DAZZLE® RGBW 24V
Color Changing LED Tape Light
RGBW tape light for color changing applications, capable of billions of colors.

Date

Project Notes

| IP20 | 24 VDC | NEC 410.16.A.1,2 & 410.16.C.1,3,5 CLOSET RATED | TITLE 24 |

FEATURES

- 4 billion color combinations
- Increased LED density for enhanced color saturation, blending and brightness
- Achieve all colors from saturated to pastel
- DMX or Diode LED controller compatible
- 5 Year limited warranty

ORDERING CODES
Order spools, and components for field assembly

OPTIONAL ORDERING CODES
Add Assembly Preferences, Finish, Lens, Mounting, Driver, and Delivery

	Voltage	Model	Length	Channels		Finish	Lens	Mounting	Driver	Delivery
DI										
	24V (24V Volt)	RGBW	0020 (20 feet)	A1 (A1)	CA (Canal)	AL (Aluminum)	*blank* (Classic Frosted Lens)	3M (3M Adhesive)	O/O (On / Off)	Field Assembly
			0100 (100 feet)	S2 (S2)	SQ (Square)	BL (Black)	BL (Black Lens)	MC (Mounting Clip)	PoE (Power over Ethernet)	Factory + Field (Hybrid)
				S45 (S45)	45 (45°)	WH (White)	CLT (Arch. Clear Lens)	RC (Rotating Clip)		Factory Assembly
				SL (Slim)	REC (Recessed)		FRT (Arch. Frosted Lens)	CHN (Mounting Channel)		
							OPT (Opal Lens)			
							PD (Prem. Diffusion Lens)			
				*See page 2 for Channel / Lens / Mounting compatibility						

DAZZLE® RGBW - SPECIFICATION TABLE

Models	24V-RGBW
Voltage	**24VDC**
Wattage	**4.39W/ft.**
Lumens RGBW	198 Lm/ft.
Cut Points	8 in.
Max Run (ft.)	20 ft.
CRI	80+ (3000K)
Dimensions	0.55 × 0.1 in. (W x H)
TM-21 (LM-80)	>50,000 Hours hours
Environment	Indoor / Damp Location (IP20)
Lead Wire A	36 in. Bare Lead 20/4 AWG UL 2464 Wire with Strain Relief
Lead Wire B	36 in. Bare Lead 20/4 AWG UL 2464 Wire with Strain Relief
LED Chips	36/ft.
Chip Type	5050 SMD Chip
Certification	UL Listed 2108
Warranty	5 Year

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CHANNEL / LENS / MOUNTING COMPATIBILITY

Channel	Compatible Lenses	Available Finishes	Mounting Options
A1 (A1)	FRT	AL / WH / BL	UC
S2 (S2)	*blank*	AL	UC
S45 (S45)	*blank*	AL	UC
SL (Slim)	*blank* / CLT / FRT / BL / PD	AL / WH / BL	MC / 3M / MAG
CA (Canal)	OPT	AL / WH / BL	UC
SQ (Square)	*blank* / CLT / FRT / BL / PD	AL / WH / BL	MC / VC / RC / HNG
45 (45°)	*blank* / CLT / FRT / BL / PD	AL / WH / BL	MC / VC / RC / HNG
REC (Recessed)	*blank*	AL	3M

LEGEND

	Lens
blank	Classic Frosted Lens
BL	Black Lens
CLT	Architectural Clear Lens
FRT	Architectural Frosted Lens
OPT	Opal Lens
PD	Premium Diffusion Lens

	Finish
AL	Aluminum
WH	White
BL	Black

	Mounting
3M	3M Adhesive
HNG	Hanging Hardware
MAG	Magnetic Clip
MC	Mounting Clip
RC	Rotating Clip
UC	U-Clip
VC	Vertical Clip

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RECOMMENDED CHANNELS

MODEL	DIAGRAM	INCLUDED ACCESSORIES	CONNECTION OPTIONS	IN CHANNEL DIFFUSION	TECHNICAL RATINGS	MOUNTING OPTIONS WITH DIMENSIONS
A1 Channel DI-CHB-A1 (A1) 48", 96" Aluminum, White, Black For 14mm Tape Lights or smaller	Height (H): 0.81 in. Width (W): 0.87 in. Interior Depth (ID): 0.45 in. Interior Width (IW): 0.79 in.	48" Aluminum, Black, & White Channels • 48 in. channel & lens • 2x surface mounting clips • 1 retaining clip • End caps: 1x open, 1x closed. 90" Aluminum, Black, & White Channels • 90 in. channel & lens • 4x surface mounting clips • 2x strain relief clip • End caps: 2x open, 2x closed, 2x slotted	14mm Clicktight Compatible	Architectural Frosted Lens RGBW: Semi-Diffused	• Beam Angle: 120° Architectural Frosted Lens • Light Loss: 30% • CCT Shift: -35K • IP Rating Shift: IP40	U-Clip: 0.82 × 0.88 in. (H x W)
S2 Channel DI-CHB-S2 (S2) 48", 96" Aluminum For 14mm Tape Lights or smaller	Height (H): 0.57 in. Width (W): 0.74 in. Interior Depth (ID): 0.34 in. Interior Width (IW): 0.63 in.	48 in. Channel & Frosted Lens, 1 open end cap, 1 closed end cap, 2 mounting clips, 2 mounting screws 96 in. Channel & Frosted Lens, 2 open end cap, 2 closed end cap, 4 mounting clips, 4 mounting screws	14mm Clicktight Compatible	Classic Frosted Lens RGBW: Semi-Diffused	• Beam Angle: 120° Classic Frosted Lens • Light Loss: 20% • CCT Shift: -40K • IP Rating Shift: IP40	U-Clip: 0.58 × 0.75 in. (H x W)
S45 Channel DI-CHB-S45 (S45) 48", 96" Aluminum For 14mm Tape Lights or smaller	Height (H): 0.78 in. Width (W): 0.78 in. Interior Depth (ID): 0.54 in. Interior Width (IW): 0.6 in.	48 in. Channel & Frosted Lens, 1 open end cap, 1 closed end cap, 2 mounting clips, 2 mounting screws 96 in. Channel & Frosted Lens, 2 open end cap, 2 closed end cap, 4 mounting clips, 4 mounting screws	14mm Clicktight Compatible	Classic Frosted Lens RGBW: Semi-Diffused	• Beam Angle: 120° Classic Frosted Lens • Light Loss: 20% • CCT Shift: -40K • IP Rating Shift: IP40	U-Clip: 0.79 × 0.79 in. (H x W)
Slim Channel DI-CPCHB-SL (SL) 48", 96" Aluminum, White, Black For 14mm Tape Lights or smaller	Height (H): 0.38 in. Width (W): 0.82 in. Interior Depth (ID): 0.3 in. Interior Width (IW): 0.67 in.	48" Aluminum, Black, & White Channels • 48 in. channel & lens • 2x surface mounting clips • End caps: 1x open, 1x closed 96" Aluminum, Black, & White Channels • 96 in. channel & lens • 4x surface mounting clips • end caps: 2x open, 2x closed	14mm Clicktight Compatible	Architectural Frosted Lens RGBW: Runway Diffusion Premium Diffusion Lens RGBW: Dotless For diffusion options not listed, refer to Slim Channel Specification Sheet.	• Beam Angle: 120° Architectural Clear Lens • Light Loss: 10% • CCT Shift: -20K Architectural Frosted Lens • Light Loss: 30% • CCT Shift: -35K Classic Frosted Lens • Light Loss: 20% • CCT Shift: -40K Black Lens • Light Loss: 90% • CCT Shift: -350K Premium Diffusion Lens • Light Loss: 10% • CCT Shift: -30K • IP Rating Shift: IP40	Slim Mount: 0.54 × 0.87 in. (H x W) 3M Adhesive: 0.48 × 0.82 in. (H x W) Magnetic U-Clip: 0.59 × 0.82 in. (H x W) Premium Diffusion: 0.96 × 0.82 in. (H x W)

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RECOMMENDED CHANNELS

MODEL	DIAGRAM	INCLUDED ACCESSORIES	CONNECTION OPTIONS	IN CHANNEL DIFFUSION	TECHNICAL RATINGS	MOUNTING OPTIONS WITH DIMENSIONS
Canal Channel DI-CPCHB-CAN (CA) 48", 96" Aluminum, White, Black For 14mm Tape Lights or smaller	Height (H): 0.59 in. Width (W): 0.69 in. Interior Depth (ID): 0.54 in. Interior Width (IW): 0.61 in.	48" Aluminum, Black, & White Channels • 48 in. channel & opal lens • 2x surface mounting clips • End caps: 1x open, 1x closed. 96" Aluminum, Black, & White Channels • 96 in. channel & opal lens • 4x surface mounting clips • End caps: 2x open, 2x closed.	14mm Tape Light: Soldered Lead Only	Opal Lens RGBW: Runway Diffusion	• Beam Angle: 120° Opal Lens • Light Loss: 55% • CCT Shift: -200K • IP Rating Shift: IP40	U-Clip: 0.6 × 0.7 in. (H x W)
Square Channel DI-CPCHB-SQ (SQ) 48", 96" Aluminum, White, Black For 14mm Tape Lights or smaller	Height (H): 0.55 in. Width (W): 0.82 in. Interior Depth (ID): 0.27 in. Interior Width (IW): 0.67 in.	48" Aluminum Channel • 48 in. channel & frosted cover • Mounting hardware • End caps: 1x open, 1x closed. 48" Black & White Channels • 48 in. channel & clear, or frosted lens • 4x surface mounted clips • 2x End-to-end interconnects 96" Aluminum Channel • 96 in. channel & frostedcover • Mounting hardware • End caps: 2x open, 2x closed. 96" Black & White Channels • 96 in. channel & clear, or frosted lens • 4x surface mounted clips • 2x End-to-end interconnects	14mm Clicktight Compatible	Architectural Frosted Lens RGBW: Runway Diffusion Premium Diffusion Lens RGBW: Dotless For diffusion options not listed, refer to Square Channel Specification Sheet.	• Beam Angle: 120° Architectural Clear Lens • Light Loss: 10% • CCT Shift: -20K Architectural Frosted Lens • Light Loss: 30% • CCT Shift: -35K Classic Frosted Lens • Light Loss: 20% • CCT Shift: -40K Black Lens • Light Loss: 90% • CCT Shift: -350K Premium Diffusion Lens • Light Loss: 10% • CCT Shift: -30K • IP Rating Shift: IP40	Chromapath Surface Mount: 0.61 × 0.82 in. (H x W) Vertical Mount: 0.61 × 0.82 in. (H x W) Rotating Mount: 1.29 × 0.82 in. (H x W) Hanging Mount: 1.51 × 0.82 in. (H x W) Premium Diffusion: 1.13 × 0.82 in. (H x W)
45° Channel DI-CPCHB-45 (45) 48", 96" Aluminum, White, Black For 14mm Tape Lights or smaller	Height (H): 0.94 in. Width (W): 0.67 in. Interior Depth (ID): 0.32 in. Interior Width (IW): 0.67 in.	48" Aluminum, Black, & White Channels • 48 in. channel & clear, or frosted lens • 4x surface mounted clips • 2x End-to-end interconnects 96" Aluminum Channel • 96 in. channel & clear, or frosted lens • 8x surface mounted clips • 4x End-to-end interconnects 96" Black & White Channels • 96 in. channel & clear, or frosted lens • 4x surface mounted clips • 2x End-to-end interconnects	14mm Clicktight Compatible	Architectural Frosted Lens RGBW: Runway Diffusion Premium Diffusion Lens RGBW: Dotless For diffusion options not listed, refer to 45° Channel Specification Sheet.	• Beam Angle: 120° Architectural Clear Lens • Light Loss: 10% • CCT Shift: -20K Architectural Frosted Lens • Light Loss: 30% • CCT Shift: -35K Classic Frosted Lens • Light Loss: 20% • CCT Shift: -40K Black Lens • Light Loss: 90% • CCT Shift: -350K Premium Diffusion Lens • Light Loss: 10% • CCT Shift: -30K • IP Rating Shift: IP40	Chromapath Surface Mount: 1 × 0.67 in. (H x W) Vertical Mount: 1 × 0.67 in. (H x W) Rotating Mount: 1.68 × 0.67 in. (H x W) Hanging Mount: 1.9 × 0.67 in. (H x W) Premium Diffusion: 1.52 × 0.67 in. (H x W)
Recessed Channel DI-CPCHB-REC (REC) 48", 96" Aluminum For 14mm Tape Lights or smaller	Height (H): 0.49 in. Width (W): 1.03 in. Interior Depth (ID): 0.42 in. Interior Width (IW): 0.59 in. Cut Out Width (CO): 0.74 in. Recessed Wing (RW): 0.15 in.	48 in. channel & frosted lens 2x surface mounted clips end caps: 1x open, 1x closed 96 in. channel & frosted lens 4x surface mounted clips end caps: 2x open, 2x closed.	14mm Clicktight Compatible	Classic Frosted Lens RGBW: Runway Diffusion	• Beam Angle: 120° Classic Frosted Lens • Light Loss: 20% • CCT Shift: -40K • IP Rating Shift: IP40	3M Adhesive: 0.59 × 1.03 in. (H x W) Recessed Mount: 0.49 × 1.03 in. (H x W)

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RECOMMENDED 24V DRIVERS

SKU	INPUT VOLTAGE / FREQUENCY	OUTPUT VOLTAGE	MAXIMUM LOAD	MINIMUM LOAD	CLASS 2	DIMMABLE	LENGTH	WIDTH	HEIGHT
MEANWELL Constant Voltage Driver Drivers for on/off or PWM dimming applications.						**MEANWELL Constant Voltage Driver Specification Sheet** https://www.diodeled.com/custom/download/productFile/filename/commercial-grade-CV-Driver-Specification%20Sheet%20(24V%20Models).pdf/				
						Contains			
						• Additional Models • Additional Features	• Derating Curves • System Diagrams		
DI-CV-MW24V60W-277-LPS3R	120 ~ 277VAC 50/60Hz	24V	60W	No Minimum Load	Yes	Yes, with compatible PWM dimmer/controls	10.79 in.	7.34 in.	2.36 in.
DI-CV-MW24V60W-277-LPS	120 ~ 277VAC 50/60Hz	24V	60W	No Minimum Load	Yes	Yes, with compatible PWM dimmer/controls	11.25 in.	3.75 in.	1.9 in.
DI-CV-MW24V90W-277-LPS3R	120 ~ 277VAC 50/60Hz	24V	90W	No Minimum Load	Yes	Yes, with compatible PWM dimmer/controls	10.79 in.	7.34 in.	2.36 in.
DI-CV-MW24V90W-277-LPL	120 ~ 277VAC 50/60Hz	24V	90W	No Minimum Load	Yes	Yes, with compatible PWM dimmer/controls	13.5 in.	4.5 in.	2.38 in.
VLM Series Constant Voltage Driver Compact driver for on/off, PWM dimming, and color-changing applications.						**VLM Series Constant Voltage Driver Specification Sheet** https://www.diodeled.com/custom/download/productFile/filename/VLM-Specification%20Sheet%20(Driver%20&%20J-Box).pdf/				
						Contains			
						• Additional Models • Additional Features	• Derating Curves • System Diagrams		
VLM60W-24-LPS3R	120 / 277VAC 47 - 63Hz	24V	60W	No Minimum Load	Yes	PWM	10.79 in.	7.34 in.	2.36 in.
VLM60W-24-LPM	120 / 277VAC 47 - 63Hz	24V	60W	No Minimum Load	Yes	PWM	8.19 in.	2.94 in.	1.31 in.
VLM100W-24-LPS3R	120 / 277VAC 47 - 63Hz	24V	100W	No Minimum Load	Yes	PWM	10.79 in.	7.34 in.	2.36 in.
PoE (Power over Ethernet) Constant voltage platform, ready for Power over Ethernet (inquire)									

RECOMMENDED CONTROLLERS

SKU	DESCRIPTION
Nicolaudie DMX LED Controllers Store up to 500 scenes across 10 separate zones with a full-color display.	
DI-DMX-DE3	Nicolaudie STICK-DE3 DMX LED Controller
DI-DMX-ESA	Nicolaudie Easy Stand Alone DMX LED Color Controller - 5k Memory
DI-DMX-GA2	Nicolaudie STICK-GA2 DMX LED Controller
DI-DMX-KE2	Nicolaudie STICK 1 Wall Mount DMX LED Controller - KE2
CASAMBI® Controllers The CASAMBI controllers will remotely control your lighting through the app - downloadable for IOS & Android.	
CBU-PWM4	CASAMBI PWM4 Single Color Dimming Controller

DAZZLE® RGBW   24V
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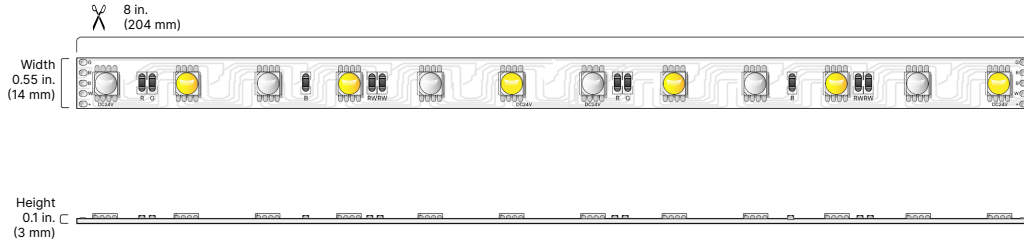RGBW tape light for color changing applications, capable of billions of colors.

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Project Notes

IP20

24 VDC

NEC 410.16,A.T.9 & 410.10.C.13.5 **CLOSET RATED**

TITLE 24

MECHANICAL DIAGRAMS

24V-RGBW

8 in.
(204 mm)

Width
0.55 in.
(14 mm)

Height
0.1 in.
(3 mm)

CONNECTIONS

36 Bare Lead 20/4 AWG UL 2464 Wire with Strain Relief

36 Bare Lead 20/4 AWG UL 2464 Wire with Strain Relief

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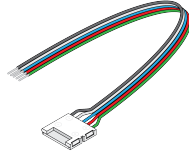**IP20** **24 VDC** **NEC** 410.16.A,12 & 410.16.C.13.5. **CLOSET RATED** **TITLE 24**

ACCESSORIES

DI-RGBW-CKT-LNK
CLICKTIGHT Tape Link Connector: DRGBW

DI-RGBW-CKT3-SPLE
CLICKTIGHT Splice Connector: DRGBW, 3 in.

DELIVERY OPTIONS

- **Field Assembly**
  Fastest order fulfillment. Field connectors and accessories not included.

- **Factory + Field (Hybrid)**
  Onsite modifications with factory connection. Additional accessories not included.

- **Factory Assembly**
  Fastest Installation. Factory made-to-order fixtures.

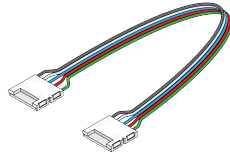### DI-RGBW-CKT24-SPLE
CLICKTIGHT Splice Connector: DRGBW, 24 in.
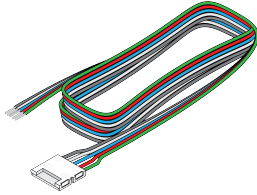
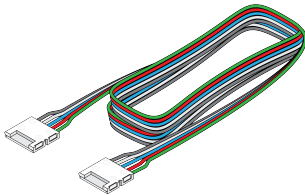### DI-RGBW-CKT3-EXT
CLICKTIGHT Bending Extension: DRGBW, 3 in.

DI-RGBW-CKT24-EXT
CLICKTIGHT Bending Extension: DRGBW, 24 in.

- Lumen value measured in accordance to IES LM-80-08. LED chips have a luminous flux range with a tolerance of +/- 5%.

- Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length. Max run may exceed Class 2 limit. Actual wattage may differ from calculated wattage due to voltage drop across run.

- Do not install product in an environment outside the listed ambient temperature. Exceeding the maximum ambient temperature may damage LED chips, reduce the total lamp life, lumen output, and/or adversely impact color consistency.

- Actual efficacy value is dependent to specified LED driver (power supply). An estimated efficacy value can be calculated as follows: Lumen value divided by average power consumption per foot.

- Operating temperature is measured according to the minimum and maximum ambient temperature environment.

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CERTIFICATIONS

Safety

- UL Listed 2108 Low Voltage Lighting System / Low Voltage Luminaire. UL 1598 / CSA 250.0-08, UL 8750. UL 879 / CAN/CSA-C22.2 no. 207-M89. Certified for United States and Canada. File # E469769.

- UL Listed Field Cuttable.

- UL Recognized Component - Sign Accessories. Available in UL Sign Components Manual (SAM Manual). File # E469770.

- CE & EMC Compliant: Verification No. GZEM141200683705V

Environment

- RoHS Compliant: Verification No. CANEC1610091501

Performance

- Can be used to comply with TITLE 24 Part 6 High efficacy LED requirements - JA8-2016-E

- LED chip data measured in accordance to IES LM-80-08.

- Photometric & Colorimetry data measured in accordance to IES LM-79-08, in Elemental LED's Innovation Lab.

Safety / Warnings / Disclosures

1. Install in accordance with national and local electrical code regulations.

2. This product is intended to be installed and serviced by a qualified, licensed electrician.

3. Only use copper wiring. Use wires rated for at least 176°F (80°C) and certified for use with external connection of electrical equipment.

4. Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length.

5. Tape light, attached wire leads, and additional extension cables, connectors, etc., are not rated for in-wall installation unless otherwise noted. Tape light and attached wire leads are field-cuttable.

6. Ensure applicable wire is installed between driver, fixture, and any controls in-between. When choosing wire, factor in voltage drop, amperage rating, and type (in-wall rated, wet location rated, etc.). Inadequate wire installation could overheat wires, and cause fire.

7. Do not install in environment where LED chips are exposed to direct sunlight as damage to the phosphor will occur.

8. Do not install in environment where excessive heat may exist (ex. close proximity to fireplace, etc.) See Ambient Temperature ratings

9. Do not install indoor LED tape light products in outdoor / wet location environments. Only wet location tape light models are rated for outdoor / wet locations.

10. Do not modify product beyond instructions or warranty will be void.

11. Tape light must be handled with care. Excessive handling, bending, and pressure may damage the product, voiding the warranty.

12. Actual color may vary from what is pictured on this sheet and other print materials due to the limitations of photographic processes.

13. We reserve the right to modify and improve the design of our fixtures without prior notice. We cannot guarantee to match existing installed fixtures for subsequent orders or replacements in regards to product appearance, CCT, or lumen output.

WARRANTY

Limited Warranty

- 5 Year limited warranty

This warranty does not include the additional accessories referenced in this specification sheet. Complete warranty details for fixtures and additional accessories are available at www.diodeled.com/limited-warranty/ within the Policies section. For warranty related questions please contact product support.

Consumer's Acknowledgment

Elemental LED, Inc. stands behind its products when they are used properly and according to our specifications. By purchasing our products, the purchaser agrees and acknowledges that lighting design, configuration and installation is a complex process, wherein seemingly minor factors or changes in layout and infield adjustments can have a significant impact on an entire system. Choosing the correct components is essential. Elemental LED is able to work with the original purchaser to make an appropriate product selection to the extent of the limited information that the customer can provide, but it is virtually impossible for Elemental LED to design a system that foresees every unknown factor. For this reason, this Warranty does not cover problems caused by improper design, configuration or installation issues. Any statement from a Elemental LED employee or agent regarding a customer's bill of goods and/or purchase order is NOT an acknowledgment that the products purchased are designed and configured correctly. The purchase agrees and acknowledges that it is the customer's responsibility to adhere strictly to all information contained in the Product Specification Sheets.

There is often more than one way to design, configure and layout an LED lighting application properly to achieve the same lighting effect. Elemental LED strongly recommends that licensed professionals be used in the design and installation of lighting systems that include Elemental LED products. The specifications include important information that a designer and installer should carefully review and strictly follow. Qualified designers and certified and/or licensed installers, with access to the final installation environment, customer goals, and Elemental LED product specifications can make the requisite decisions appropriate for a successful finished lighting application.

Specification Sheet │ DAZZLE® RGBW Color Changing LED Tape Light │ SS4182024 │ 4.6
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