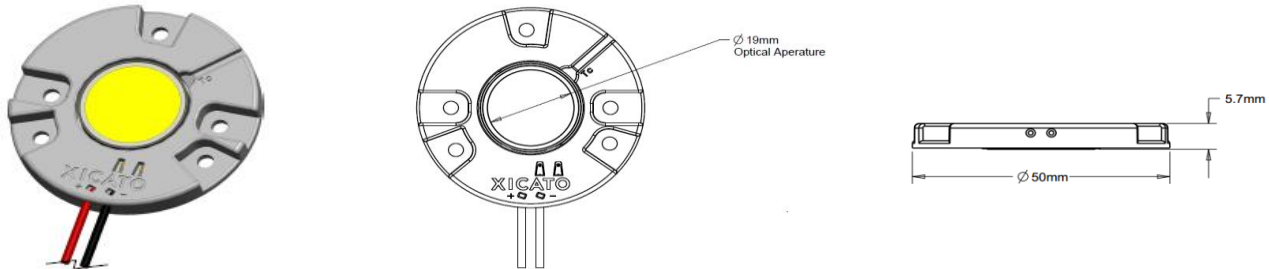


PRODUCT DATA SHEET

XICATO

XTM LED Module *with Corrected Cold Phosphor Technology*[®]

Artist Series



Specification Features

Physical Characteristics

Module Source Type:	Corrected Cold Phosphor LED Module. Dia. 50mm (1.97") x 5.6mm (0.22"). Light emitting surface \varnothing 19mm (0.75").
Maximum Case Temperature:	90°C
Phosphor Proximity:	Remote
Module Weight:	18 gm (.63 oz). 100 count box. Box weight 3 kg (7 lbs). 533mm x 254mm x 153mm (21" x 10" x 6").
Interfaces:	Electrical: 12.7mm stripped tinned 20AWG 300V integrated wire. 400mm (15.7") length. Mechanical: Recommended mounting screws: M3 x 0.5mm x 8mm with split lock washer. Torque 0.4Nm (3.5 in-lb) using three-hole pattern, 0.6Nm (5.3 in-lb) for two-hole pattern. Thermal: Integral thermal pad. A mating thermal interface (i.e. heatsink) surface flatness of ≤ 0.1 mm and center-hole less than $\varnothing 12$ mm is recommended in order to maintain thermal performance.
Module Housing:	Injection molded 30% glass-filled PBT.
Storage Temperature:	-40°C to 85°C

Photometric Characteristics

Color Consistency Initial:	1 x 2 MacAdam (1 x 2 SDCM) along BBL.
Color Rendering Index (CRI):	Ra: 98 (typical). R9 \geq 90, R15 \geq 95
Color Consistency Maintained:	C3/B10/F10 50,000 hrs. ($< 0.003 \Delta u', v'$ 5 years/44,000 hrs. warranty ¹¹)
Lumen Maintenance:	L80/B10/F10 50,000 hrs. (L70, B0, F0 5 years/44,000 hrs. warranty ¹¹)

Other

Regulatory:	UL recognized Class 2, CE (IEC62031, Class III), RoHS 2 compliant. IP20. Photobiological Safety (EN62471:2008), ESD Class 3B (HBM). No special ESD handling procedures required.
Mercury Content	None
UV or IRC Emissions:	None

PRODUCT DATA SHEET

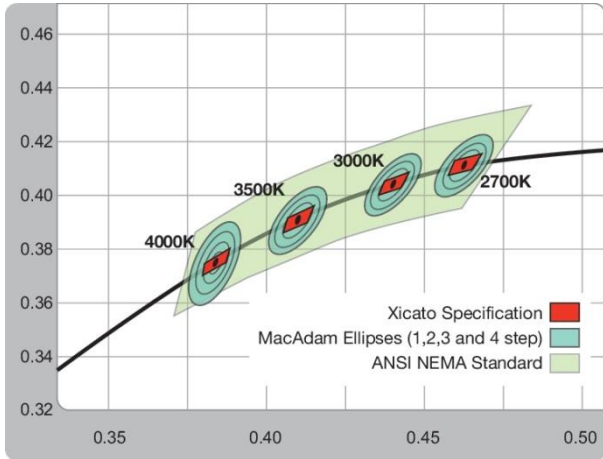
XICATO

XTM LED Module *with Corrected Cold Phosphor Technology*[®]

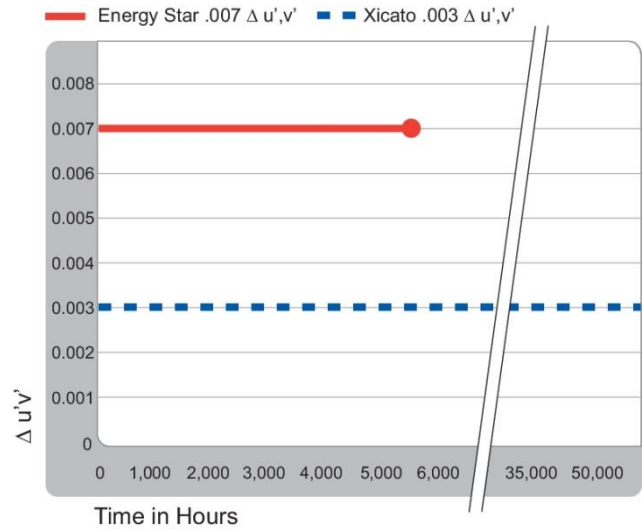
Artist Series

Color Information

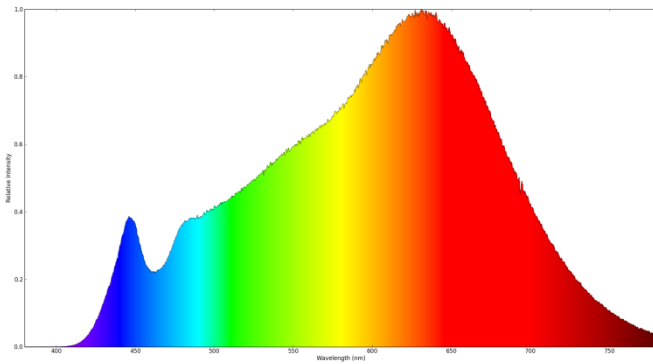
Color Consistency – Initial



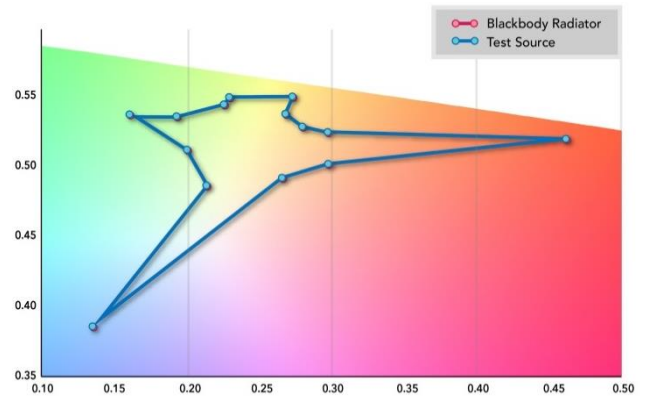
Color Consistency – Maintained



Spectral Power Distribution



Color Gamut



Color Rendering Index (3000K Typical)

Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	
Artist Series	98	98	99	98	98	98	97	98	98	98	99	98	88	98	98	98

PRODUCT DATA SHEET



XTM LED Module *with Corrected Cold Phosphor Technology*[®]

Artist Series

Technical Data

Lighting ¹						Electrical (constant current)													
Module	Part Number	Correlated Color Temperature (CCT) ²	Color Rendering Index (Ra) ³	Initial Color Consistency			Lumen Maintenance (hrs) ⁴	Module	Drive Current (mA) ^{5, 12}	Forward Voltage ⁶			Power Consumption (W) ⁷	Lumen Output ⁸ (Typical)		Efficacy (Typical) (lm/W)			
				SDCM	CCT	Duv				Min	Typ	Max		lm	lm/W				
1300 lm	XTM19952713CCA	2700K	CRI Ra 98 R9 ≥ 90 R15 ≥ 95	≤1 x 2	± 40K	± 0.001	50k	1300 lm	700	17.3	22.3	24.8	15.6	1300	83				
	XTM19953013CCA	3000K							500	16.8	21.7	24.2	10.9	965	89				
	XTM19953513CCA	3500K							350	16.4	21.2	23.7	7.4	720	97				
	XTM19954013CCA	4000K																	
2000 lm	XTM19952720CCA	2700K										2000 lm	1050	19.8	25.1	27.9	26.4	2000	76
	XTM19953020CCA	3000K											700	19.1	24.3	27.1	17.0	1400	82
	XTM19953520CCA	3500K											500	18.7	23.8	26.6	11.9	1055	89
	XTM19954020CCA	4000K											350	18.3	23.4	26.2	8.2	800	98
3000 lm	XTM19952730CCA	2700K										3000 lm	1050	26.4	32.5	35.1	34.1	3000	88
	XTM19953030CCA	3000K											700	25.7	31.8	34.3	22.3	2140	96
	XTM19953530CCA	3500K											500	25.2	31.2	33.8	15.6	1580	101
	XTM19954030CCA	4000K											350	24.9	30.9	33.4	10.8	1240	115

- All lighting data shown in the above table is taken at a recommended operating test point (Tc) temperature of 70°C and highest rated drive current.
- "3000K" and "3500K" CCT's are 2950K and 3420K, respectively. CCT data ANSI/NEMA compliant.
- "Ra" is defined as the average of color rendering indices R1-R8. 3000K data shown. Ra value typical.
- L80 50,000 hrs. Long term testing in process.
- The module is designed for usage with a constant current power supply with an output current up to 770mA (700mA) or 1100mA (1050mA) max. (including tolerance).
- Voltage data based on 20°C to 90°C operating range. For operation outside this range, contact Xicato.
- Power consumption is stated as a typical value that is based on the typical range of forward voltage.
Maximum and minimum power values can be calculated using the voltage range.
- Absolute range of lumen output is ±10% of typical value.
- Thermal compatibility classification: Contact Xicato for details.
- Specifications subject to change without notice.
- 5 year color and lumen maintenance warranty. Refer to www.xicato.com for details.
- Maximum peak ripple current with frequencies ≥ 100hz for each product are 2000mA (1300lm), 3000mA (2000lm).

PRODUCT DATA SHEET

XICATO

XTM LED Module *with Corrected Cold Phosphor Technology*[®]

Artist Series

Recommended LED Module in Luminaire Specification

Physical Characteristics: LED module shall be remote phosphor, nominal 50mm (1.97") diameter.

Performance: LED module shall have a CRI (Ra) 98 with an R9 ≥ 85 . LED module color points shall be within 1 x 2 SDCM initial. Flux output shall be measured at a minimum of 70 °C ($\pm 5^\circ\text{C}$).

General Requirements: LED module shall be UL recognized, CE compliant and RoHS compliant. Module shall be warranted for 5 years for catastrophic failure, lumen maintenance ($\geq L70$), and color consistency ($< .003 \Delta u', v'$). LED module shall be Xicato Module. # _____

About Xicato

Xicato is passionate about light. Light has an emotional effect on people and a direct impact on business profitability. It ultimately influences everything in our lives. Xicato is a recognized leader in creating LED modules that provide superior aesthetics, economics and durability. Xicato aspires to be the trusted partner of the global lighting design community and luminaire manufacturers.

For an overview of our customers' luminaires visit www.xicato.com.