Xicato Linear Tape (XLT)

Artist Series

PRODUCT DESCRIPTION

The Xicato Linear Tape (XLT) Artist Series is the first constant voltage, linear light source good enough to be called Xicato Artist Series. A flexible, adhesive-backed tape solution designed for cove, display case, under-cabinet, and other low-density linear applications, XLT Artist Series is designed to match the lit effect of Xicato's other Artist Series products, while meeting the industry's highest standards for color quality, initial color consistency, color and lumen maintenance, and color and lumen consistency along its full 5m length. Xicato is the only light source provider to give a long-term warranty on both output and color consistency, creating a strong case for lowest total cost of ownership and smallest ecological footprint, while insuring consistent lighting design quality for the life of the installation.

KEY PRODUCT FEATURES

Color Rendering	CRI Ra: 98; CRI R9: 95 // TM-30 Rf: 95; Rg 102 (all metrics are typical)
Flux Consistency	720 lumens per meter ±10% across continuous 5m length
Color Consistency	1x2 SDCM across continuous 5m length
Efficacy	100lpw Typ
Lumen Maintenance	L70/B0 @ 50k hours
Color Maintenance	<0.003 Δu'v' @ 50k hours
Warranty	Xicato's full 5-year, B0. No failures.

CIE CRI COLOR METRICS (VALUES ARE TYPICAL)

	R_a	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
XLT Artist Series	98	97	99	97	97	97	97	99	97	95	99	95	89	97	97	97

ADDITIONAL SPECIFICATIONS

Input Voltage	24VDC Constant Voltage
Power	7.2W/meter
Max Run Length	5 meters (16.4 ft.)
Dimensions	10mm x 1.5mm (W x H)
Beam Angle	120°
Field Cuttable	Every 100mm
Mounting	3M™ 468MP Adhesive Tape
Operating Temp	-20°C to 60°C
Heatsink	None required up to 45°C Ambient
Location	Indoor, Dry
Dimmable	Yes

COMPLIANCE AND REGULATORY

UL Listed 2108, Class 2. File # E499492
CSA: C22.2 No. 250.0
CE Certified EN 62031:2008 + A1:2012 + A2:2015
IEC TR 62778:2014
Compliance with EN 55015, EN 61547, EN 61000-3-2
Ingress Protection rating: IP20
ESD Class 3B (HBM). No special ESD handling procedures required.
RoHS and REACH compliant

XLT ORDERING GUIDE

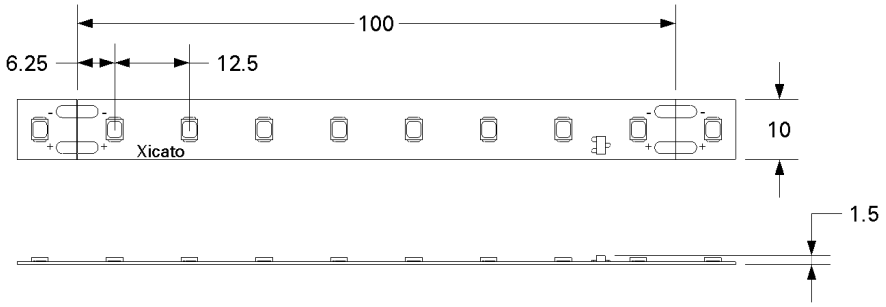
PART NUMBERING SYSTEM

Platform	Length in cm	CRI Series	Temperature	Flux (lm/5m)	Voltage
XLA: Xicato Linear Tape	50 = 500cm	95: Artist	27: 2700 30: 3000 35: 3500 40: 4000	36: 3600lm	24: 24VDC

PART CODES AND DESCRIPTIONS

Part Number	Description
XLT5095273624A	Xicato Linear Tape, 500cm, Artist, 2700K, 3600LM, 24VDC
XLT5095303624A	Xicato Linear Tape, 500cm, Artist, 3000K, 3600LM, 24VDC
XLT5095353624A	Xicato Linear Tape, 500cm, Artist, 3500K, 3600LM, 24VDC
XLT5095403624A	Xicato Linear Tape, 500cm, Artist, 4000K, 3600LM, 24VDC

DIMENSIONS



XLT WARRANTY

Warranty duration:	5 years
Warranty coverage:	Covers initial color consistency, lumen maintenance, and color maintenance on EVERY light source (B0). No failures.
Initial Color Consistency:	Every cuttable segment (100mm) is within 1x2 MacAdam Ellipse (1x2 SDCM) of target color point across a continuous 5m length. Color point tuned at operating temperature 40°C.
Lumen Maintenance:	Better than 70% (L70, B0, F0) at 50,000 hours at maximum operating drive current and maximum operating temperature (65°C) across a continuous 5m length.
Color Maintenance:	All XLT within a contiguous space shall remain within ± 0.003 Δu'v' of each other at maximum operating temperature (65°C) for the duration of the warranty.
Full warranty text at:	www.xicato.com/support/warranty

INITIAL COLOR CONSISTENCY: DETAILS

Artist Series color point targets are on the Planckian locus at each specified CCT

All metrics are calculated according to the proprietary Xicato color matching function

Correlated Color Temp		Initial Color Consistency		
Nominal	Actual	CCT	Duv	SDCM
2700K	2700K	± 40K	± 0.001	± 1x2
3000K	2950K	± 50K		
3500K	3420K	± 60K		
4000K	4000K	± 70K		

COLOR METRICS: ARTIST SERIES

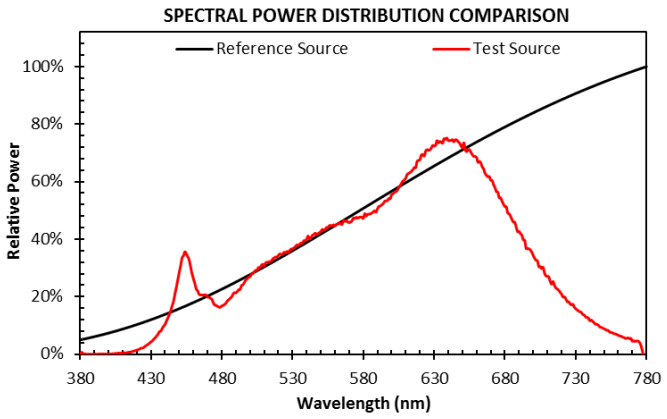
Artist Series is designed to perfectly emulate natural light sources, with precise color rendering by CIE or IES standards, for the most exacting illumination of art, architecture, or other surfaces and materials.

All color rendering data at 40°C case temperature (T_c). Product is warranted to 65°C.
Tester consistency (reproducibility) ± 0.0002 Duv (CIE 1964) from NIST reference
Correlated Color Temperature: 2700K, 3000K, 3500K or 4000K nominal. 3000K used as test reference.

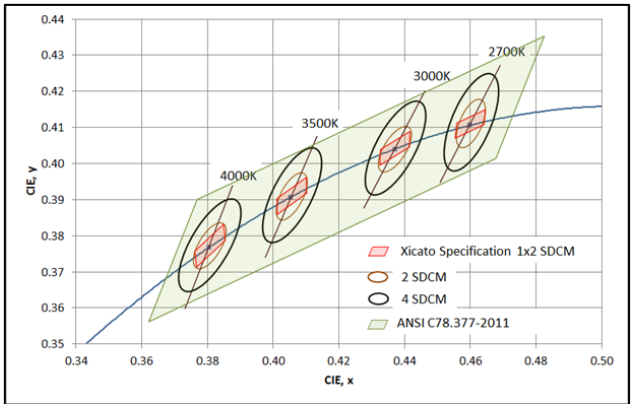
CIE CRI COLOR METRICS (VALUES ARE TYPICAL)

	R_a	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
XLT Artist Series	98	97	99	97	97	97	97	99	97	95	99	95	89	97	97	97

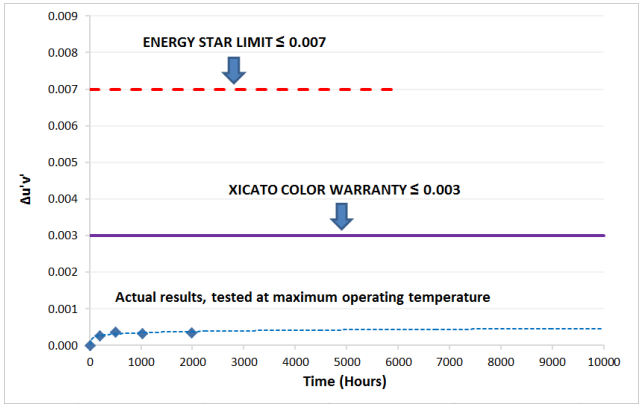
Spectral Power Distribution vs. Reference Source



Color Consistency



Color Maintenance



IES TM-30 COLOR METRICS

(Values are typical. Based on 3000K CCT)

IES TM-30 Color Fidelity (R_f)	95
IES TM-30 Color Gamut (R_g)	102

OTHER COLOR METRICS

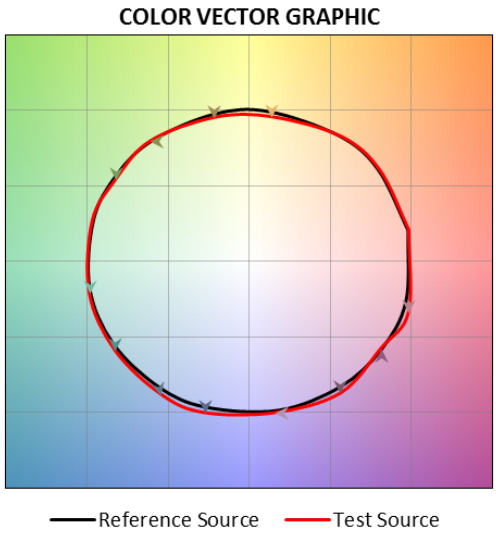
CQS	98
TLCI (Qa)	99
GAI-E	59
GAI-BB	108

COLOR VECTOR GRAPHIC

This plot shows the average chromaticity shift for the samples within each of 16 hue bins, which are compiled out of the 99 IES TM-30 Color Evaluation Samples. The values are normalized so that the reference is a circle.

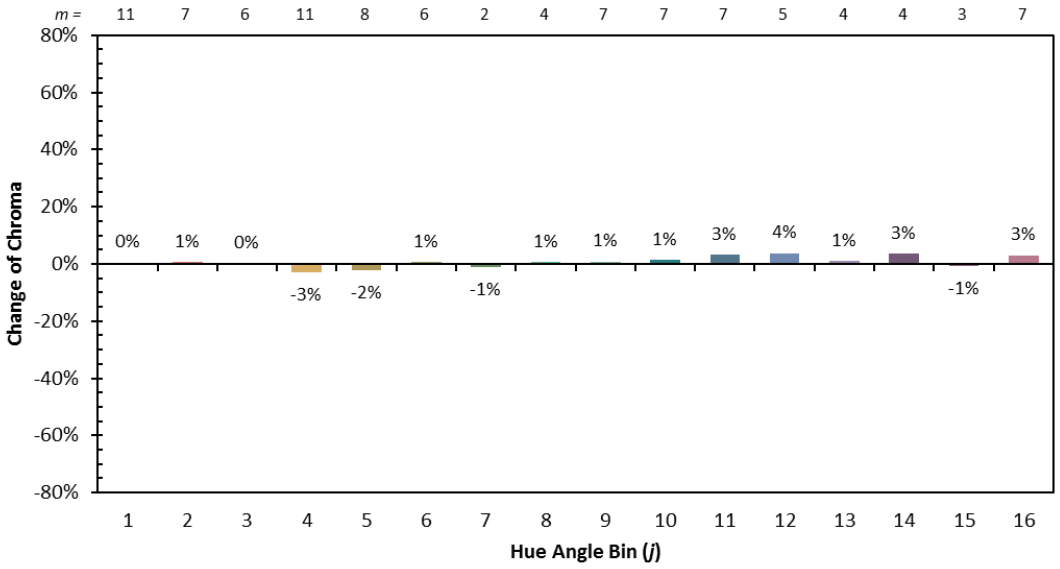
Vector arrows indicate the direction and degree of the shift for each hue bin.

- Radial shift indicates an increase/decrease in saturation.
- Tangential shift indicates a shift in hue.
- Length of arrow indicates degree of shift.



COLOR RENDITION BY HUE ANGLE

This chart displays the change in chroma for the average sample within each TM30 hue angle bin. The number of samples per bin, which can vary based on the CCT used for the calculation, is shown at the top. The color of the bar is based on the average chromaticity under the 5000K reference illuminant; the colors may not display accurately depending on the calibration of the monitor, and should be used for orientation only. Shorter bars are better.



BASIC SAFETY, HANDLING AND ASSEMBLY

SAFETY

Install in accordance with national and local electrical code regulations.
This product is intended to be installed and serviced by a qualified, licensed electrician.
Only install with a Class 2 DC Constant Voltage LED driver.
Each maximum run requires a dedicated power feed from the driver. Do not extend beyond the recommended maximum run length.
Ensure applicable wires are installed between power supply, fixture, and any intervening control devices.

GENERAL HANDLING

Make sure your **hands and tools are clean** before handling XLT.

Do not drop XLT or allow tape to rattle in a loosely packed container. This may dislodge LEDs, damage tape backing, or break electrical contacts.

Do not touch the phosphor coating on top of the LEDs (the light emitting surface). These surfaces are sensitive to scratches, contamination, and debris which may decrease LED performance If any dust or debris accumulates on LED surface, clean the surface by blowing on it with clean air. The phosphor surface can also be cleaned by gently wiping with isopropyl alcohol.

ASSEMBLY

Always use recommended connectors.

Be sure not to reverse polarity on the electrical leads to the XLT, as this may damage the LEDs. Be absolutely certain to use the proper wire gauge and color and, when required, poke them into the proper connector. One-time poke-in connectors are not guaranteed to function properly if wires are pulled loose and reinserted.

Make sure that mounting surface is clean and free of debris before mounting.

For more detailed handling and assembly instructions, including:

- How to mount connectors, optics, adapters, fasteners
- How to mount XLT onto flat surfaces
- Wiring and wire harness

…and more, please see "Application Note - XLT Assembly Instructions" on the Xicato website.

ACCESSORY SELECTION TOOLS

XLT Artist Series is rated for 24V DC power, and is dimmable using standard constant voltage dimming solutions such as the Eulum NDRV, which is part of the "Powered by Xicato GalaXi™" ecosystem. Xicato has a searchable database of power supplies, extrusions, optics and connectors that have been evaluated by Xicato and can be integrated with Xicato's XLT light source. Users can search and filter on a wide range of parameters to match the desired solution for their application. Contact your sales representative or technical application representative for more details.

About Xicato

Xicato (www.xicato.com) designs and develops light sources and electronics that enable architects, designers and building managers to create beautiful, smart spaces in which people love to live and work. With thousands of installations around the globe, Xicato continues to be a leading supplier of high quality lighting solutions, and is defining the future of intelligent light sources by integrating electronics, software and connectivity. Founded in 2007, Xicato's headquarters is based in Silicon Valley and the company has offices in China, Europe and the US.

LUMINAIRE SPECIFICATION: RECOMMENDED LED LIGHT SOURCE

GENERAL DESCRIPTION

Color Point and Spectral Power Distribution shall be optimized for precise, accurate, natural color rendering.

Color Point	Shall match Xicato Artist Series specification
Initial Color Consistency:	Every light source shall be within a 1x2 MacAdam Ellipse (1x2 SDCM)
Initial Color Point Accuracy:	Shall be within ± 0.001 Duv of Black Body Locus (BBL)
Color Maintenance:	Luminaires within a contiguous space shall remain within 3 MacAdam Ellipses of each other at 50,000 hours at maximum operating voltage and maximum temperature (65°C). LM-80 data at maximum rated current and 65°C shall show Δu'v' < 0.003 at 6,000 hours.
Lumen Maintenance:	Shall be better than 70% (L70, B0, F0) at 50,000 hours at maximum operating drive current and maximum case temperature (65°C).
Dimming	Luminaire shall be capable of dimming to 1% or less of maximum intensity. Modulation and frequency for luminaire at 2% of maximum intensity shall fall within the No Effect area, and at 1% within the Low Risk area, of IEEE Std 1789-2015 (IEEE Recommended Practices for Modulating Current in High-Brightness LEDs for Mitigating Health Risks to Viewers).
Warranty:	Verifiable 7 years or 50,000 hours, including minimum on mortality, lumen maintenance, and color maintenance. Mortality: B0 – No failures. Lumen maintenance: L70, B0 (better than 70% on all units). Color maintenance: < 0.003 Δu'v' at 50,000 hours

DETAILED COLOR SPECIFICATIONS

IES TM-30-15 Color rendering fidelity (R_f) shall be 95.

IES TM-30-15 Color rendering gamut (R_g) shall be 102.

Minimum CIE CRI (Ra) shall be 95; minimum R9 shall be 90.

Typical CIE CRI R values shall be:

R1: 97	R9: 95
R2: 99	R10: 99
R3: 97	R11: 95
R4: 97	R12: 89
R5: 97	R13: 97
R6: 97	R14: 97
R7: 99	R15: 97
R8: 97	

LED light source shall be Xicato Linear Tape, Artist Series: XLT5095xx3624A, or equivalent.

COLOR VECTOR GRAPHIC