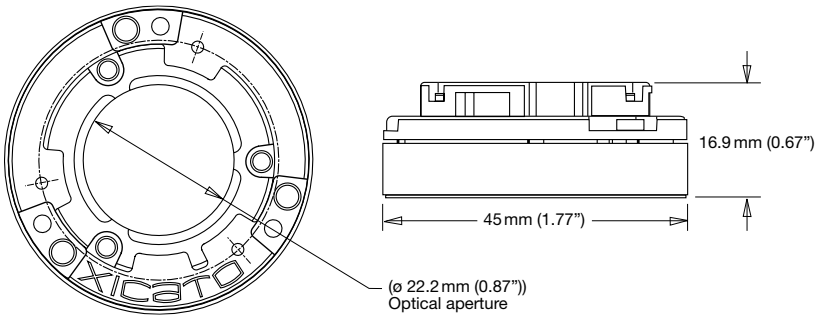
XSM Vibrant Series™ LED Module 120 GAI_{BB} / CRI 95

Corrected Cold Phosphor Technology®



Specification Features

Physical Characteristics

Module Source Type: Corrected Cold Phosphor LED module. Dia. 45mm (1.77") x 16.9 mm (.67"). Optical Aperture Dia. 22.2mm (.87").
Maximum Case Temperature: 90 °C
Phosphor Proximity: Remote.
Module Weight: 54gm (1.9oz) (100ct box weight 6kg (13.2lbs)).
Interfaces: Base dia. 45mm (1.77"). Provision for accessory reflector attachment. Integral wire harness 24 AWG, 40cm, UL105°C, 300V. Mounting screws M3 x 0.5 x 12mm. Integral thermal pad: Nominal thermal conductivity 10W/m-K (through-plane), 150W/m-K (in-plane), .127mm thick.
Module Housing: Diecast aluminum construction with sealed glass aperture. IP66 rated.
Storage Temperature: -40°C to 85°C

Photometric Characteristics

Color Consistency - Initial: CCT +/- 50K, Duv +/- .001, 1 x 2 step MacAdam (1 x 2 SDCM). Below the BBL.
Color Rendering Index: Ra 95, R9 90, R12 97 (typical).
Gamut Area Index Black Body[12] (GAI_{BB}): 120.
Color Consistency - Maintained: C3 50,000hrs.[11]
Lumen Maintenance: L70 50,000 hrs.[4]

Other

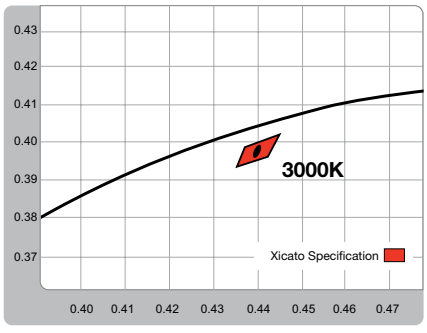
Regulatory: Modules UL recognized. RoHS compliant. CE Compliant (IEC62031). IP66 (IEC60529).
Mercury Content: No mercury.
UV or IR Content: None.

Ordering Guide*

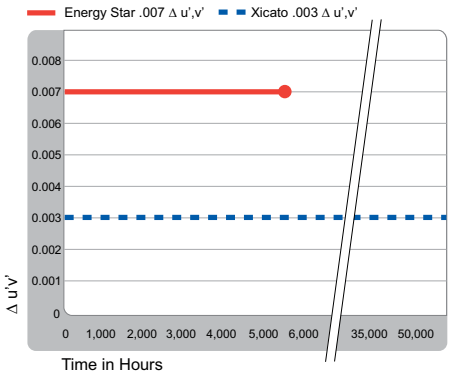
Luminous Flux	Part Number	Correlated Color Temperature
1300 lm	XSMV930-1300-C	3000K
2000 lm	XSMV930-2000-C	3000K

* For a complete list of luminaires incoporating Xicato LED Modules and information on compatible drivers, heatsinks and reflectors, go to **www.xicato.com.** For XSM Artist series, refer to XSM Artist Series Data Sheet. For Standard series, refer to Standard Series Data Sheet.

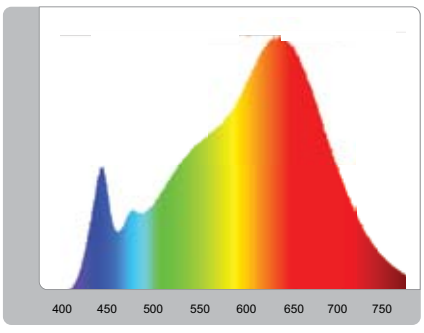
Color Consistency - Initial



Color Consistency - Maintained



Spectral Power Distribution



Color Rendering Index (Typical)

Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
95	99	98	97	96	98	96	95	94	90	97	95	97	98	98	98

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Technical Data

Lighting[1]								
Module	Part Number	Correlated Color Temperature[2]	Color Rendering Index[3]	Gamut Area Index[12]	Color Consistency			Lumen Maint-enance[4]
		(CCT)	Ra	(GAI_{BB})	SDCM	CCT	Δ uv	hrs
1300 lm	XSMV930-1300-C	3000K	CRI 95 R9 90	120	≤1 x 2	± 50K	± 0.001	50k
2000 lm	XSMV930-2000-C							

Electrical (constant current)								
Module	Drive Current[5]	Forward Voltage[6]			Power Consump-tion[7]	Lumen Output [8] (Typical)	Efficacy (Typical)	Thermal Class[10]
	mA	Min	Typ	Max	W	lm	lm/W	
1300 lm	1050	23.9	26.4	30.0	27.7	1300	47	K
	700	23.1	25.4	29.0	17.8	930	52	G
	500	22.3	24.7	28.2	12.4	700	57	E
	350	21.8	24.2	27.6	8.5	500	59	C
2000 lm	1050	37.5	41.1	46.4	43.2	2000	46	Q
	700	36.1	39.6	44.8	27.7	1420	51	K
	500	35.1	38.4	43.6	19.2	1070	56	G
	350	34.3	37.6	42.6	13.2	780	59	E

Notes:
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' CCT is 2990K. CCT data ANSI/NEMA compliant.
3. 'Ra' is defined as the average of color rendering indices R1-R8.
4. XSM 2000lm long term testing in process. 1300lm based on LM-80/TM-21.
5. The module is designed for usage with a constant current power supply with an output current to 1100mA max.
6. Voltage data based on 20°C to 90°C operating range. For operation outside this range, contact factory.
7. 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.
8. Absolute range of lumen output is ±10% of typical value.
9. Specifications subject to change without notice.
10. Thermal compatibility classification: Contact Xicato for details.
11. C3= <.003 Δ u'v'.
12. GAI_{BB} is Gamut Area Index normalized to the black body locus and using all 15 standard CRI colors. Values are typical.

Recommended LED Module Specification

Physical Characteristics: LED module shall be remote phosphor, nominal 45mm (1.77") diameter, and aluminum and glass construction. Module shall be sealed, meeting IP66 requirements. Module shall be field-servicable.
Performance: LED module shall have a CRI (Ra) 95, R9 90, R12 97 and a gamut area index black body of 120. LED module color points shall be within 1 x 2 SDCM initial. Flux output shall be measured at a minimum of 70 °C (±5°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 (≥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.

For the best in lighting design, Xicato recommends a qualified lighting designer from the Professional Lighting Design Association (PLDA) or the International Association of Lighting Designers (IALD).

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