

LN-RGBW

Linear RGBW LED Module



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Project ||

Type ||

Quantity ||

LN-RGBW

Linear RGBW LED Module

LUXTECH RGBW combines architectural-grade white LEDs with RGB LEDs to offer an RGBW module with high efficacy, consistent and tightly controlled color, and a Zhaga compliant form factor.



FEATURES

- » Zhaga compliant form factor
- » Rigid FR4 two-layer PCB
- » 0.787" (20mm) Width
- » Constant Current Input
- » DMX Controllable in 4 channels
- » White LEDs LM-80 Tested by Cree
- » RGB-in-one LEDs by Nichia
- » Tight RGB LED binning for color consistency
- » Specification-Grade 3M Adhesive Backing
- » 3-Step MacAdam Binning
- » 90 CRI Standard

GENERAL SPECIFICATIONS

- » Forward Voltage: 27V +/- 3.0V
- » Max Output: 2500 lm (3500K 90 CRI White LEDs)
- » LED Pitch: 0.61"
- » Color Rendering Index: 90+
- » L70 > 72,000 Hrs (Calculated, Ts = 85°C, 220mA LED Current)
- » RGB Nominal 2.8 W per channel (22")
- » High Performance 2 oz. Copper
- » Uses Molex PicoMate wire harnesses. Driver-to-module interface board available.
- » Beam Angle: 120°

Project ||

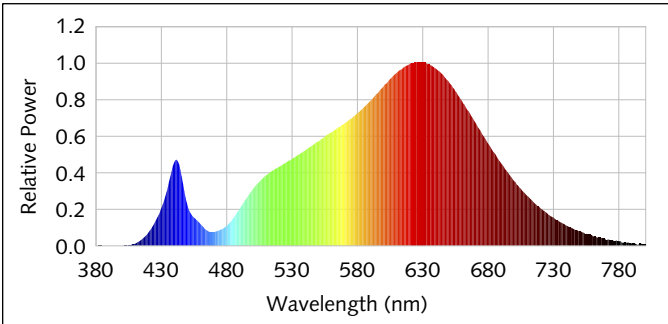
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Quantity ||

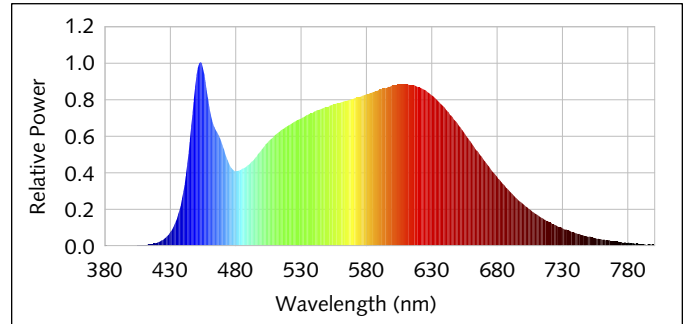
OPTICAL SPECIFICATIONS

SPECTRAL POWER DISTRIBUTION, WHITE

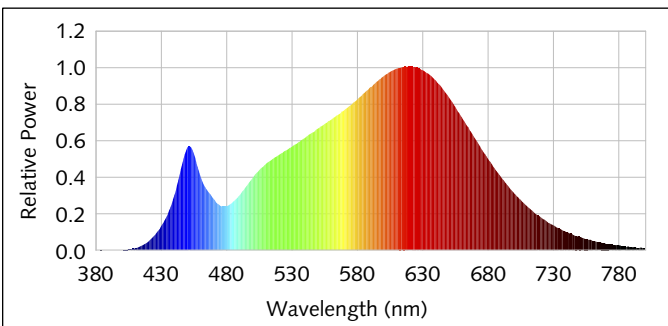
2700K 3-STEP



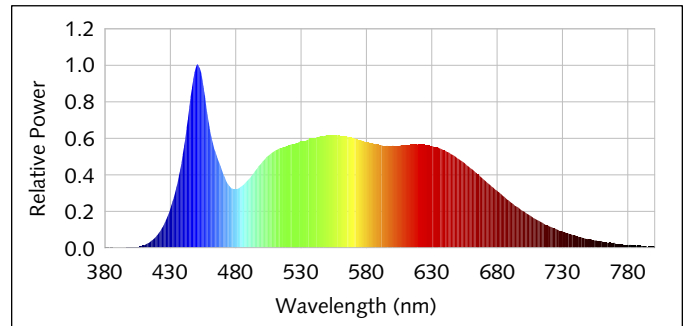
4000K 3-STEP



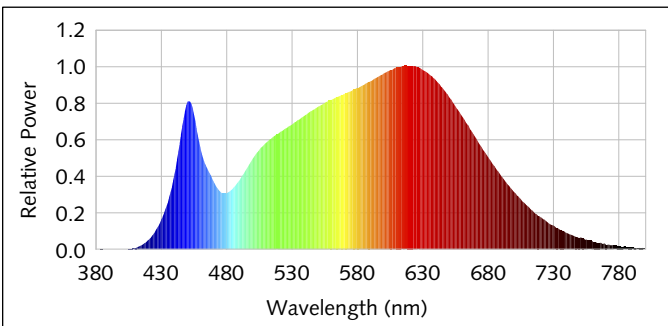
3000K 3-STEP



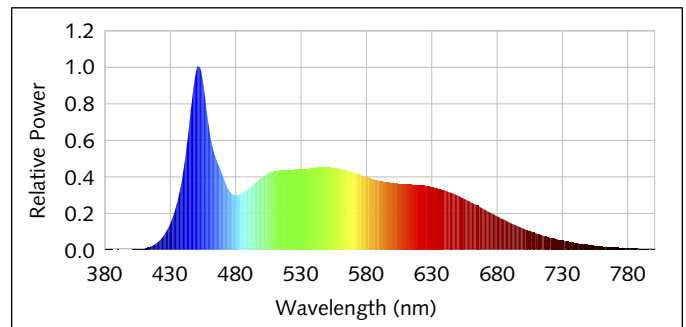
5000K 3-STEP



3500K 3-STEP



6500K 3-STEP



Project ||

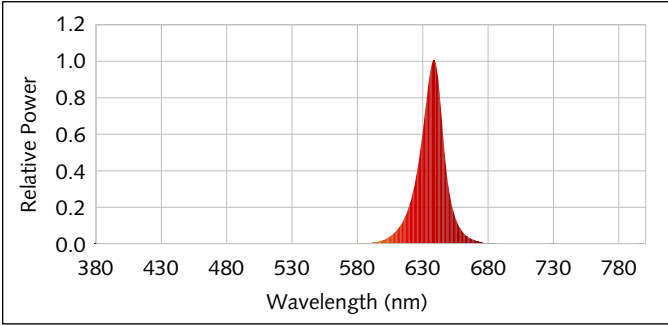
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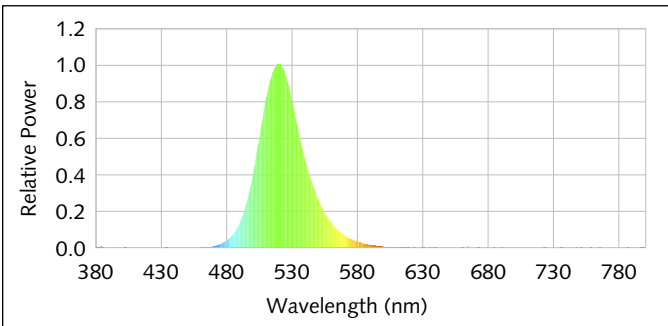
OPTICAL SPECIFICATIONS

SPECTRAL POWER DISTRIBUTION, RGB

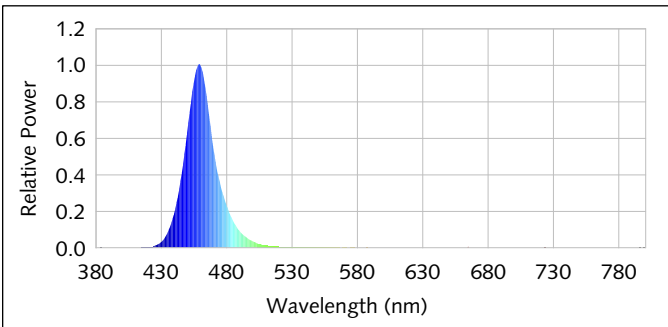
RED



GREEN

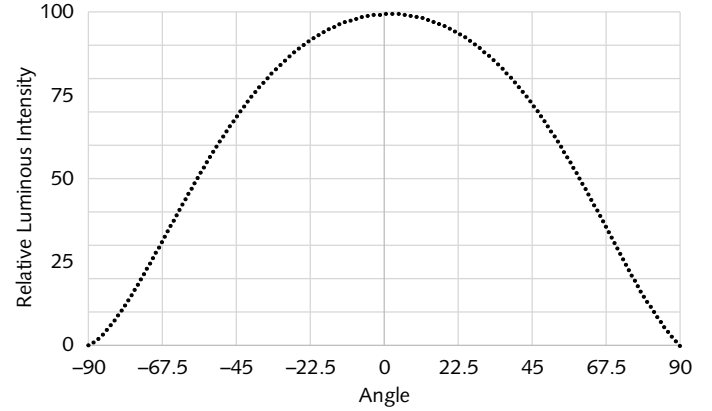


BLUE

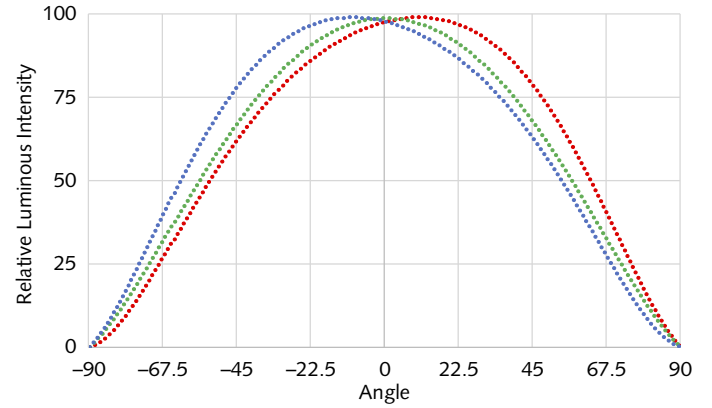


BEAM ANGLE

WHITE (CREE)



RGB (NICHIA)



Project ||

Type ||

Quantity ||

ELECTRICAL CHARACTERISTICS

Assuming 35K, 90 CRI, 25°C

WHITE						
Current (mA)	100	250	350	500	640	800
Voltage (V)	24.12	25.65	26.46	27.54	28.44	29.43
Flux (lm)	396	950.4	1249.2	1764	2142	2530.8

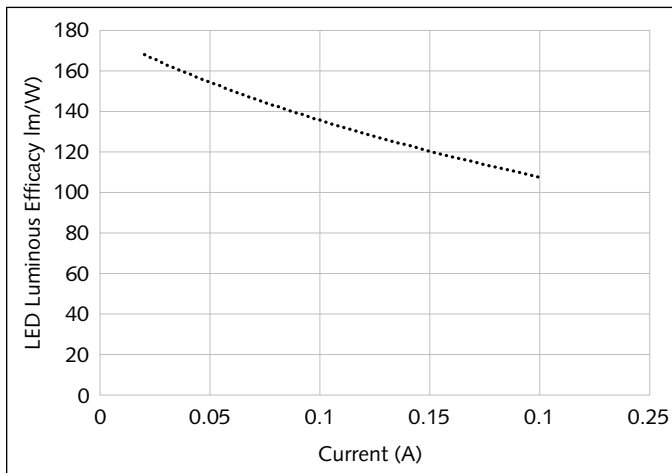
RED					
Current (mA)		40	80	120	160
Voltage (V)		17.1	18.9	19.8	21.6
Radiant Flux (mcd)		13500	27000	40500	54000

GREEN					
Current (mA)		40	80	120	140
Voltage (V)		27.9	29.25	30.6	31.5
Radiant Flux (mcd)		45360	79200	101304	117180

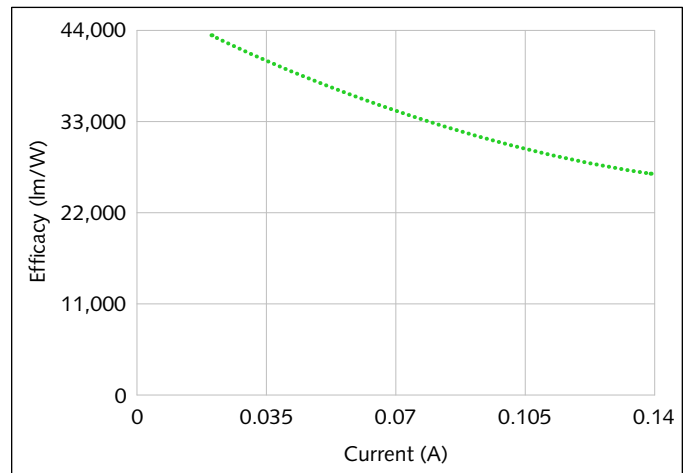
BLUE				
Current (mA)		40	80	100
Voltage (V)		27	28.89	29.25
Radiant Flux (mcd)		9720	18000	19440

EFFICACY VS. CURRENT

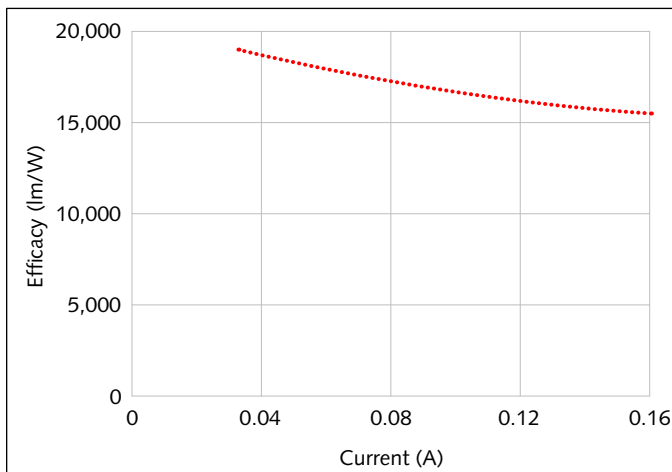
WHITE (CREE)



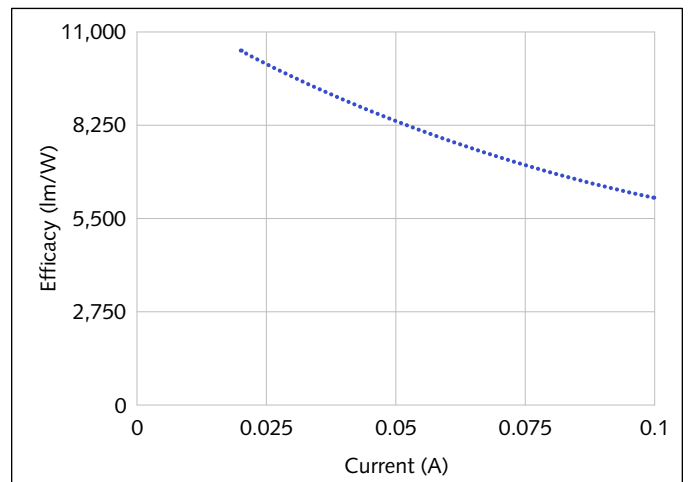
GREEN (NICHIA)



RED (NICHIA)



BLUE (NICHIA)



Project ||

Type ||

Quantity ||

ABSOLUTE MAXIMUM RATINGS

WHITE	
Current (mA)	800
Voltage (V)	30
Flux (lm)	2800
Temperature (°C)	85

RED	
Current (mA)	160
Voltage (V)	23.85
Temperature (°C)	85

GREEN	
Current (mA)	140
Voltage (V)	30.4
Temperature (°C)	85

BLUE	
Current (mA)	100
Voltage (V)	30.4
Temperature (°C)	85

COMPONENTS	
Max Connector Current per Contact (A)	1.5
Max Recommended Run Length (ft)	6

Project ||

Type ||

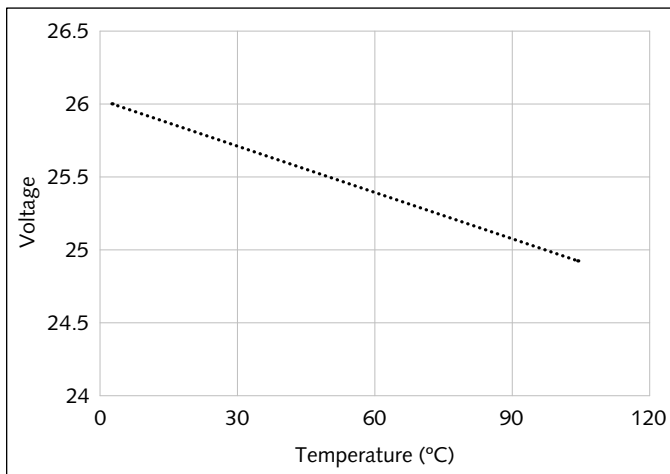
Quantity ||

DERATING

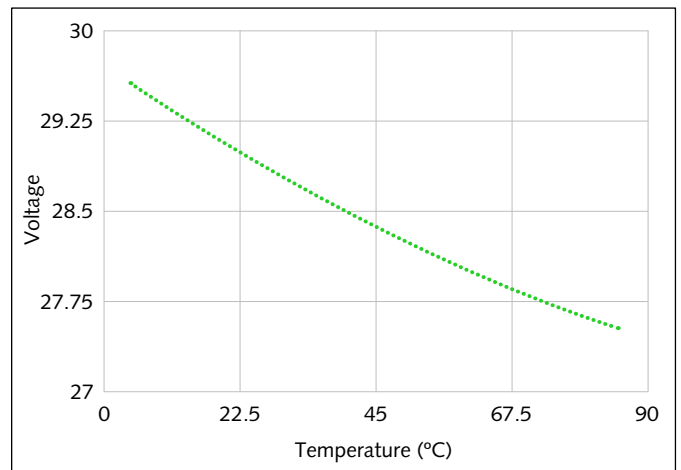
COLOR TEMPERATURE	LIGHT OUTPUT
2700K	95%
3000K	100%
3500K	100%
4000K	106%
5000K	106%
6500K	106%

VOLTAGE VS. TEMPERATURE

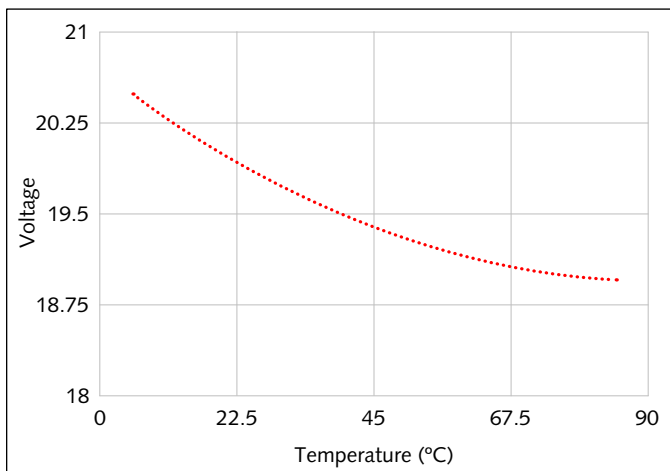
WHITE (CREE)



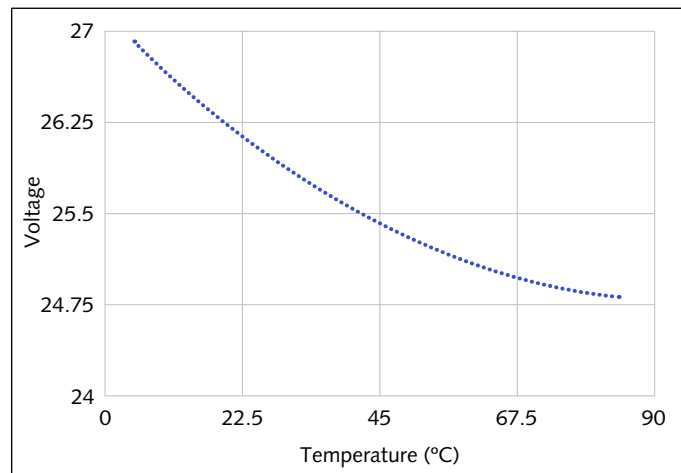
GREEN (NICHIA)



RED (NICHIA)



BLUE (NICHIA)



Project ||

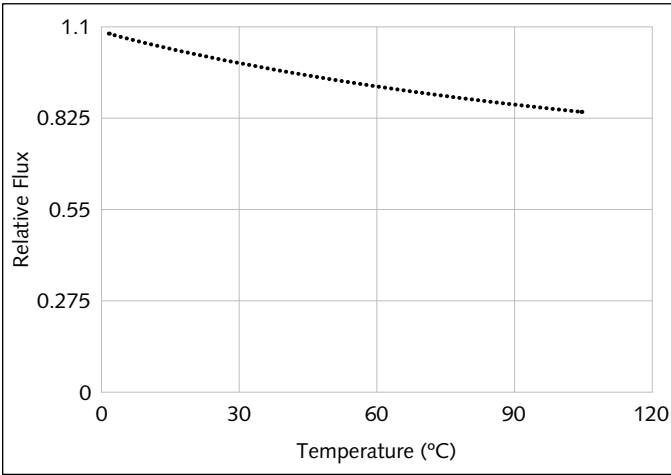
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Quantity ||

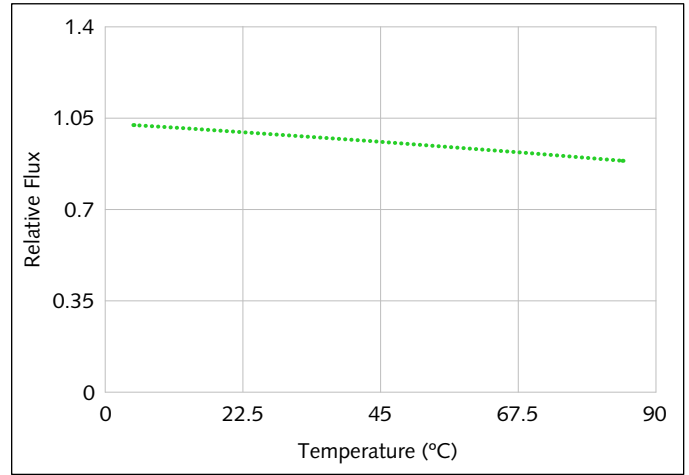
DERATING

FLUX VS. TEMPERATURE

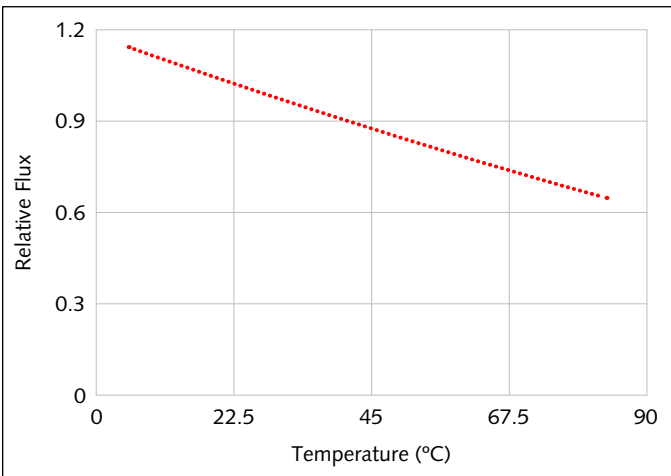
WHITE (CREE)



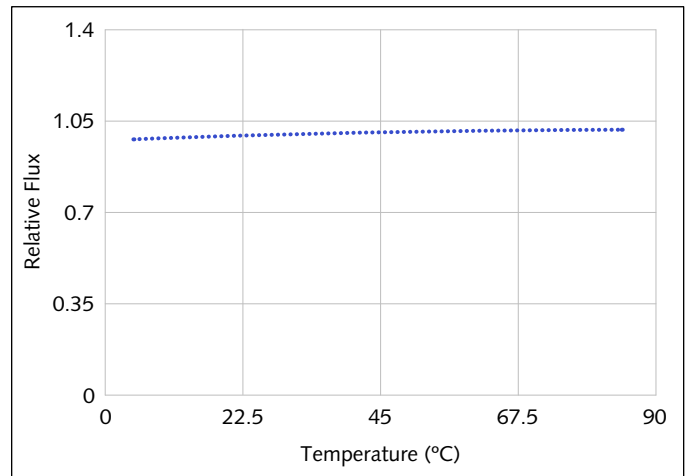
GREEN (NICHIA)



RED (NICHIA)



BLUE (NICHIA)



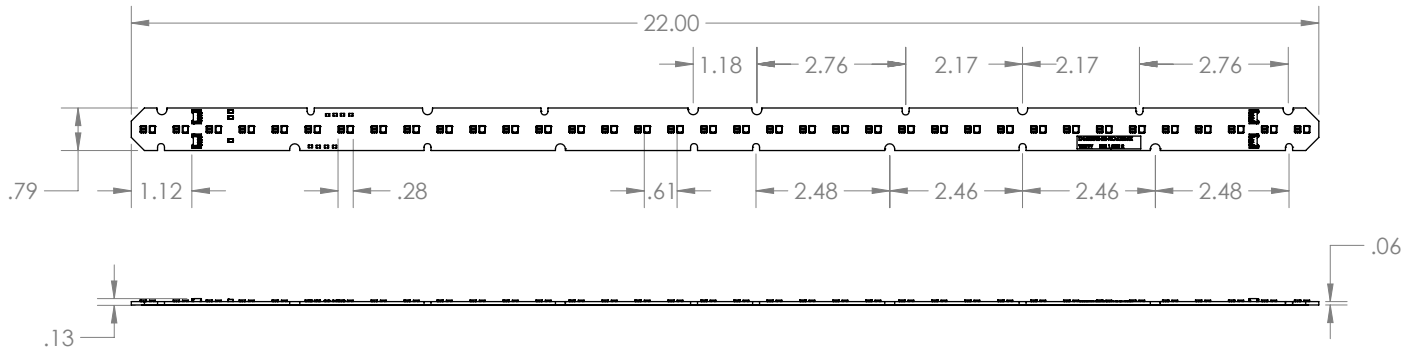
Project ||

Type ||

Quantity ||

MECHANICAL CHARACTERISTICS

TECHNICAL DRAWING



Units: Inches [mm]

PRODUCT DIMENSIONS

PARAMETER	SPECIFICATION (IN)
Width	0.787
Length	22
PCB Thickness	0.06
Module Thickness, Tape to Connector Top	0.13
Screwhole sizes	#6, #8
Connector to board edge distance	1.12

CONNECTOR AND WIRING

PARAMETER	SPECIFICATION
Molex PicoMate Connector System	28 AWG
Connector board allows interconnection from 18-22 AWG to the PicoMate harness.	

Project ||

Type ||

Quantity ||

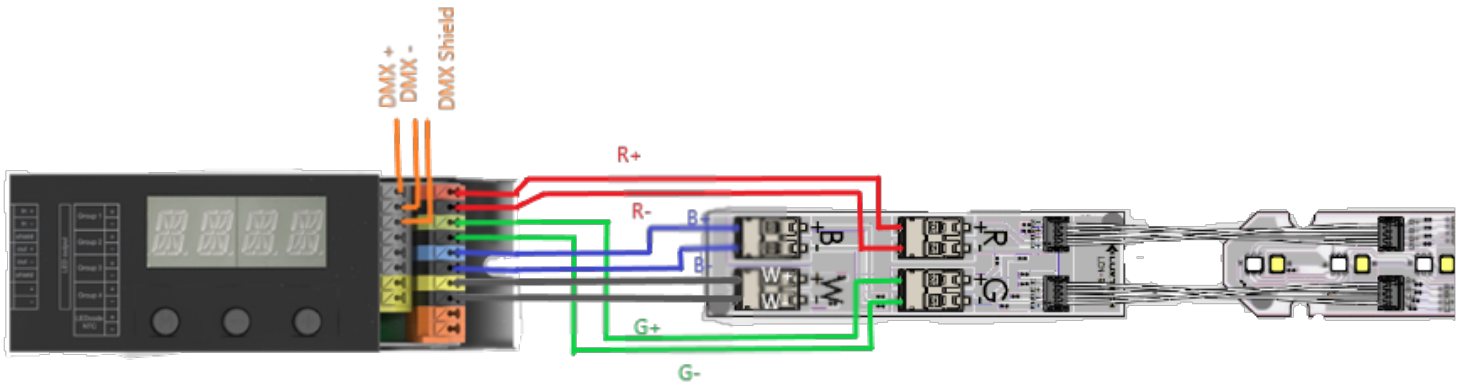
ACCESSORIES AND DESIGN RESOURCES

CONNECTORS



Units: Inches [mm]

WIRING DIAGRAM



DRIVER SELECTION

Recommended for use with EldoLED PowerDrive DMX drivers.

CONTROLLER SELECTION

RECOMMENDED BRAND	MODEL	CONTROL TYPE	NEEDED ACCESSORIES
Lunatone	DALI Touchpanel	DALI	Lunatone PS2 30mA DALI Bus Power supply
Sunricher	SR-2812B(US)	DMX	12-24VDC Power Supply

Design resources: Calculator and CAD files available at LUXTECH.com

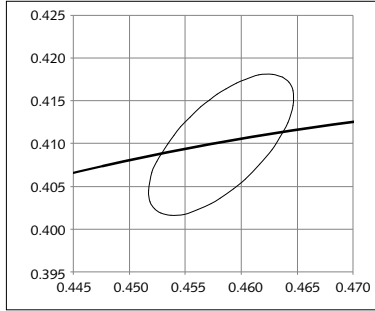
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Type ||

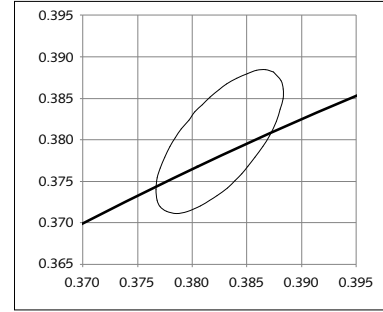
Quantity ||

COLOR BINNING INFORMATION

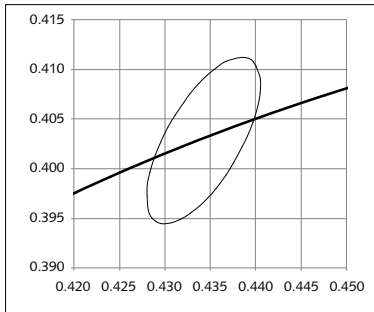
2700K 3-STEP



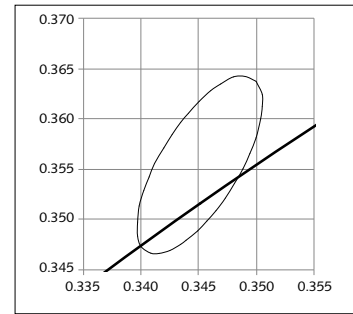
4000K 3-STEP



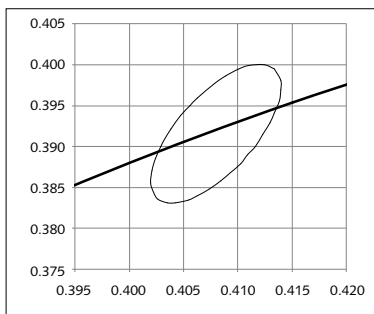
3000K 3-STEP



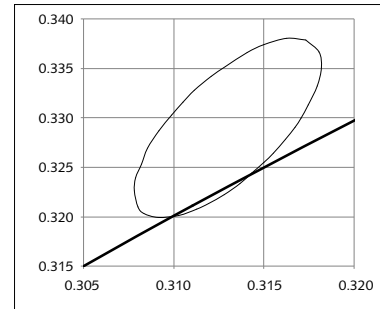
5000K 3-STEP



3500K 3-STEP



6500K 3-STEP



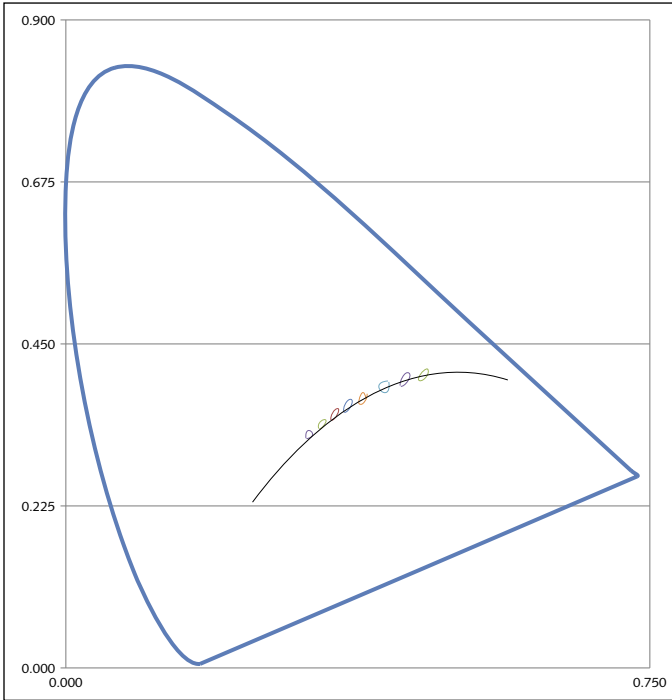
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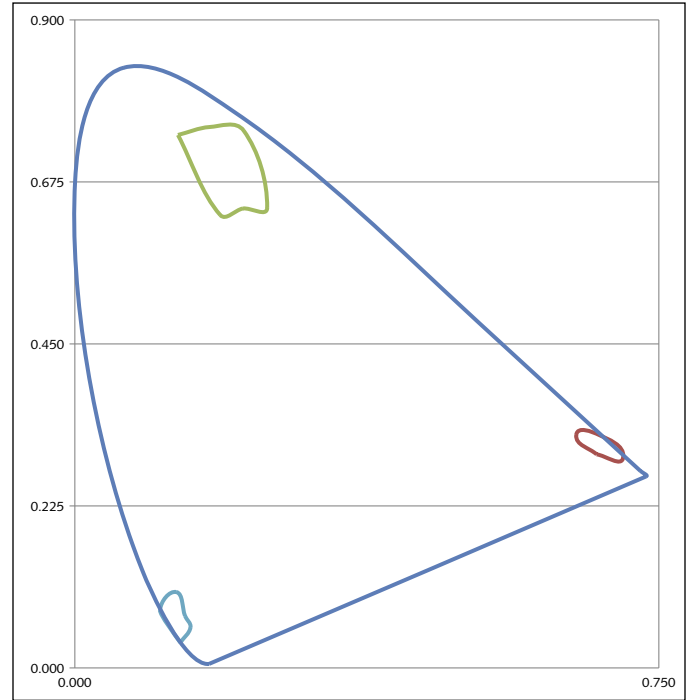
Quantity ||

COLOR BINNING INFORMATION

WHITE SINGLE BIN



RGB SINGLE BIN



Project ||

Type ||

Quantity ||

ORDERING INFORMATION

PRODUCT CODES

PRODUCT	CCT	CRI
LN-RGBW-22-C	27K	80
	30K	90
	35K	
	40K	
	50K	
	65K	

EXAMPLE: LN-RGBW-22-C-35K-90

ACCESSORY CODES

PRODUCT	LENGTH	DESCRIPTION
LCN-RGBW		Driver-to-board interconnect module
LW-RGBW	22	Wire harness with 2.26 inch wires
LW-RGBW	60	Wire harness with 6.0 inch wires
LW-RGBW	80	Wire harness with 8.0 inch wires

EXAMPLE: LW-RGBW-22

REV. 1.35



People Centric Lighting

ABOUT LUXTECH

LUXTECH is an LED component design and manufacturing company specializing in high quality LED modules and architectural grade lighting solutions. LUXTECH is a catalyst for health and well-being through human centric lighting systems. Our inventive custom engineering for natural lighting is advancing emotional wellness and productivity with the potential for global social impact. LUXTECH is located in Philadelphia's Old City neighborhood.

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