RoscoLED® Tape Systems

Handling & Mounting Guidelines

- RoscoLED Tape requires 24VDC operation. Always confirm the power supply outputs 24VDC and the dimming controls have compatible operating voltage. Connecting the Tape to other than 24VDC power supplies will cause damage and void the product warranty. Whenever possible use Rosco power and dimming controls for best performance.

- Each 5m Reel of Tape includes a pre-soldered multi-pin male connector for direct attachment to a RoscoLED Control Box. A mating female connector with pigtail leads is included for terminal connection to a discrete power supply or controller.

- Rosco recommends maximum 5m continuous runs of Tape. Each run of tape should be home run (wired in parallel) from the power and dimming controls. Use RoscoLED Connecting Cables to create contiguous runs greater than 5m in length.

- Reference the power requirements (W/m) on the Tape package to select power supplies and dimming controls of appropriate size.

- Always mount the power supply as close to the RoscoLED Tape as possible so as to avoid excessive voltage drop. Use heavier gauge lead wires for longer runs. See recommended lead wire gauges vs distance on the chart on page 2.

- See RoscoLED Tape Wiring Diagram on page 3 for connection details:

  RoscoLED Static White Tapes require a single channel for dimming control.
  RoscoLED VariWhite Tapes require two channels for color temp mixing/control.
  RoscoLED VariColor Tape requires four channels for color mixing/control.

- All RoscoLED Tapes can be field cut every few cm (✂ noted on tape). Cut Tape remnants can be re-used and require new lead wires/connectors to be soldered onto the copper pads present at each cut point. Each pad is marked for the proper color/color temperature or + lead attachment. Soldering is the responsibility of the installer.

- All RoscoLED Tape includes VHB/TESA adhesive backing which can be used for mounting onto solid surfaces (single use). Ensure the substrate is clean and free of dirt and oils before mounting. Carefully remove one end of the protective layer without bending or twisting the tape, position the tape in the desired location, and continue removing the protective layer while positioning the rest of the tape. Apply uniform pressure to the tape along its entire length to engage the adhesive. Do not apply excessive force to the LED chips as they could become dislodged!

- All RoscoLED Tape can be mounted inside rigid aluminum profiles. Consult your Rosco representative to confirm which profiles are compatible with each style of Tape. RoscoLED Tape profiles can be field-cut. Refer to RoscoLED Tape Profile Mounting Instructions for additional information.

- RoscoLED Tape has a minimum bend radius of 1.5”/3.8cm. Avoid sharper bends which could dislodge the LED chips or damage the circuits.

- RoscoLED Tape has IP43 rating. Tape with IP65 sealed coating is available upon request. IP65 Tape can be field cut, however each cut requires re-sealing. Rosco cannot warrant any field-cut IP65 Tape. Rosco can provide custom lengths (less than 5m) of IP65 Tape; contact your Rosco representative for more information.

- Maintain ambient temperature of -20°C to +60 °C for optimum RoscoLED Tape performance.

- Maintain proper ambient temperatures where power supplies and control devices are located to avoid thermal overload and sudden loss of power to RoscoLED Tape. Check component specifications for maximum recommended ambient conditions.

- Ensure appropriate strain relief to the lead wires so as to avoid stress on the connection to the power and dimming controls.

RoscoLED® Tape Systems

Guidelines for Selecting Lead Wire Gauge

Use appropriate wire gauge to avoid voltage drop below 21.5V at end of run.
Distances represent separation between Power Supply/Dimming Controls and LED Tape.

RoscoLED Tape Static White 24V (14.4W/m)

	Voltage @ End of Run / % Voltage Drop					
	16ft / 5m	33ft / 10m	49ft / 15m	66ft / 20m	82ft / 25m	98ft / 30m
AWG20	23.03 / 4.04%	22.05 / 8.13%	21.08 / 12.17%			
AWG18			22.16 / 7.67%	21.55 / 10.21%		
AWG16				22.46 / 6.42%	22.07 / 8.04%	21.69 / 9.63%

RoscoLED Tape VariWhite 24V (19W/m)

	Voltage @ End of Run / % Voltage Drop					
	16ft / 5m	33ft / 10m	49ft / 15m	66ft / 20m	82ft / 25m	98ft / 30m
AWG20	22.17 / 5.38%	21.43 / 10.71%				
AWG18		22.38 / 6.75%	21.57 / 10.13%			
AWG16				21.97 / 8.46%	21.46 / 10.58%	
AWG14						22.08 / 8.00%

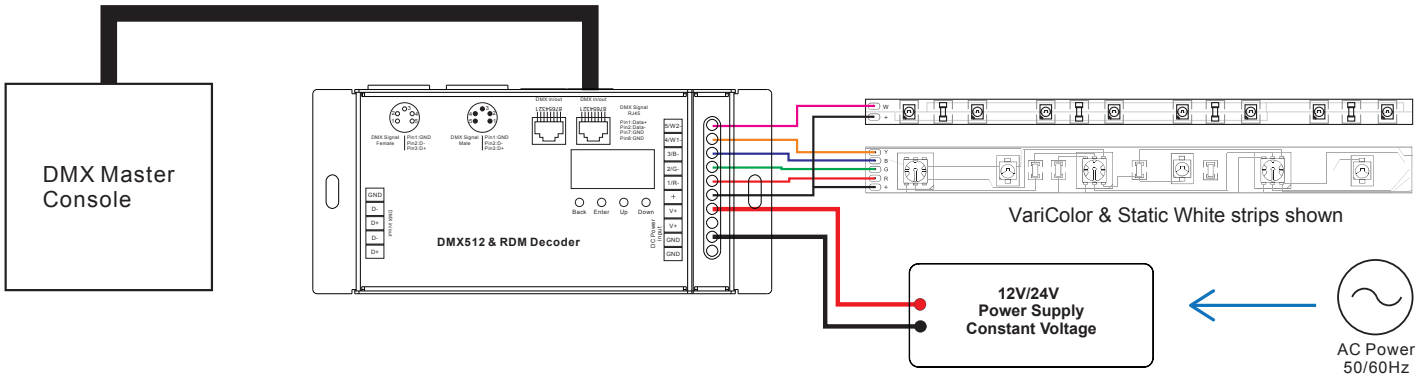
RoscoLED Tape VariColor RGB+W 24V (23W/m)

	Voltage @ End of Run / % Voltage Drop					
	16ft / 5m	33ft / 10m	49ft / 15m	66ft / 20m	82ft / 25m	98ft / 30m
AWG20	22.40 / 6.50%					
AWG18		22.04 / 8.17%				
AWG16			22.15 / 7.71%	21.54 / 10.25%		
AWG14					22.06 / 8.08%	21.68 / 9.67%

RoscoLED Tape VariColor RGBA (38.4W/m)

	Voltage @ End of Run / % Voltage Drop					
	16ft / 5m	33ft / 10m	49ft / 15m	66ft / 20m	82ft / 25m	98ft / 30m
AWG20	21.40 / 10.83%					
AWG18		21.94 / 8.58%				
AWG16						
AWG14			22.06 / 8.08%	21.41 / 10.79%		
AWG12					21.97 / 8.46%	21.56 / 10.17%

RoscoLED® Tape Wiring Diagram



RoscoLED Tape VariColor Connections	
Output Color	Wire Color
"+"	Black
Red	Red
Green	Orange
Blue	Brown
White/Amber	Yellow

RoscoLED Tape VariWhite Connections	
Output Color	Wire Color
"+"	Black
Warm White	Red
Cool White	Brown

RoscoLED Tape Static White Connections	
Output Color	Wire Color
"+"	Black
White	Red