DRIVER INSIDE

FIND THE RIGHT (WHITE) LIGHT

In a world where simplicity meets sophistication, ERP introduces revolutionary LED light engines with elegant driver-inside technology that improves quality and control—while dramatically reducing costs across-the-board.

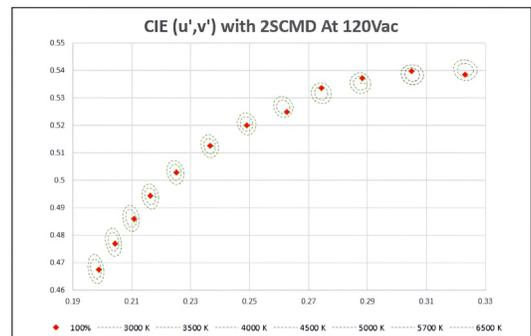## BIANCO LIGHT ENGINES DO IT ALL

A true lighting breakthrough—embedding the AC–DC driver inside the light engine and delivering the highest quality of light.

The technology-rich module can be preconfigured on the assembly line to operate at a predefined color temperature, or dim-to-warm—with options to mimic halogen or incandescent.

Consider the versatility—four light emitting surfaces, three feature packages, programmable CCT, range, warm dim profiles, and two tuning ranges.

BIANCO DELIVERS SUPERIOR QUALITY LIGHT

- Integrated Driver (120–277 VAC)
- CRI: 90+
- Color Consistency: 3-step (typically 2-step) MacAdam ellipse
- No Flicker (IEEE 1789-2015 compliant)
- Energy Star Compliant

CIE (u',v') with 2SCMD At 120Vac

Legend: 100% | 3000 K | 3500 K | 4000 K | 4500 K | 5000 K | 5700 K | 6500 K

BIANCO SLASHES COSTS EVERYWHERE

- Eliminates external driver cost
- Eliminates UL required 90 °C thermal cutoff protector— it's integral to the engine
- Reduces fixture cost
- Reduces fixture size
- Reduces fixture labor
- Easy module replacement in the field
- Programmability flexibility reduces SKU inventory

bianco™

ERP DRIVER INSIDE

A **POWERFUL** LITTLE PUCK

Bianco offers a full line of technology-rich LED light engines in 50 mm (Zhaga compliant) and 65 mm case diameters. Coupled with three control options, Bianco offers a robust line-up for all your lighting requirements.

50 mm module diameter — 65 mm module diameter

| 9 mm | 12 mm | 19 mm | 32 mm |

1200 lumens →→→ 4800 lumens

Bianco Product Series	SWM1, SWM2	TWM1, TWM2
Modes of Operation	SINGLE WHITE	TUNABLE WHITE, WARM DIM, SINGLE WHITE
ERP Driver Inside	Yes	Yes
CCT/Tunable Range (K)	2700, 3000, 3500, 4000	1800–6500
Warm Dim	-	Halogen or Incandescent
Tri-Mode Dimming	Yes	Yes
0–10 V Tuning	-	Yes
Optional Bluetooth	-	Yes
LES (mm)	9, 12, 19, 32	9, 12, 19, 32
Peak Lumens (lm)	1200–4800	1200–2600
CRI	90+	90+
Color consistency	3 step (typical 2 step)	3 step (typical 2 step)
Lumen Maintenance	L70	L70
Flicker	IEEE1789 -2015 Compliant	IEEE1789 -2015 Compliant

araya
ERP DRIVER INSIDE

COLOR IS HOW YOU LIGHT IT®

The replication and control of the range and beauty of daylight while ensuring color consistency from fixture-to-fixture over life, whether you use Tunable Color, Tunable White, LED Dimming or Halogen Dimming light paths.
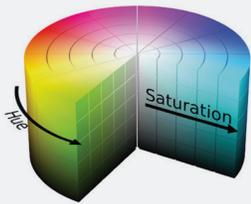
Spectral Quality of Daylight

90+ CRI

HIGHEST QUALITY TUNABLE WHITE LIGHT
Araya recreates daylight by mixing LED colors of the rainbow, to deliver full spectrum light from 1800 K to 6500 K at 90+ CRI.
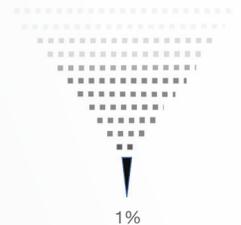
Color Access

Pastels to Saturates

FULL COLOR ACCESS to millions of colors within the gamut area created by the LEDs in the CIE color space, enabling tailored light from shades of pastels to saturates.

E-FLICKER FREE LED DIMMING TO 1%
is enabled by a proprietary hybrid technology that maintains color consistency while dimming.
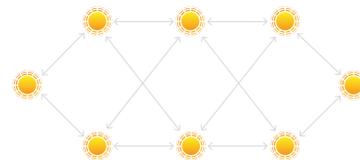
1%

LED Dimming

100% − 1%*

Warm Dim (Halogen)

3050 K (100%) − 1800 K (1%)

Color Consistency

Less than 2 SDCM

WARM DIMMING RECREATED
by emulating a halogen lamp from 3050 K at full brightness to 1800 K at 1%.

COLOR CONSISTENCY OF LESS THAN 2 SDCM
from fixture-to-fixture as verified by independent LM-84 testing—with on-board driver electronics and control logic for precise control of current and PWM.

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ERP DRIVER INSIDE

AWM1
AC INPUT TUNABLE COLOR LED LIGHT ENGINES

AWM1 (12 mm LES)

AWM1 (19 mm LES)

ELECTRICAL SPECIFICATIONS AND PHOTOMETRIC INFORMATION

Nominal Input	120 VAC / 60 Hz
Control Options	DMX512-A-RDM (with over-the-wire FW upgrade capability)
CRI (Ra / R9)	> 90* / > 70*
Dimming Range	100% to 1%, at constant CCT
Nominal Color Consistency	Norm. < 2 Step MacAdam ellipse
CCT Range	1800–6500 K*
Case Diameter	50 mm (1.97 in.)
Case Height	18.5 mm (0.69 in.)
Light Emitting Surface (LES) Diameter	12 mm, 19 mm
Light Output	1200 lm, 1500 lm

*Minimum CCT (for including S-red) to be determined.
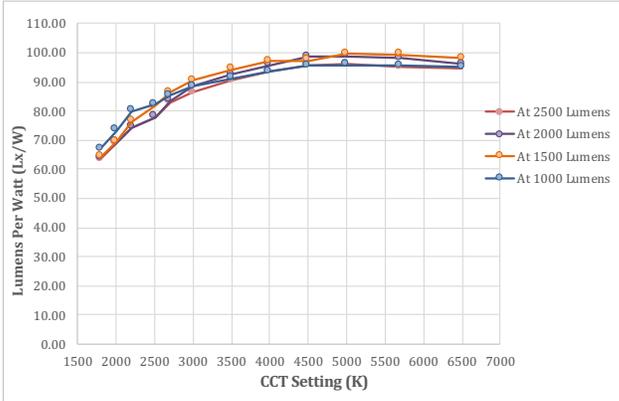
OPERATIONAL SPECIFICATIONS

CONTROL SYSTEM / PROTOCOL	DIMMING	CCT	WARM DIM	RGBW
DMX512-A-RDM	100–1%	TUNABLE 1800–6500 K	2850–1800 K (Incandescent) 3050–1800 K (Halogen)	√

All information is preliminary. Specifications may be subject to change without notice. Questions? Please contact support@erp-power.com.
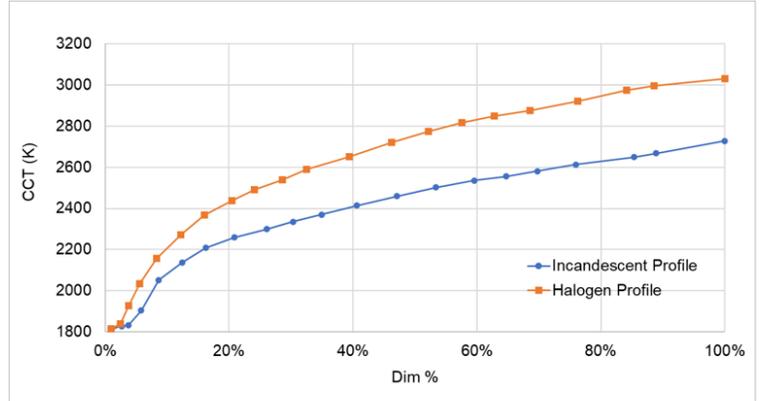
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THE AWM1 DATA TELLS THE STORY

LIGHT OUTPUT AND COLOR QUALITY

TYPICAL LUMENS PER WATT ON EACH CCT SETTING

Y-axis: Lumens Per Watt (Lx./W) — 0.00 to 110.00
X-axis: CCT Setting (K) — 1500 to 7000

Legend:
- At 2500 Lumens
- At 2000 Lumens
- At 1500 Lumens
- At 1000 Lumens

WARM DIM PROFILES

Y-axis: CCT (K) — 1800 to 3200
X-axis: Dim % — 0% to 100%

Legend:
- Incandescent Profile
- Halogen Profile

RGB COLOR WHEEL & CORRESPONDING HUE DEGREES

- Hue 0 — 0/360°
- Hue 10 — 60°
- Hue 20 — 120°
- Hue 30 — 180°
- Hue 40 — 240°
- Hue 50 — 300°
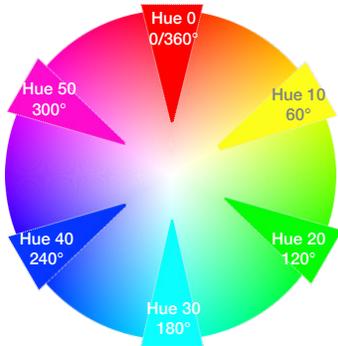
SPD AND DOMINANT WAVELENGTHS OF EACH RGB CHANNEL

Y-axis: 0.00E+00 to 1.00E+00
X-axis: Wavelength (nm) — 350 to 750

CIE

- Dom. Wavelength: 515.7 nm (Purity 0.461)
- White* 2429K (Purity 0.498)
- Dom. Wavelength: 617.3 nm (Purity 0.947)
- Dom. Wavelength: 458.4 nm (Purity 0.942)
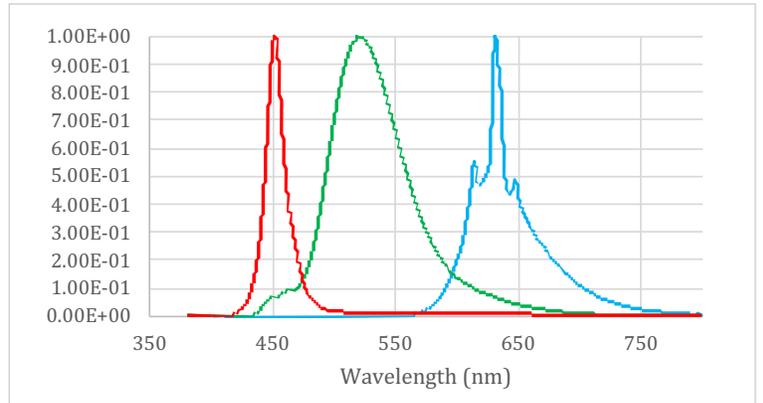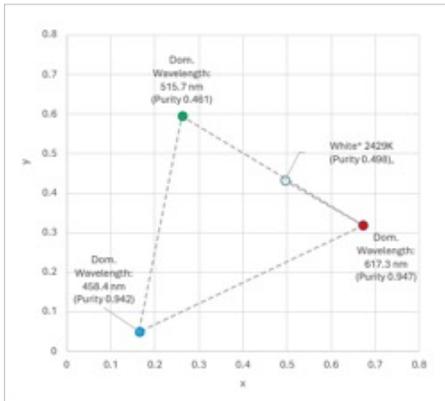
	L_dominant (nm)	Excitation Purity (%)*
RED	617.3	95
GRN	515.7	46
BLU	485.4	94

*Achromatic Stimulus Point (0.3333, 0.3333) was used as reference.

DRIVING QUALITY OF LIGHT

ERP
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