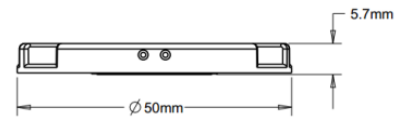
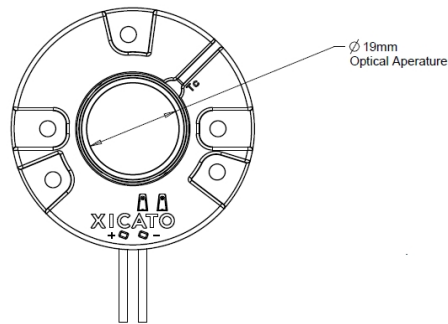


PRODUCT DATA SHEET

XICATO

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

Standard 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 (7lbs). 18 gm (.63 oz). 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: 83 (typical). Values ± 3 .
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

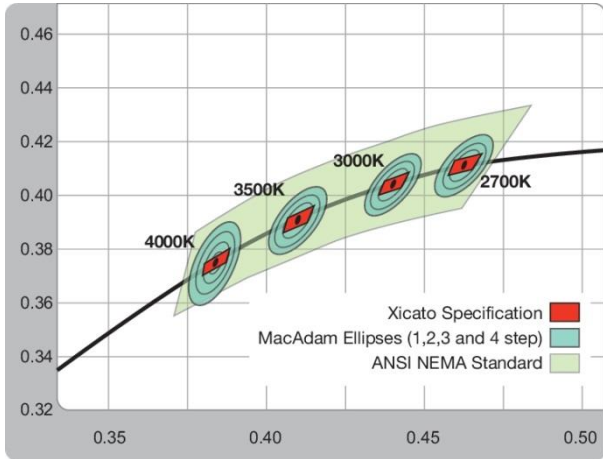
PRODUCT DATA SHEET

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

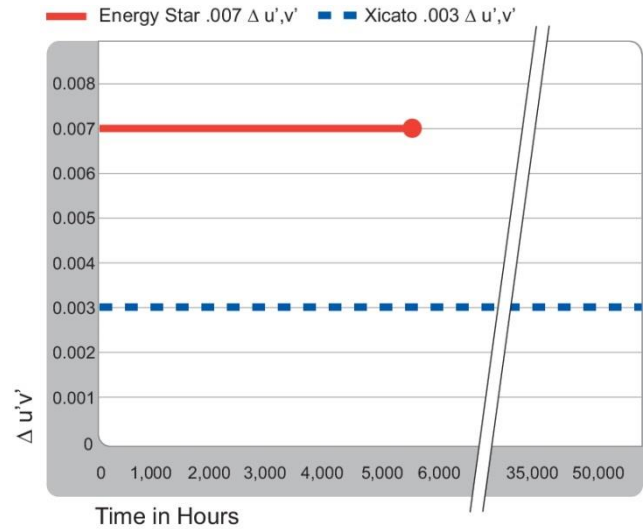
Standard Series

Color Information

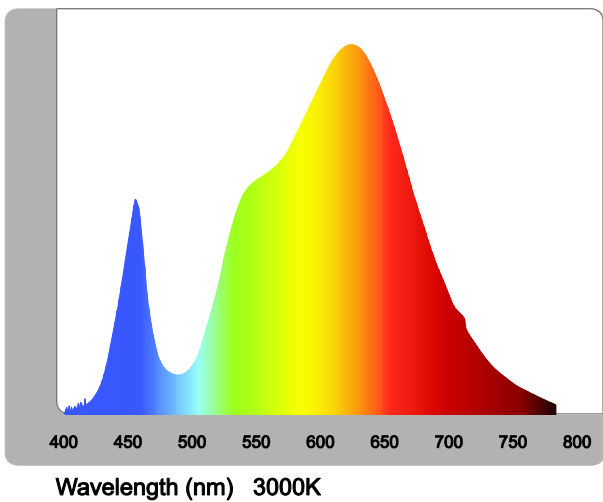
Color Consistency – Initial



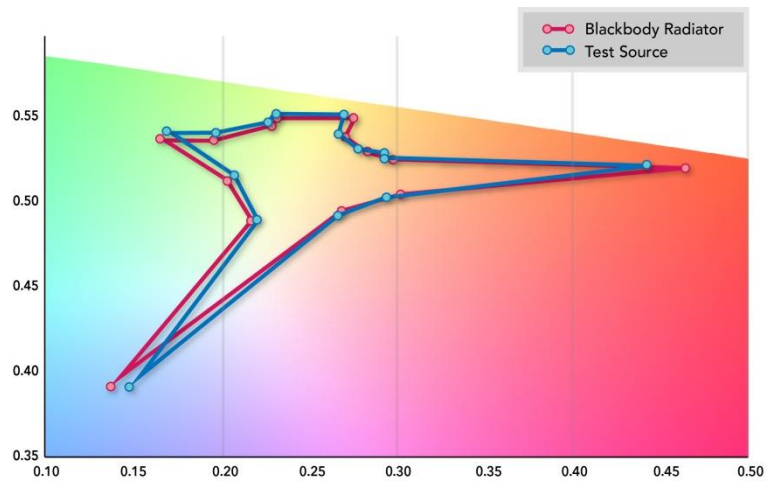
Color Consistency – Maintained



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	
Standard Series	83	82	89	95	84	82	87	86	65	16	64	79	58	81	93	75

PRODUCT DATA SHEET



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

Standard 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	XTM19802713CCA	2700K	83 ±3	≤1 x 2	± 40K	± 0.001	50k	1300 lm	700	12.6	16.7	18.6	11.7	1300	111						
	XTM19803013CCA	3000K							500	12.2	16.3	18.1	8.2	965	118						
	XTM19803513CCA	3500K							± 60K	350	11.9	15.9	17.8	5.6	720	129					
	XTM19804013CCA	4000K							± 70K	700	20.1	27.9	31.0	19.5	2000	102					
2000 lm	XTM19802720CCA	2700K						± 40K	2000 lm	700	12.6	16.7	18.6	11.7	1300	111					
	XTM19803020CCA	3000K						± 50K		500	12.2	16.3	18.1	8.2	965	118					
	XTM19803520CCA	3500K						± 60K		350	11.9	15.9	17.8	5.6	720	129					
	XTM19804020CCA	4000K						± 70K		700	20.1	27.9	31.0	19.5	2000	102					
3000 lm	XTM19802730CCA	2700K						83 ±3	≤1 x 2	± 40K	± 0.001	50k	3000 lm	1050	22.6	27.9	31.0	29.3	3000	102	
	XTM19803030CCA	3000K												700	21.9	27.0	30.1	18.9	2100	111	
	XTM19803530CCA	3500K												± 60K	500	21.4	26.4	29.6	13.2	1585	120
	XTM19804030CCA	4000K												± 70K	350	21.0	26.0	29.1	9.1	1195	131
4000 lm	XTM19802740CCA	2700K											± 40K	4000 lm	1400	23.4	27.9	30	39.1	4000	102
	XTM19803040CCA	3000K											± 50K		1050	22.7	27.1	29.2	28.5	3080	108
	XTM19803540CCA	3500K											± 60K		700	22.2	26.5	28.6	18.6	2160	116
	XTM19804040CCA	4000K											± 70K		500	21.7	26.0	28.2	13.0	1630	125
5000 lm	XTM19802750CCA	2700K	83 ±3	≤1 x 2	± 40K	± 0.001	50k						5000 lm	1400	28.6	33.4	35.7	46.8	5000	107	
	XTM19803050CCA	3000K												1050	27.7	32.5	35.1	34.1	3850	113	
	XTM19803550CCA	3500K												± 60K	700	27.1	31.8	34.3	22.3	2700	121
	XTM19804050CCA	4000K												± 70K	500	26.6	31.2	33.8	15.6	2030	130

- 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. Value is 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), 1100mA (1050mA) and 1540mA (1400) 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), 2000mA (2000lm).

PRODUCT DATA SHEET

XICATO

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Standard 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) 83. CRI values shall be ± 3 points initial. 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.