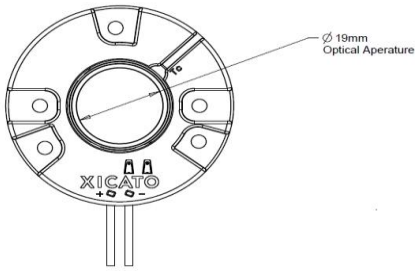
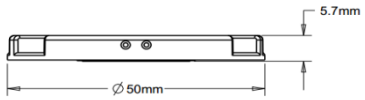
PRODUCT DATA SHEET

XICATO

XTM LED Module *with Corrected Cold Phosophor Technology®*

Vibrant Series (V80)





Specification Features

Physical Characteristics

Module Source Type:	Corrected Cold Phosphor LED Module. Dia. 50mm (1.97”) x 5.6mm (0.22”). Light emitting surface Ø19mm (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 hardware: M3 x 0.5mm x 8mm with split lock washers. 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 Ø12 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 step MacAdam (1 x 2 SDCM). Below the BBL.
Color Rendering Index (CRI):	Ra: 83, R9 16, R12 62 (typical)
Gamut Area Index (GAI_{BB})[4]	111
Color Consistency Maintained:	C3/B10/F10 50,000 hrs. (<0.003 Δ u’,v’ 5 years/44,000 hrs. warranty[12])
Lumen Maintenance:	L80/B10/F10 50,000 hrs. (L70, B0, F0 5 years/44,000 hrs. warranty[12])

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

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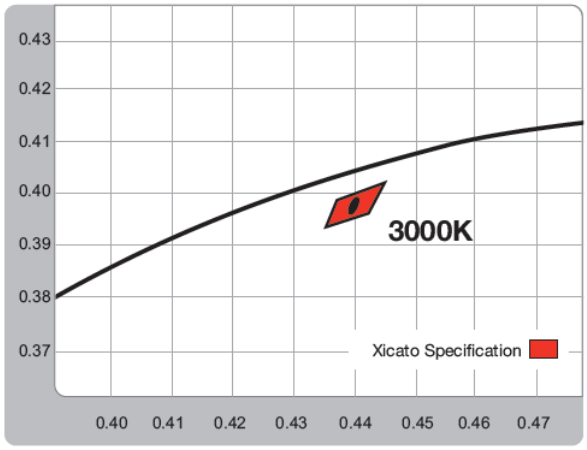
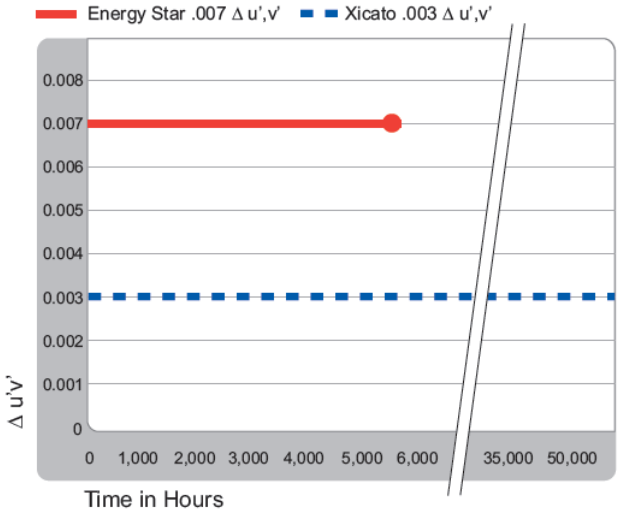
Color Information

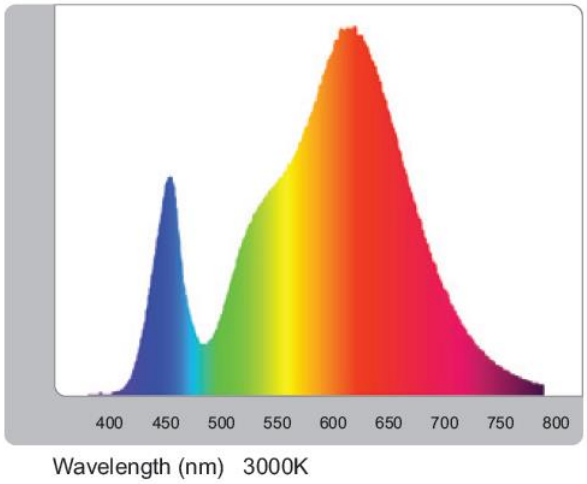
Color Consistency – Initial



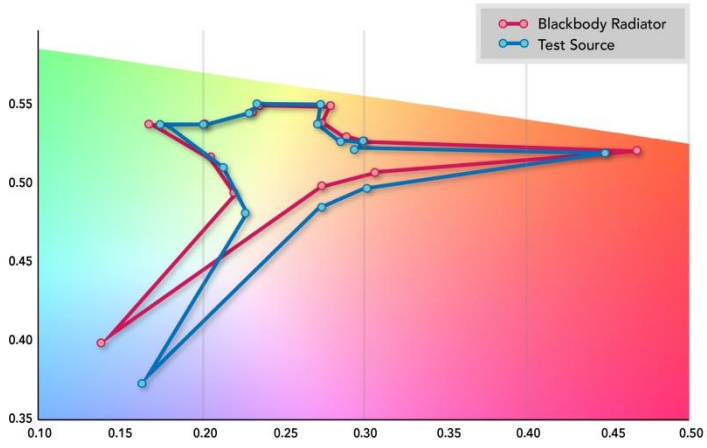
Color Consistency – Maintained



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

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Technical Data

Lighting [1]									Electrical (constant current)							
Module	Part Number	Correlated Color Temperature (CCT)[2]	Color Rendering Index (Ra) [3]	Gamut Area Index[4]	Initial Color Consistency			Lumen Maintenance (hrs) [5]	Module	Drive Current (mA)[6, 13]	Forward Voltage[7]			Power Consumption (W)[8]	Lumen Output[9] (Typical)	Efficacy (Typical)
					SDCM	CCT	Duv				Min	Typ	Max		lm	lm/W
1300 lm	XTM19V83013CCA	3000K	83	111	≤1 x 2	± 50K	± 0.001	50k	1300 lm	700	12.6	16.7	18.6	11.7	1300	111
										500	12.2	16.3	18.1	8.2	965	118
										350	11.9	15.9	17.8	5.6	720	129
2000 lm	XTM19V83020CCA								2000 lm	700	20.1	27.9	31.0	19.5	2000	102
										500	19.5	27.1	30.2	13.6	1490	110
										350	19.1	26.5	29.6	9.3	1105	119
3000 lm	XTM19V83030CCA								3000 lm	1050	22.6	27.9	31.0	29.3	3000	102
										700	21.9	27.0	30.1	18.9	2100	111
										500	21.4	26.4	29.6	13.2	1585	120
										350	21.0	26.0	29.1	9.1	1195	131
4000 lm	XTM19V83040CCA								4000 lm	1400	23.4	27.9	30	39.1	4000	102
										1050	22.7	27.1	29.2	28.5	3080	108
										700	22.2	26.5	28.6	18.6	2160	116
										500	21.7	26.0	28.2	13.0	1630	125
5000 lm	XTM19V83050CCA								5000 lm	1400	28.6	33.4	35.7	46.8	5000	107
										1050	27.7	32.5	35.1	34.1	3850	113
										700	27.1	31.8	34.3	22.3	2700	121
										500	26.6	31.2	33.8	15.6	2030	130

1. 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.
2. "3000K" and "3500K" CCT's are 2950K and 3420K, respectively. CCT data ANSI/NEMA compliant.
3. "Ra" is defined as the average of color rendering indices R1-R8. 3000K data shown.Value is typical. Min. 80CRI.
4. GAI_{BB} is Gamut Area Index normalized to the black body locus and using all 15 standard CRI colors. Value is typical
5. L80 50,000 hrs. Long term testing in process.
6. 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).
7. Voltage data based on 20°C to 90°C operating range. For operation outside this range, contact Xicato.
8. 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.
9. Absolute range of lumen output is ±10% of typical value.
10. Thermal compatibility classification: Contact Xicato for details.
11. Specifications subject to change without notice.
12. 5 year color and lumen maintenance warranty. Refer to www.xicato.com for details.
13. Maximum peak ripple current with frequencies ≥ 100hz for each product are 2000mA (1300lm), 2000mA (2000lm), 3000mA (3000lm).

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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, R9 16, R12 62 and a gamut area black body index (normalized) of 111. 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 ºC (±5ºC).

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 (≥ L70), and color consistency (<.003 Δ 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.