

# XICATO MAN

No.2



CAN HE TRIUMPH OVER THE POWERFUL *LIGHT DESTROYERS?*

**XICATO MAN vs. THE CHANGELING**

**YOU CAN CHANGE,  
BUT YOU CAN'T HIDE!**

**ZA-ZAP!**

**I WILL  
OVERCOME YOU  
WITH 1X2 MACADAM  
ELLIPSES OF SEPARATION  
ON MY BLACK BODY  
RADIATOR!**

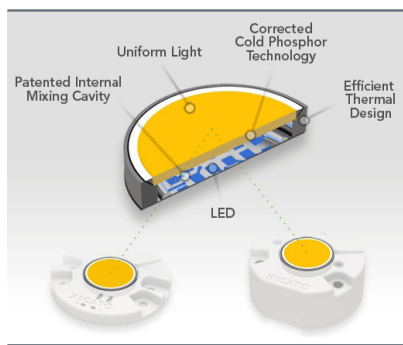


# XICATO MAN SAVES THE WORLD FROM POOR COLOR CONSISTENCY & BINNING

## Corrected Cold Phosphor Technology®

Corrected Cold Phosphor Technology enables extremely accurate initial color, color maintenance, and lumen maintenance. Color is "tuned" in the factory to precise color point and CRI specifications, as measured by extremely accurate instruments.

Heat is the enemy of lifetime for both color and lumen output. Corrected Cold Phosphor Technology ensures that LEDs and phosphors are kept cool using separate thermal paths,



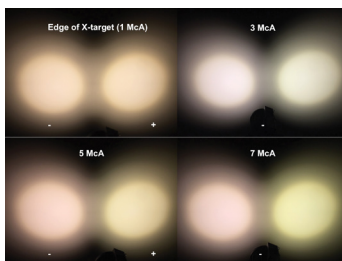
## Warranty

Xicato guarantees initial color accuracy, color maintenance, and lumen maintenance of every XTM for 5 years, and every XIM for 7 years or 50,000 hours. Initial color consistency is guaranteed to be within 1x2 MacAdam Ellipses. Lumen output is guaranteed to be at least 70% of initial output on every module, with not a single failure (L70/B0/F0), for the entire warranty period. Color consistency between products in a single contiguous visual space, viewable from any location in that space, is guaranteed to differ by no more than 0.003 in  $u'v'$  (C3) for the same period. There's no fine print and no extra cost, just the confidence that now you can see your space in the best possible light for the life of the module.

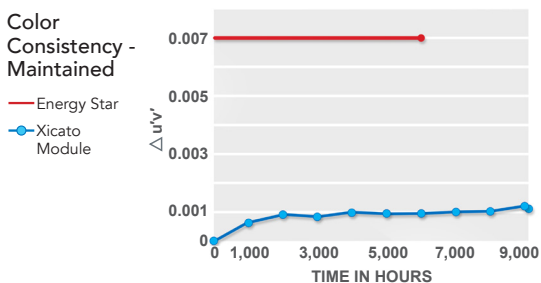
## NO means – NO FAILURES, NO EXCUSES AND FULL CONFIDENCE

Often lifetime claims are given as "L70/B10", which means that 1 in 10 products will be outside of the 70% lumen maintenance specification. How much below 70% is not described. Have you seen a wall where 1 in 10 lights is beyond 5 McA? How about a wall with half of the products out of spec? "Half bad" corresponds to B50, the usual industry warranty.

Xicato specifies only B0 - not a single bad part. Zero. Every individual light remains within 3 McA for its entire life. You can be sure that your building, your lighting design, and your luminaires will look terrific for at least 50,000 hours. You will avoid the cost and hassle of changing luminaires, and have a showcase you can be proud of for many years. What is that worth?



- 1x2 McA: Xicato initial quality.
- 3 McA: Most competitors' initial quality. Xicato's maximum after 50,000 hours.
- 5 McA: Some competitors' initial quality.
- 7 McA: Competitors' warranted maximum after 50,000 hrs



# XICATO

## XICATO MAN vs. THE GRAY LADY

Meet my two light guns designed to make everything look gray! We will conquer the world with poor light! You're finished, XICATO MAN!

BE CAREFUL GRAY LADY! DON'T GET ANY BRIGHT IDEAS!



# XICATO MAN CONQUERS THE GRAY LADY WITH EXCEPTIONAL COLOR RENDERING

Xicato carefully engineers and controls LED and phosphor recipes to deliver modules with color rendering and efficacy metrics that are optimized for specific applications. In addition to the standard CIE Ra pastels R1-R8, Xicato targets the important supplementary reference colors R9-R15, which include chlorophyll, skin

tones and, critically, the deep red (R9) that affects the appearance of wood, brick and other materials. In 2015, Xicato became the first company to publicly embrace the new IES TM-30-15 standard, which is based on the latest science for calculating color fidelity and gamut, and now provides TM-30 data on all its products.

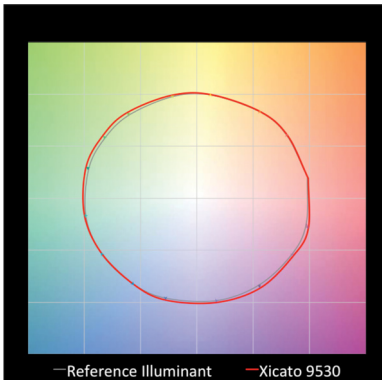


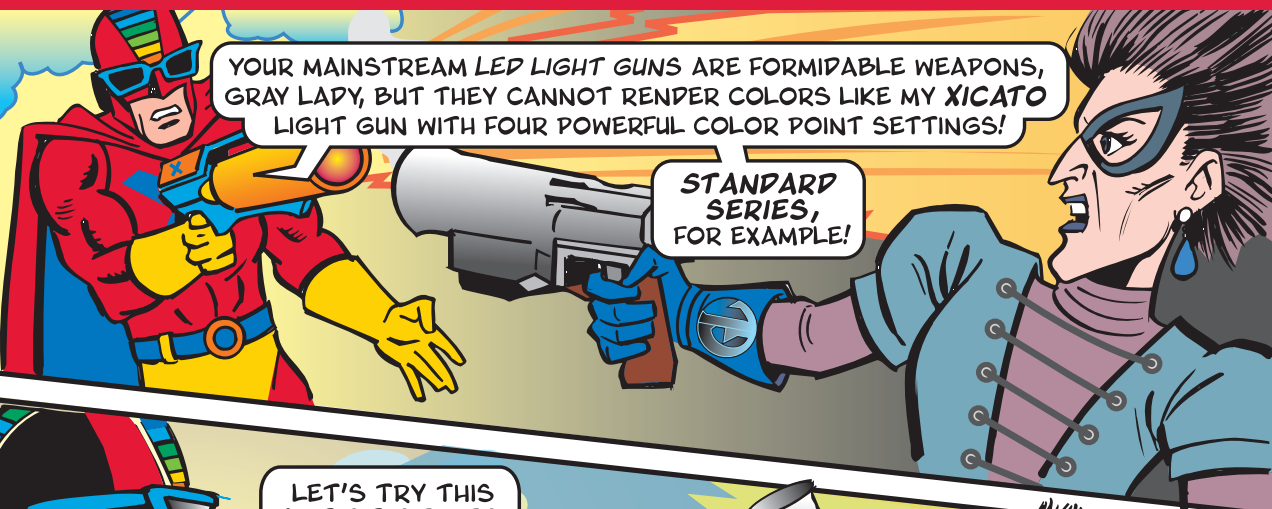
Appearance with typical 80CRI product



Appearance with Xicato Artist Series®

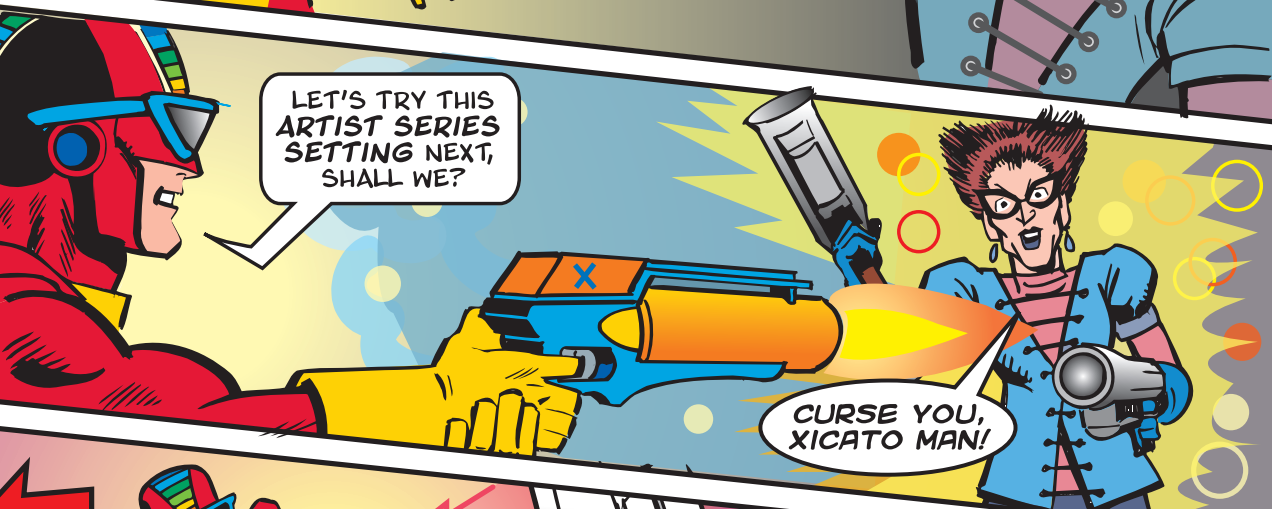
Series	TM-30			CIE CRI														
	Rf	Rg	Ra	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
Artist	96	103	97	98	99	97	96	98	97	98	97	95	99	93	94	98	97	99
Beauty	91	107	95	96	96	97	94	95	92	94	95	95	92	91	88	95	99	97
Designer	89	101	91	91	94	97	92	91	93	91	90	55	87	93	84	92	98	87
Standard	78	101	83	80	88	95	81	80	85	85	63	14	73	80	70	81	97	74
V80	73	105	83	82	87	90	81	81	82	85	69	28	69	80	65	82	94	78
V95	93	106	96	96	97	97	94	96	94	95	97	96	95	91	92	96	98	97





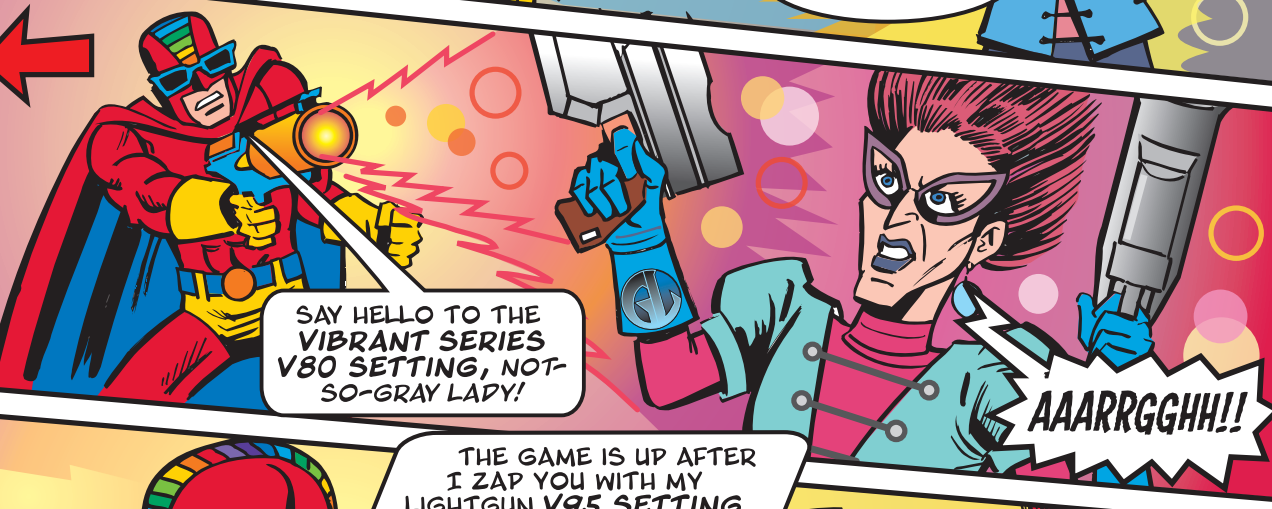
YOUR MAINSTREAM LED LIGHT GUNS ARE FORMIDABLE WEAPONS, GRAY LADY, BUT THEY CANNOT RENDER COLORS LIKE MY XICATO LIGHT GUN WITH FOUR POWERFUL COLOR POINT SETTINGS!

STANDARD SERIES, FOR EXAMPLE!



LET'S TRY THIS ARTIST SERIES SETTING NEXT, SHALL WE?

CURSE YOU, XICATO MAN!



SAY HELLO TO THE VIBRANT SERIES V80 SETTING, NOT-SO-GRAY LADY!

AAARRGGHH!!



THE GAME IS UP AFTER I ZAP YOU WITH MY LIGHTGUN V95 SETTING OF THE VIBRANT SERIES!!

Too... much... color-GASP!!

# XICATO MAN ZAPS THE GRAY LADY WITH A HEAVY DOSE OF COLOR ENGINEERING

## Artist Series®

Our color scientists have engineered the Artist Series to have a typical CRI of Ra 98. The Artist Series has been optimized to get excellent results for the more saturated and skin color samples of the CRI reference set. The Artist Series not only outperforms other LED solutions, but also traditional lamp types like compact fluorescent and compact metal halide.

## Beauty Series™

Developed in collaboration with lighting designers and leading cosmetology professionals and backed by independent research, Xicato Beauty Series is a remarkable light source that brings out the natural beauty of skin tones. Beauty Series makes people look and feel their best. And when they enjoy how they feel, they engage in their environment and stay longer.

## Designer Series™

Providing an optimum balance between high CRI and efficacy, the Designer Series was created to meet California Title 24 requirements (90+ CRI and 50+ R9) with excellent R values across the board. Designer is able to achieve high lumen output (4500 lm in a 19mm LES) while bringing out the rich colors of merchandise and surfaces.

## Vibrant Series®

By increasing the gamut area of our Vibrant Series modules, objects appear richer and with more texture and depth. This enables us to see colors, hues and tones, particularly for whites, purples, pinks and blues, that are real, but simply aren't visible under halogen light. Vibrant is available in both high CRI (V95) and high efficacy (V80) flavors.

## Standard Series

For applications where color accuracy is important but efficacy must be maximized, the standard series provides excellent CRI in an energy efficient source.

ARTIST SERIES®	
	Natural Color
	Very High Color Rendering CRI > 95. R <sub>9</sub> > 90
	R <sub>f</sub> 96 R <sub>g</sub> 103
	Hospitality & Gallery Lighting 2700-4000K CCT
	80+ Lumens per Watt Superior Color Consistency

BEAUTY SERIES™	
	Beautiful Skin Tones
	Excellent Color Discrimination
	Ra 95 Rf 91 Rg 107
	Cosmetics Counters & Social Spaces
	Custom Spectrum 75+ LPW Superior Color Consistency

DESIGNER SERIES™	
	Premium Color
	High Efficacy with High CRI Ra 91 Rf 87 Rg 101
	Premium Retail, Hospitality & Residential
	High ceilings
	Superior Color Consistency

VIBRANT SERIES®	
	Striking Color
	GAIBB ~ 111 CRI > 80 Rf 73 Rg 105
	GAIBB ~ 123 CRI > 95 Rf 93 Rg 106
	Retail & Display Lighting 3000K CCT
	100+ Lumens per Watt Superior Color Consistency

STANDARD SERIES	
	Accurate Color
	Normal Color Rendering CRI > 80
	R <sub>f</sub> 78 R <sub>g</sub> 101
	Office & General Lighting 2700K - 4000K CCT
	100+ Lumens per Watt Superior Color Consistency

# XICATO

A superhero named Light Avenger stands on a rooftop. He has a red suit with a blue 'X' on his chest, a blue cape, and yellow gloves and boots. He is holding a blue and orange handheld device that is emitting red laser beams towards a building's windows. The scene is set in a city at night, with cars and a truck on the street below, their headlights on. The background shows city buildings with lit windows.

WITH MY DIMMING MODULE DESIGNED FOR SIMPLE BUILDING INTEGRATION, I CAN DIM THE LIGHTS PERFECTLY TO ZERO!

THE LIGHT AVENGER DEMONSTRATES HIS POWERS OF PERFECT DIMMING TO THE CITY!



# XICATO MAN ASTONISHES HIS FANS WITH SMOOTH DEEP DIMMING

When considering dimming, the three primary lighting objectives are smoothness, depth and low risk of visible distractions or physiological effects of flicker through the dimming range. Technically this requires a high degree of coordination between the various components in an LED system.



## Xicato's XIM Intelligent Dimming Solution

Xicato's hybrid approach to dimming uses the best attributes of both constant current reduction (CCR) and a special form of PWM to achieve smooth, deep, responsive dimming to 0.1% in DALI and 1% in 1-10V systems. As a result, Xicato XIM exceeds the highest international standards for avoiding health effects related to flicker.

## Optimizing Dimming Through Integration

By integrating the dimming driver, microelectronics and the LEDs in the same solution, the integrated dimming driver can use data and operating performance of the exact LEDs it is controlling to produce the best dimming effect and to ensure that the effect is consistent across an installation. These sophisticated electronics, along with internal sensors, not only protect the module from heat-related damage, but also provide data that allows Xicato to verify our warranty of every XIM module for 7 years or 50,000 actual hours of operation.



# XICATO

## XICATO MAN VS. DR. FLICKER

YOU'RE NO MATCH FOR THE DANGEROUS FLICKER EFFECTS THAT I CAN CREATE WITH MY REPLACEMENT LAMPS!

AARRGGGHHH! THAT FLICKERING IS CAUSING EYESTRAIN AND CREATING POTENTIALLY HARMFUL SITUATIONS!



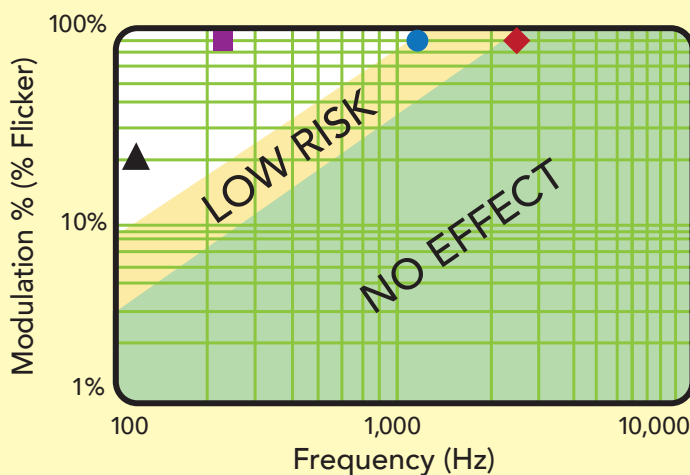
# XICATO MAN STUNS HIS NEMESIS BY ELIMINATING POTENTIALLY HARMFUL FLICKER

Managing flicker can be a challenge at any light level, and is particularly a challenge when light is being dimmed. The Institute of Electrical and Electronics Engineers (IEEE) has developed the standard IEEE 1789 that addresses safe modulation of frequencies for High Brightness LEDs, and defined the parameters for flicker.

The key to mitigating the risk of flicker is to ensure that the frequency is high enough that flicker falls in the "low risk" or "no-observable-effect" zones. XIM was designed to reduce the risk of flicker, even at deep dim levels (see chart).

## Example- Recommended Specification

Dimming Performance: Module shall be 1-10V/0-10V, compatible with IEC60929 Annex E. Module shall dim to measured light level of 1% at lowest level. Fading across the dimming range shall be smooth and monotonic. Minimum flicker frequency at 1% measured light output shall be 2500Hz. Meets IEEE 1789-2015: low risk to health and safety



- Recommended Low Risk Minimum (1250Hz)
- ◆ Xicato XIM at 1% Dim Level (2500 Hz)
- "Quality" Dimming Driver at 5% Dim Level
- ▲ "Mainstream" Dimming Driver at 20% Dim Level

Source: "Designing to mitigate effects of flicker in LED lighting and reducing risks to health and safety." by Lehman, B and Wilkins, A.J.



# XICATO MAN VS. BARON VON OVERSPILL

BARON VON OVERSPILL HAS BROKEN OUT OF PRISON! XICATO MAN TRIES TO TRACK HIM DOWN USING SUPERIOR BEAMS!

HEE-HA-HA-HA!!  
MY SPILL LIGHT  
WILL RUIN THE  
CAREFULLY PLANNED  
SCHEMES OF LIGHTING  
DESIGNERS AROUND  
THE WORLD!!



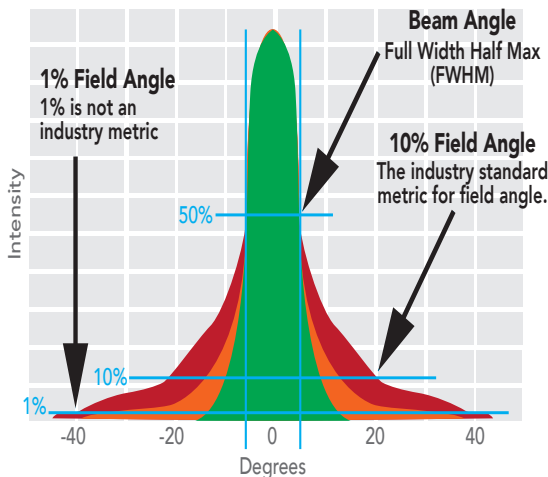
# XICATO MAN DEFEATS BARON VON OVERSPILL WITH 9MM LES

All LED arrays, COBs and modules with fairly large light emitting surfaces (LES) suffer from an inability to easily control all light emitted from the LES. This uncontrolled light is often called "spill light", quantified as "field angle", and can make it very difficult to create drama and contrast in accent lighting applications. Recognizing the challenge and lack of available options, Xicato decided to tackle this problem head on.

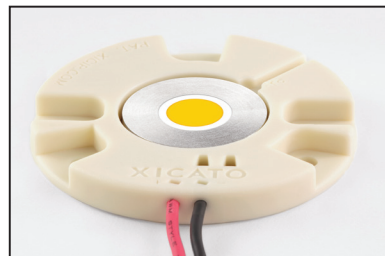
The result was a new LED module with a 9mm LES. Now available in both the

XTM and XIM product lines, the smaller LES allows much tighter, higher intensity beams with greatly reduced spill light. With the right optics, luminaires with Xicato 9mm modules can replace MR16, PAR, and A111 lighting, creating contrast, drama, and the look that lighting designers and specifiers love.

Xicato 9mm modules come with the same 1x2 McA color accuracy, B0 lifetime specifications, and 5 year (XTM) or 7 year / 50,000 hour (XIM) warranty on light output and color consistency.



<b>High Performance Optic</b> Low field angles, smooth	<b>Medium Performance Optic</b> Larger field angles, smooth	<b>Low Performance Optic</b> Very large field angles
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XTM with 9mm LES



XIM with 9mm LES

# XICATO

THE LIGHT DESTROYERS PLOT TO DESTROY QUALITY LIGHTING, ONE BUILDING AT A TIME!

THAT FOOL XICATO MAN THINKS HE HAS DEFEATED US!

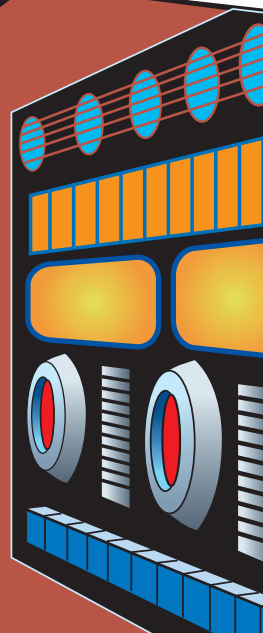
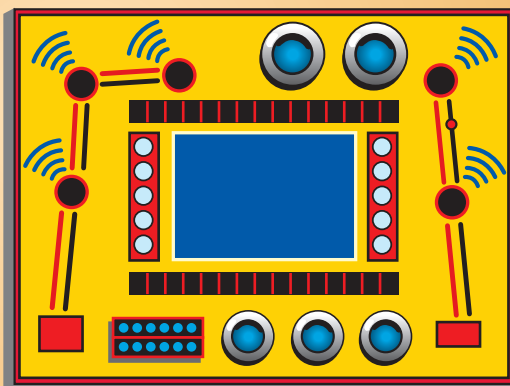
HA! HE CANNOT DEFEAT MY SPILL LIGHT!

BAH! THE LIGHT AVENGER HAS NO POWER OVER THE CHANGELING!

MY GRAY LIGHT GUNS WILL SOON HAVE HIM CRYING FOR MERCY!

...BUT XICATO MAN IS TRACKING THEM VIA HIS CONTROL CENTER!

DREAM ON, LIGHT DESTROYERS! OUR FINAL BATTLE WILL SPELL DEFEAT FOR YOU ALL!

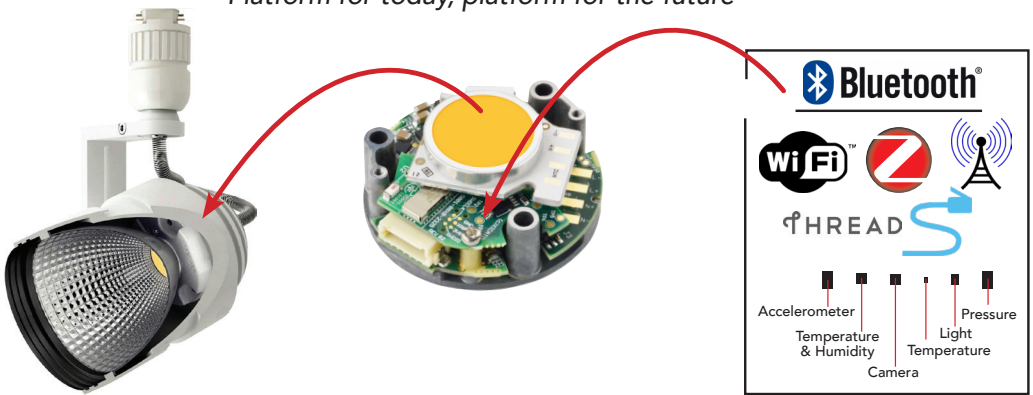


# XICATO MAN TAKES CONTROL AND AMAZES THE UNIVERSE

**I**f we can learn anything from the explosion of smart phones over the last eight years, it's the power of integration and open APIs to enable apps and services. Smart Phones set the stage for many industries to follow, including lighting and other systems in the built environment. We believe that it starts with high quality lighting as the foundation for integration into an intelligent platform.




## The Xicato Intelligent Module (XIM) Platform for today, platform for the future



Light	Sensors	Microcontroller(s)	Connectivity
<ul style="list-style-type: none"> <li>• LED driver Optimized for LED array</li> <li>• Dimming engine Smooth, deep and flicker free</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature</li> <li>• Time</li> <li>• Electrical (Vf, I)</li> <li>• Light</li> <li>• Environmental conditions</li> <li>• Occupancy/motion</li> </ul>	<ul style="list-style-type: none"> <li>• Light control</li> <li>• Sensor readout</li> <li>• Data management</li> </ul>	<ul style="list-style-type: none"> <li>• Wireless</li> <li>• Wired</li> <li>• Open API</li> </ul>





XICATO MAN TRIUMPHS BY USING HIS SECRET WIRELESS GADGET AND OVERRIDES THE LIGHT DESTROYERS!

SORRY, LIGHT DESTROYERS, BUT YOUR REIGN OF BAD LIGHTING IS OVER!

CURSES! BUT HOW??

I'VE BEEN WIRELESSLY GATHERING OPERATIONAL AND SENSOR DATA WITH MY **BLUETOOTH ENABLED XIM MODULES!** WITH THESE TOOLS I CAN ENSURE THE LIGHTING IN THE BUILT ENVIRONMENT WILL STAY PERFECT FOREVER!



# XICATO MAN CONQUERS THE LIGHT DESTROYERS WITH XIM GEN4 BLUETOOTH CONTROL

## Value Story

### For the OEM

*Lower cost and higher performance,  
with fewer SKUs*

- Smaller fixture size - fewer components
- Lower total assembled system cost
- Perfect match of driver to LED array - no system compatibility issues
- Verifiable 50,000 hour warranty on entire module -
- LEDs and electronics
- Greater functionality = higher revenue and margins

### For the Specifier and Installer

- Elimination of dedicated control wires
- Control at the individual fixture level - independent of wiring scheme
- Faster, easier provisioning
- Easy binding to switches and sensors
- Open APIs for custom programming
- Fast, simultaneous response - no "popcorning"
- Exquisitely fine dimming control to 0.1%
- Define user groups, fixture groups, scenes and profiles

### For the End User

*Applications and Services*

#### Lower Capital and Installation Cost

- Elimination of dedicated control wires
- Lower cost control system
- Simplified provisioning and reconfiguration

#### Facility Management

- Monitoring of operating hours for proactive maintenance
- Energy consumption and quality monitoring
- Real-time and historical temperature and intensity data
- Enables end user control for personalized workspaces
- Tie through gateway into existing BMS

#### Sensor Integration

- Can communicate directly with bluetooth-enabled switches and sensors
- Occupancy
- Ambient light
- Environmental sensors
- Fire and Safety systems

#### Bluetooth Beacons


- Navigation and wayfinding
- Location-based information
- Advertising and promotions

#### Reliability & Performance

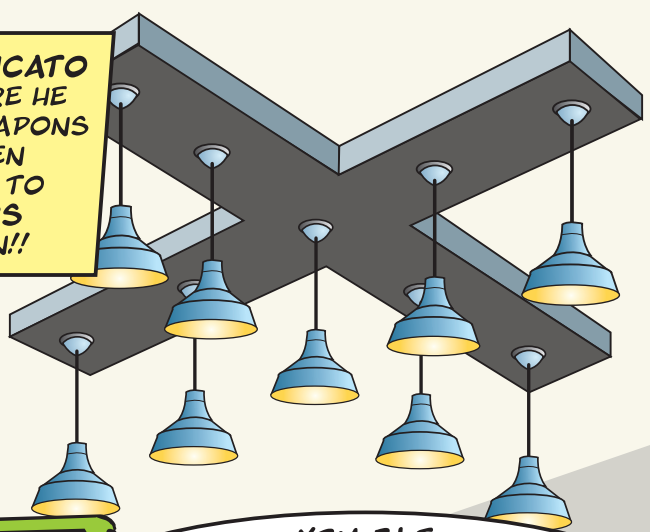
- Lighting functions without gateway or network connection
- Low latency – Immediate response to control commands



# XICATO




AFTER EVERY EXHAUSTIVE BATTLE, XICATO MAN RETURNS HOME TO HQ, WHERE HE AND 'RED', HIS RESEARCHER AND WEAPONS DEVELOPMENT EXPERT, HAVE BEEN WORKING ON NEW TECHNOLOGIES TO DEFEAT THE LIGHT DESTROYERS IF THEY DECIDE TO ATTACK AGAIN!!



**XIM BLE**  
WIRELESS MODULES ARE A PHENOMENAL WEAPON. INSTALLERS SAVE MONEY ON WIRING, AND COMMISSIONING IS EASIER THAN EVER BEFORE!

MEANWHILE, RED PUTS THE FINISHING TOUCHES ON THE BEAUTY SERIES, A NEW COLOR FORMULA DEVELOPED WITH RESEARCH ALLIES...



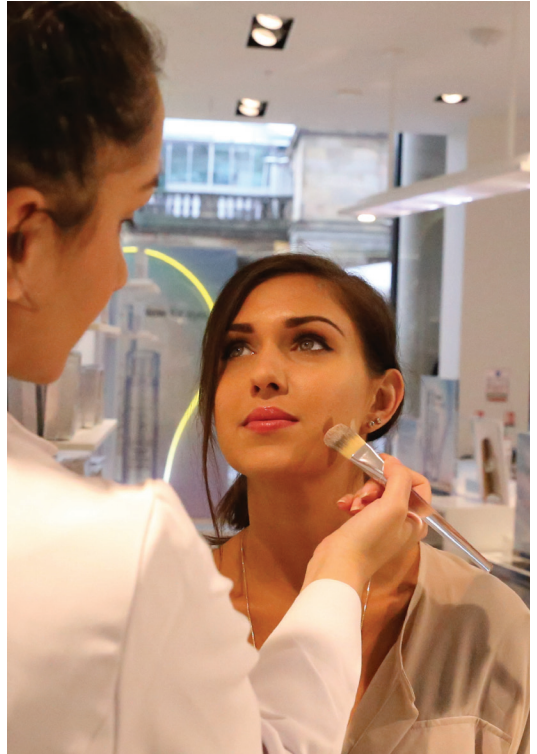
THE LIGHT DESTROYERS CAN NO LONGER MAKE US LOOK LIKE ZOMBIES. IT'S EASY TO FIND MAKEUP THAT MATCHES MY SKIN TONE, AND I'VE NEVER LOOKED AND FELT SO GOOD!

# XICATO MAN ABOLISHES GRAY LADY SKIN TONES WITH BEAUTY SERIES

**T**he true test of skin tone rendering is at the cosmetics counter, where lighting must be optimized for the often conflicting goals of providing comfort for customers, while making it possible to match cosmetic foundation colors to skin tone. Effective branding requires an environment in which customers feel good about themselves and leave with a strong positive impression. Matching is critical for ultimate customer satisfaction and to prevent wasteful and expensive returns.

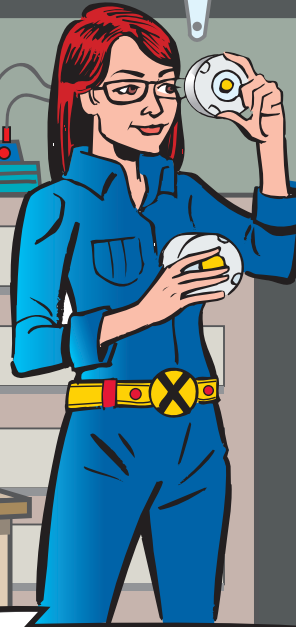
Developed in collaboration with lighting designers and leading cosmetology professionals, and backed by independent research, Xicato Beauty Series is a remarkable light source that makes people look and feel exceptional. Studies show that moods and confidence are enhanced when people feel better about themselves, and when they enjoy how they feel, they engage in their environment and stay longer. Beauty Series is designed to bring out the natural, subtle beauty of skin tones.

The Beauty Series emerged from third party research and trials that tested multiple light sources in an effort to find the one that balances the accurate color discrimination required for matching cosmetics foundations to skin tone, with the comfortable warmth of incandescent. Beauty Series was rated the best light overall. And cosmetic store managers and customers have commented on how soft and natural the light feels, while at the same time making it easier to choose and apply makeup.



# XICATO

UNBEKNOWNST TO XICATO MAN AND HIS FAITHFUL ASSISTANT, THERE IS A NEW LIGHT DESTROYER PLOTTING AGAINST THEM.



NOW THIS INTELLIGENT MODULE WILL NEVER SEE THE LIGHT OF DAY AND I CAN CONTINUE TO PREVENT WIDESPREAD ADOPTION OF INTELLIGENT LIGHTS WITH MY PROPRIETARY AND CLOSED PROTOCOLS!!

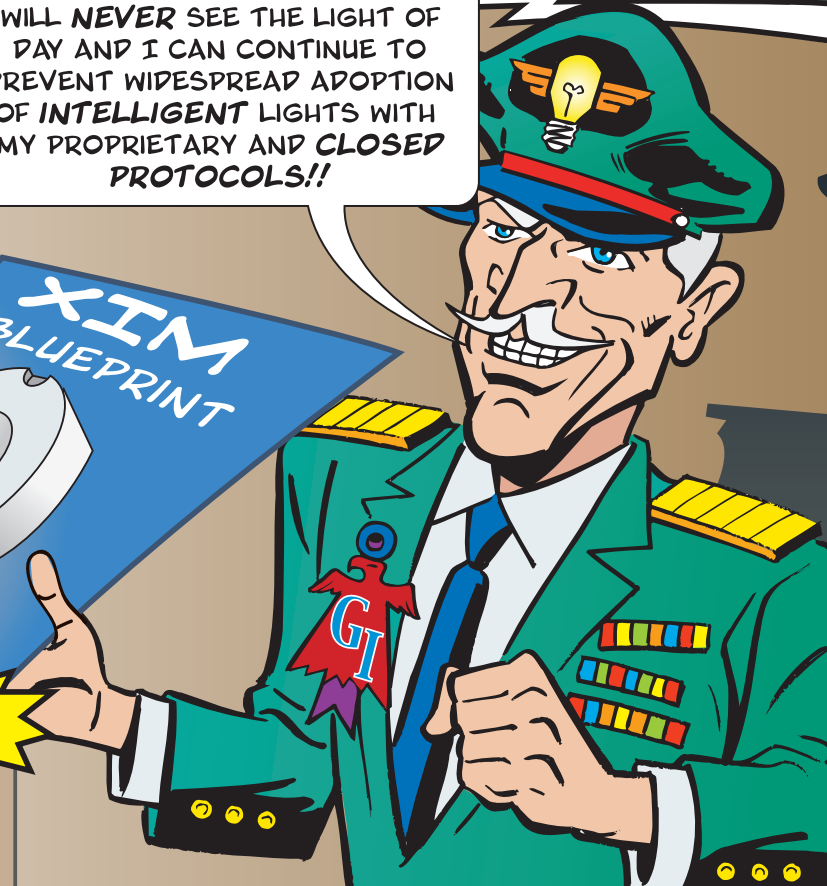
EVIL MASTERMIND GENERAL IGNORANCE HAS PLOTTED WITH HIS DIABOLICAL SIDEKICK, COPYCAT, TO STEAL THE BLUEPRINT OF THE NEW XIM AND DESTROY IT!!

Evil Meeeoow...



XIM BLUEPRINT

TO BE CONTINUED...!!



# WARNING! COPY CAT AND GENERAL IGNORANCE AT LARGE!

Lighting is a key node in the Internet of Things, and is increasingly networked, along with sensors, HVAC systems, and mobile devices, to provide new applications and customer values.

But lighting people are not trained in networking or sensor technologies, yet are frequently expected to specify control systems and sensors for client environments. They are easy prey for vendors promising “open systems” that only work with the vendors’ hardware and software.

Legacy lighting control systems are not ready for IoT, and most vendors that are embracing IoT are doing so using proprietary protocols. They force their customers to install elaborate systems consisting of expensive controllers, gateways, and switches, and hire expensive technicians to install and commission them.

Xicato believes in the IoT, but also believes that you should already have the device you need to commission, control, and manage your lighting.

For example, XIM Generation 4 (XIM Gen4) with Bluetooth Low Energy (BLE) can already talk to any recent smartphone or tablet using standard internet browsers, as well as new EnOcean energy harvesting switches.

Xicato is enabling a new, open ecosystem that allows you to fend off General Ignorance with a wireless system that is easy to install, easy to commission, easy to control and easy to manage.



# XICATO

# XICATO MAN'S ARSENAL OF WEAPONS

## MODULE RANGE

All of our modules utilize Corrected Cold Phosphor Technology®, resulting in industry-best sustained color and light output, as well as offer our unique 5 year color and lumen maintenance warranty .

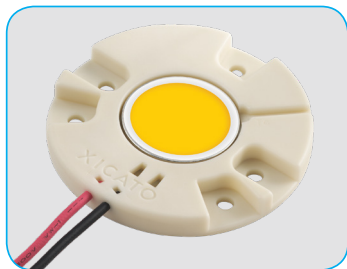
CORRELATED COLOR TEMPERATURES:  
2700K to 4000K

LIGHT TYPES:  
Standard Series, Artist Series®, Designer Series™, Vibrant Series®, Beauty Series™

EFFICACIES:  
Typically over 100+ lm/W at operating conditions, except for the high CRI versions which are 80+ lm/W

## XTM

XTM is our basic module range for accent and general lighting applications. Low cost, a Zhaga compatible form factor and flux packages up to 5000 lumen are characteristic of this range. It is available in versions with 19mm and 9mm light emitting surfaces – the latter for narrow



beams from a variety sized reflectors.

## XIM

Using the same core light source as our XTM, the XIM combines controls, communications, sensors and software. Bringing critical electronics together in the LED module offers many advantages, including affordable, flicker-free dimming, increased lifetime surety via electrical and thermal feedback, installation savings via internal DC drivers and a contribution towards accurate building services evaluation via retrievable module performance and operational data. XIM will also start the industry on a journey to smart buildings, aware of their environment and reacting to it, ensuring maximum human comfort at minimum energy consumption.

- 1-10V, DALI and Bluetooth Smart® options
- Superior deep dimming, down to 0.1% in DALI & Bluetooth, and 1% in 1-10V
- Integrated DC driver electronics
- Electrical and temperature protection
- Data retrieval possibilities, instantaneous and cumulative (hours of usage, percentage output, energy consumption case temperature, on/off cycles protection modes)
- 19mm and 9mm light emitting surfaces
- Future-proof platform for expanding capabilities

# Xicato Light Source Portfolio

## XTM WARRANTY

5 Years  
within 1 x 2 McA  
L70/B0/F0 (no failures)  
C3/B0 (no failures)

## XIM WARRANTY

Verifiable  
50,000 Hours or 7 Years  
L70/B0/F0 (no failures)  
C3/B0 (no failures)

Note:  
CRI listed as XX+ are guaranteed minimum values.  
Actual values are typically min+3.

LEGEND	XCA+XTM	+XIM
9mm LES	•	⊙
19mm LES	•	⊙

Xicato Portfolio	Lumen Output	Correlated Color Temperature			
		2700K	3000K	3500K	4000K
<b>Artist Series®</b> CIE CRI: Ra 95+, R9 90+ IES TM-30: Rf 96, Rg 103	700	⊙	⊙	⊙	⊙
	1300	⊙	⊙	⊙	⊙
	2000	•	•	•	•
	3000	•	•	•	•
	4000	•	•	•	•
<b>Beauty Series™</b> CIE CRI: Ra 95 IES TM-30: Rf 91, Rg 107	1300	⊙			
	2000	⊙			
<b>Designer Series™</b> CIE CRI: Ra 90+, R9 50+ IES TM-30: Rf 88, Rg 101	700				
	1300		⊙		⊙
	2000		⊙		⊙
	3000		⊙		⊙
	4500		•		•
<b>Standard Series</b> CIE CRI: Ra 80+ IES TM-30: Rf 78, Rg 101	700	⊙	⊙	⊙	⊙
	1300	⊙	⊙	⊙	⊙
	2000	⊙	⊙	⊙	⊙
	3000		⊙	⊙	⊙
	4000		•	•	•
<b>Vibrant Series® V80</b> CIE CRI: Ra 80+ IES TM-30: Rf 73, Rg 105	700		⊙		
	1300		⊙	⊙	
	2000		⊙	⊙	
	3000		⊙	⊙	
	4000			•	
<b>Vibrant Series® V95</b> CIE CRI: Ra 95+ IES TM-30: Rf 93, Rg 106	700		⊙		
	1300		⊙	⊙	
	2000		•	⊙	
	3000			•	
	4000			•	



## Our Partners - XIM Gen4 available from companies in red

3S Lighting	Australia	Stratas	Germany	DMA Design	UK
Efficient Lighting Systems (ELS)	Australia	Weber Lighting	Germany	Factorylux	UK
Intralux	Australia	Wila Lichttechnik	Germany	Great British lighting	UK
Xenian	Australia	Electron	Greece	Hampshire Lighting	UK
OZ Lighting	Austria	3Lights	Indonesia	High Technology Lighting	UK
XAL	Austria	BKA	Indonesia	Holders Components / Distributor	UK
Zumtobel	Austria	DUA Lighting	Indonesia	INTO Lighting	UK
Brick in the Wall	Belgium	Arcluce	Italy	Light Projects	UK
da'lux	Belgium	Artemide	Italy	Lucent Lighting	UK
Dark	Belgium	BCM	Italy	Lumenpulse	UK
Deltalight	Belgium	Cantalupi Lighting	Italy	Lumino Lighting	UK
El Rico lighting	Belgium	DGA	Italy	Luxonic	UK
Etnobel	Belgium	ECE SRL / Distributor	Italy	Luxonic Lighting	UK
Exerus Lighthology	Belgium	Euroluci	Italy	Martech	UK
Kreon	Belgium	Exenia	Italy	Mike Stoane Lighting	UK
LEDLab	Belgium	Flos	Italy	NJO Technology	UK
Luxendi / Distributor	Belgium	Forma Lighting	Italy	Optelma Lighting	UK
Orbit	Belgium	iGuzzini	Italy	Profile Lighting	UK
PSM lighting	Belgium	ILTI Luce	Italy	QE Global Lighting	UK
Royal Botania	Belgium	L&L Luce & Light	Italy	SubZero Lighting	UK
TAL	Belgium	Lifegate	Italy	Swan Lighting	UK
Tekna	Belgium	Light Contract	Italy	The Light Corporation	UK
Waco	Belgium	Macrolux	Italy	The light lab	UK
Lumini	Brazil	Martinelli Luce	Italy	Whitegoods	UK
3G Lighting	Canada	Palagi	Italy	Wila	UK
AXIS	Canada	Reggiani	Italy	ac/dc	US
Beta-Calco	Canada	Brightlite / Distributor	Japan	Architectural Lighting Works	US
CDI Canada / Distributor	Canada	EPK Corporation	Japan	Architectural Star	US
Dasal Architectural Lighting	Canada	Kobe International	Japan	Baro	US
GVA Lighting	Canada	Koizumi	Japan	B-K Lighting, Inc.	US
MP Lighting	Canada	Morikawa	Japan	CDI / Distributors	US
Senso Lighting	Canada	Seiko SCM	Japan	Con Tech Lighting	US
Viso Lighting	Canada	Yamagiwa	Japan	Cooper Lighting Lumiere	US
Lumenpulse	Canada / US	Dongmyung Lighting Co., Ltd	Korea	Cooper Lighting RSA	US
Sistemalux	Canada / US	Helem / Distributor	Korea	Creative Systems Lighting	US
3Lights	China / Hong Kong	Youngkong	Korea	Designplan	US
CDN	China / Hong Kong	Anvia	Netherlands	Dreamscape Lighting	US
CityLux	China / Hong Kong	CLS LED	Netherlands	Duraguard	US
Diamond Lighting	China / Hong Kong	Keen lichtdesign	Netherlands	Edison Price Lighting	US
Epistar	China / Hong Kong	MLS Lichtsystemen	Netherlands	Eleek Lighting	US
Forma Lighting (HK) Ltd.	China / Hong Kong	Omega light	Netherlands	Flos	US
JC Lighting	China / Hong Kong	Proliad	Netherlands	FX Luminaire	US
Jet Glory	China / Hong Kong	QClight	Netherlands	Generation Brands	US
Mage Lighting	China / Hong Kong	Quasar	Netherlands	Hevi Lite	US
NSL	China / Hong Kong	TovLED	Netherlands	HK Lighting	US
Ominus Lighting	China / Hong Kong	Van Doorn	Netherlands	iGuzzini	US
PSSK	China / Hong Kong	W van der Woude verlichting	Netherlands	Insight Lighting	US
Regal King	China / Hong Kong	Aquaform	Poland	Intense Lighting	US
Ricardo	China / Hong Kong	LUG	Poland	InterLux	US
RIO	China / Hong Kong	Organic Lighting	Poland	Kirlin	US
SAT	China / Hong Kong	EEE	Portugal	Kurt Versen	US
Tecnon	China / Hong Kong	OMS	Slovakia	Ledra Brands (Alphabet)	US
Vellnice	China / Hong Kong	Flos Architectural	Spain	LF Illumination	US
WAC	China / Hong Kong	Huxley / Distributor	Spain	Lighting Services Inc	US
Widegerm	China / Hong Kong	Lamp	Spain	Lindsley Lighting	US
Wklighting	China / Hong Kong	LED BCN	Spain	Litelab	US
Zodiac Lighting	China / Hong Kong	LedCis	Spain	Lucent	US
Unic-Light ApS	Denmark	Troll Luxiona	Spain	Lucifer Lighting	US
Arteled Light in shop	France	Aspect Lighting	Sweden	Lukas	US
Cubispot	France	Fagerhult	Sweden	Lumenoptix	US
Eclatec	France	Stockholm Lighting	Sweden	Lumetta	US
Fosfens	France	Swedlite	Sweden	Lutron	US
IPSO	France	Ventique	Sweden	Manning	US
LEC Lyon	France	Optelma by OptaLED	Switzerland	Mark Architectural Lighting	US
Novo concept	France	Slight	Switzerland	Neidhardt Lighting	US
Ozone	France	Weber Lighting	Switzerland	Nulux Inc.	US
Secante	France	Macron	Taiwan	Pathway Lighting	US
Soka	France	MSC	Taiwan	Pinnacle Lighting	US
Sonimétal	France	Rise	Taiwan	PMC	US
Sunlight	France	Agustos Teknoloji / Distributor	Turkey	Prescolite	US
Ansorg	Germany	Avolux	Turkey	Rambusch	US
Elpro	Germany	Heper Moonlight	Turkey	Specialty Lighting Industries	US
Getron	Germany	Kreon Aydınlatma	Turkey	Spectrum	US
Hess Lighting	Germany	Nasa Lighting	Turkey	Teka Illuminations	US
Holders Components / Distributor	Germany	ACDC	UK	Times Square	US
Optelma by OptaLED	Germany	Anglepoise	UK	v2 Lighting Group, Inc.	US
Ruco Licht	Germany	Compact Lighting	UK	Vantage	US
Selux	Germany	Design 360	UK	WAC Lighting	US
stageled	Germany	Designed Architectural Lighting (DAL)	UK	Winona Lighting	US
Steng Licht	Germany	Display Lighting	UK	Zumtobel	US



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