


4" LED DOWNLIGHT MODULE SELECTION GUIDE

Offered in Adjustable, Fixed and Wall Wash configurations, the ELEMENT 4" Series was specifically designed to offer specifiers a variety of alternative LED options in a single specification grade housing. Its innovative design allows the 4" Series to maintain an LED agnostic platform which easily adapts to today's most relevant LED offerings as well as new LED technologies as they are developed in the future. This flexibility empowers the design community to select an LED solution that best fits the design criteria and performance preferences for a given project, while having confidence in specifying the 4" Series for its thoughtful engineering and aesthetic appeal. Today the 4" Series offers a choice of five LED modules, each with a distinct set of features and benefits that we have outlined in the following pages. For more information on the ELEMENT 4" Series, please visit ELEMENT-Lighting.com

	 CITIZEN MAX-OUTPUT / HIGH-OUTPUT / LOW-OUTPUT			 XICATO / ARTIST SERIES	 LUMENETIX WARM COLOR DIMMING	 LUMENETIX PROGRAMMABLE WHITE
Output (Fixture Performance)	Max: 3300 / 2640	High: 2590 / 2060	Low: 1500 / 1200	1800 / 1275	1075	1075
CRI	80+ / 90+			80+ / 98+	90+	90+
Color Temperature	2700K 3000K 3500K			2700K 3000K 3500K	3000K-1800K Warm Dim	1600K-4000K
Dimming	Down to 5%			Down to 5%	Down to 1%	Down to 1%
Dimming Type	ELV, 0-10V, Hi-Lume			ELV, 0-10V, Lutron Hi-Lume	0-10V	0-10V, 2 sets
Beam Spreads	18°, 25°, 40°			21°, 43°, 60°	21°, 43°, 60°	21°, 43°, 60°
Power Supply	Constant Current Driver			Constant Current Driver	24V DC Constant Voltage	24V DC Constant Voltage
Wattage	Max: 32 watts	High: 32 watts	Low: 18 watts	24 watts / 22 watts	23 watts	23 watts
Title 24	At 90 CRI			-	-	-

*with ELV Driver option

	FEATURES & BENEFITS			
	<ul style="list-style-type: none"> Highest Output Highest Efficacy Tightest Beam Spread Title 24 	<ul style="list-style-type: none"> High Output by Xicato High Efficacy by Xicato High Color Consistency 	<ul style="list-style-type: none"> Automatically Changes Color Temperature as it Dims Dims along Black Body Curve to Mimic Halogen 	<ul style="list-style-type: none"> Color Temperature & Dimming controlled independently Optional Remote Light Commissioning Tool Ability to 'Copy & Paste' Programs from Fixture to Fixture


4" LED DOWNLIGHT MODULE SELECTION GUIDE

CITIZEN CLL030 SERIES

Citizen has long been known among consumers for its prominent position in the digital watch industry. In addition, the company has been producing great LED boards for many years. It has successfully leveraged its technological prowess, component manufacturing capabilities and partnership with Nichia, one of the world's highest regarded diode manufacturer to build a great reputation for making high quality LED modules.

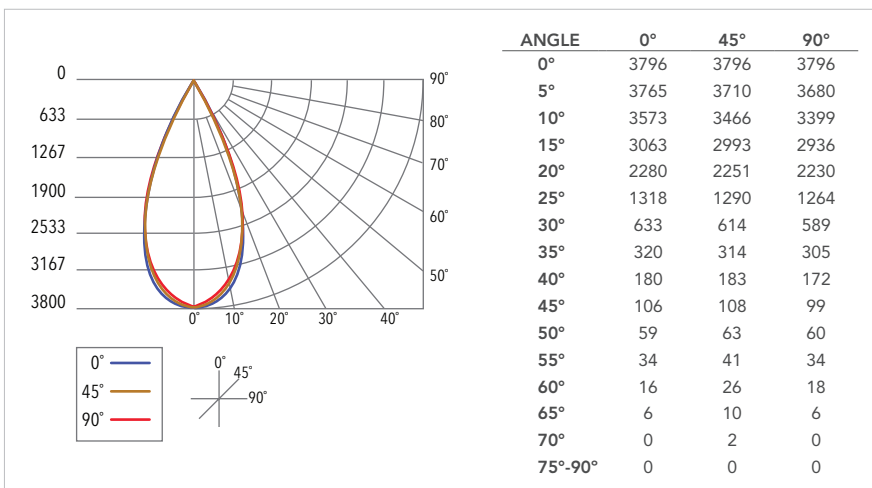
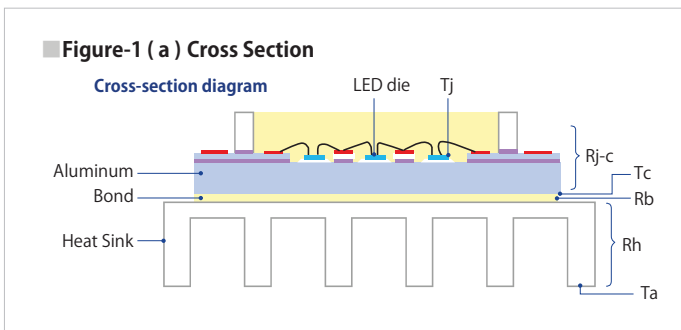
The Citizen CLL030 Series uses a single point source LED instead of an LED array found in many other LED modules. This single point source produces an extremely clean beam without the burden of multi shadows which can occur when using LED arrays. Using an integrated knurled surface Total Internal Reflection Optic, the beam gradually falls off similar to the effect of a softening lens. The integrated nature of the optic eliminates the need for secondary lenses, thus maximizing output of the LED module.

The Citizen CLL030 Series is the most efficient of the 4" LED modules we offer. With efficacy of up to 81 gross lumens per watt, this LED module is commonly used in energy-conscious projects where restrictions on watts per square foot are enforced. In addition to being efficient, Citizen's CLL030 Series driver offers extremely smooth dimming and is highly compatible with most dimming systems on the market.

 <p>CITIZEN MAX OUTPUT / HI-OUTPUT / LO-OUTPUT</p>			
Output (Fixture Performance)	Max: 3300 / 2640	High: 2590 / 2060	Low: 1500 / 1200
CRI	80+ / 90+		
Color Temperature	2700K 3000K 3500K		
Dimming	Down to 5%*		
Dimming Type	ELV, 0-10V, Hi-Lume		
Beam Spreads	18°, 25°, 40°		
Power Supply	Constant Current Driver		
Wattage	Max: 32 watts	High: 32 watts	Low: 18 watts
Title 24	At 90 CRI		

*with ELV Driver option

FEATURES & BENEFITS	
<ul style="list-style-type: none"> • Highest Output • Highest Efficacy • Tightest Beam Spread • Title 24 	




The Citizen CLL030 Series' single point source design and 3-step binning process offer an extremely clean beam with excellent color consistency.

4" LED DOWNLIGHT MODULE SELECTION GUIDE

XICATO

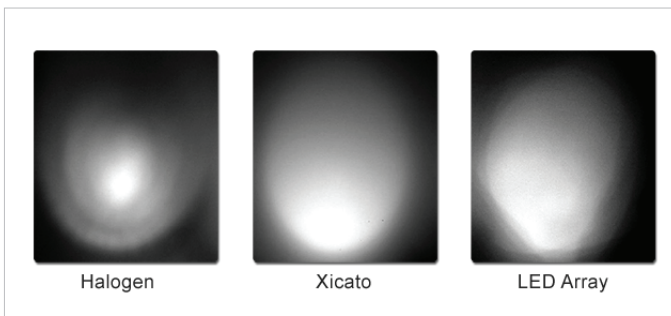
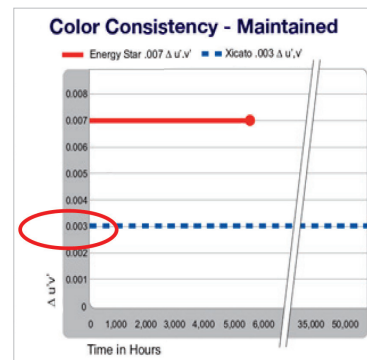
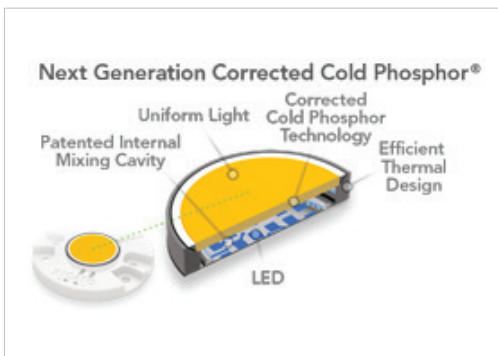
Xicato takes creating great lighting very seriously. They understand lighting’s role in transforming spaces and impacting revenue for retailers, restaurateurs, event planners, gallery owners and corporations alike. The company’s mantra of quality lighting with purpose leads them to focus on helping designers attain just the right light to ensure an outstanding customer experience.

When developing LED modules, Xicato focuses on more than basic industry standards of CRI and efficacy. Using Corrected Cold Phosphor Technology®, they also offer guaranteed color consistency for a minimum of 5 years. During the manufacturing process, each LED module is ‘tuned’ to achieve Xicato’s exacting standards for initial color. Only Xicato guarantees every LED module will be within a 1 x 2 MacAdam Ellipse around the color point on the black body locus. To ensure performance in the field, the LEDs and remote phosphor keep the LEDs cooler and prevent the phosphor from degrading over the life of the module.

	
	XICATO
Output (Fixture Performance)	1800 / 1275
CRI	80+ / 98+
Color Temperature	2700K 3000K 3500K
Dimming	Down to 5%*
Dimming Type	ELV, 0-10V, Lutron Hi-Lume
Beam Spreads	21°, 43°, 60°
Power Supply	Constant Current Driver
Wattage	24 watts / 22 watts
Title 24	-

*with ELV Driver option

	FEATURES & BENEFITS
	<ul style="list-style-type: none"> • High Output by Xicato • High Efficacy by Xicato • High Color Consistency




Xicato’s Corrected Cold Phosphor Technology® provides amazingly uniform light while safeguarding fixture color consistency over time.

4" LED DOWNLIGHT MODULE SELECTION GUIDE

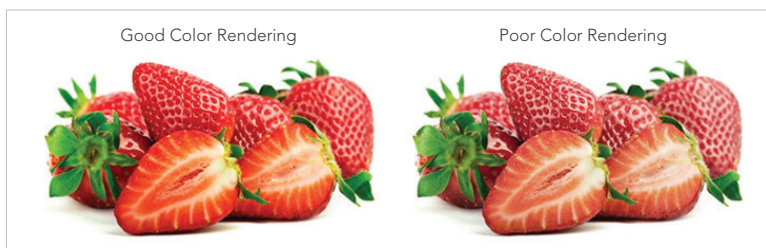
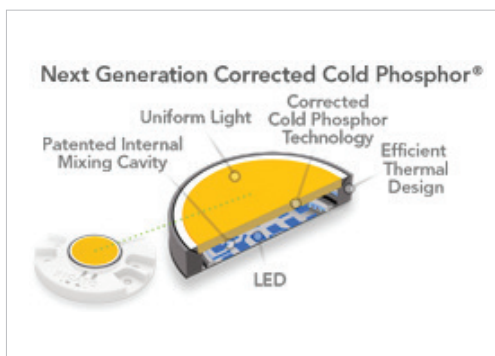
XICATO ARTIST SERIES

Xicato takes creating great lighting very seriously. They understand lighting’s role in transforming spaces and impacting revenue for retailers, restaurateurs, event planners, gallery owners and corporations alike. The company’s mantra of quality lighting with purpose leads them to focus on helping designers attain just the right light to ensure an outstanding customer experience.

To solve the long-standing dilemma of choosing between natural light and efficient light, Xicato developed the Artist Series. While halogen lamps have been the standard bearer for reproducing natural light, they have a short lifetime of just 2000 hours on average and terrible energy efficiency. Conversely, fluorescent and CMH have been the standards for more efficient, longer lasting lighting but do a poor job of reproducing natural light. Xicato’s engineers have solved the problem of how to deliver high quality light that is efficient and long lasting. The Xicato Artist Series is virtually indistinguishable from halogen light, except on the electric meter reading where the difference is clear. You get the same amazing color consistency guarantee as the standard Xicato LED module but with amazingly high CRI, including R9 values of 98+.

	
	XICATO ARTIST SERIES
Output (Fixture Performance)	1800 / 1275
CRI	80+ / 98+
Color Temperature	2700K 3000K 3500K
Dimming	Down to 5%*
Dimming Type	ELV, 0-10V, Lutron Hi-Lume
Beam Spreads	21°, 43°, 60°
Power Supply	Constant Current Driver
Wattage	24 watts / 22 watts
Title 24	-

*with ELV Driver option



FEATURES & BENEFITS	
	<ul style="list-style-type: none"> • High CRI Artist Series • 95+ R9 Values • High Color Consistency

	Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
XSM Artist Series	98	98	99	98	98	98	97	98	98	96	99	98	88	98	98	98
Typical IR Coated Halogen Dichroic	98	98	99	99	99	98	98	99	97	92	97	98	97	98	99	97
Typical Compact Metal Halide	82	90	94	69	82	81	81	87	71	27	59	62	55	93	78	88
Typical Compact Fluorescent	87	91	93	86	91	89	90	88	70	17	76	91	81	93	92	81

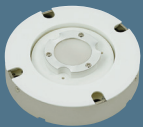
Xicato’s Artist Series offers superb color reproduction as demonstrated by the strawberries while outperforming traditional energy-saving light sources.

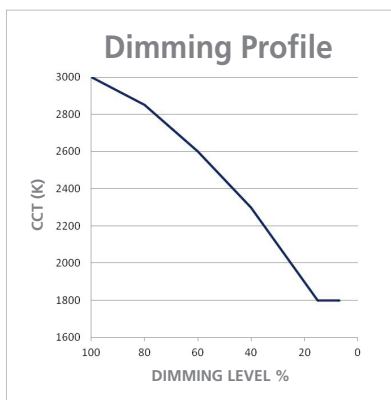
4" LED DOWNLIGHT MODULE SELECTION GUIDE

LUMENETIX WARM COLOR DIMMING

Lumenetix approaches light knowing that it has a profound impact on peoples’ daily lives. Lumenetix araya® offers the ability to control a broad spectrum of high quality white light as well as tailor light to individual preferences, objects or spaces. The araya® color tuning technology received the 2012 Light Engine Innovation Award at LIGHTFAIR International 2012 and is leading the lighting industry into the next wave of the LED revolution. At the heart of that revolution is offering functionality beyond traditional lighting intensity control in combination with high quality replication of the broad spectrum of natural daylight using single light engines.

To replicate the dimming profiles of halogen sources, Lumenetix offers Warm Color Dimming technology. In this application, the araya® LED Module allows users to enjoy the same warm glow offered by traditional halogen sources when dimmed. Starting at 3000K at 100% brightness, the LED module follows the Black Body Curve and automatically varies the CCT down to 1800K as it dims down to 15%.

	 <p>LUMENETIX WARM COLOR DIMMING</p>
Output (Fixture Performance)	1075
CRI	90+
Color Temperature	3000K-1800K Warm Dim
Dimming	Down to 1%
Dimming Type	0-10V
Beam Spreads	21°, 43°, 60°
Power Supply	24V DC Constant Voltage
Wattage	23 watts
Title 24	-
	<p>FEATURES & BENEFITS</p> <ul style="list-style-type: none"> • Automatically Changes Color Temperature as it Dims • Dims along Black Body Curve to Mimic Halogen



The Lumenetix araya® module uses highly engineered color mixing to mimic halogen’s highly desirable warm dimming light profile.


4" LED DOWNLIGHT MODULE SELECTION GUIDE

LUMENETIX PROGRAMMABLE WHITE

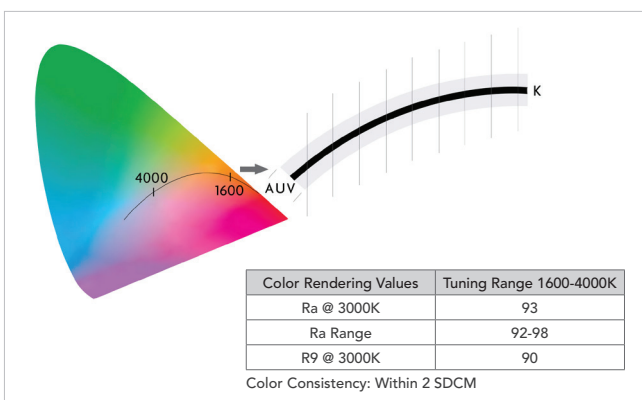
Lumenetix approaches light knowing that it has a profound impact on peoples’ daily lives and believes in offering functionality beyond traditional lighting intensity control, in combination with high quality replication of the broad spectrum of natural daylight using single light engines. Lumenetix araya® offers the ability to control a broad spectrum of high quality white light as well as tailor light to individual preferences, objects or spaces.

The Lumenetix araya® Programmable White Color Tuning Module mixes broad spectrum LEDs to deliver tunable white light on the Planckian curve at very high color rendering values ranging from 91-97 CRI. The result is light that very accurately replicates natural light. In addition, this dynamic LED module also features a Saturation and Hue Mode for intentionally creating off-Planckian curve color points.

The Programmable White module can be setup and controlled using the wireless Lumenetix Light Commissioning Tool, industry standard 0-10V input wired controls, or a hybrid of wired and wireless controls. The Light Commissioning Tool allows precise control over the CCT from 1650K to 4000K as well as dimming control in precise 1% increments. Once the desired light output is reached, the Light Commissioning Tool’s Copy & Paste function allows the setting to be “copied” and then “pasted” onto another Lumenetix Programmable White LED fixture to ensure consistency throughout an entire space.

	
	LUMENETIX PROGRAMMABLE WHITE
Output (Fixture Performance)	1075
CRI	90+
Color Temperature	1600K-4000K
Dimming	Down to 1%
Dimming Type	0-10V, 2 sets
Beam Spreads	21°, 43°, 60°
Power Supply	24V DC Constant Voltage
Wattage	23 watts
Title 24	-

	FEATURES & BENEFITS
	<ul style="list-style-type: none"> • Color Temperature & Dimming controlled independently • Optional Remote Light Commissioning Tool • Ability to ‘Copy & Paste’ Programs from Fixture to Fixture



The Lumenetix araya® Color Tuning module is capable of reproducing thousands of colors of light both on and off the black body curve.