

XTM Frequently Asked Questions

Market Overview

Q Why did Xicato develop this new module?

A Xicato is simply supporting requests from luminaire manufacturers who have been using other arrays and Zhaga modules and they wanted to be able to offer superior quality of light.

Q How much is XTM?

A Roughly 50% lower price than its equivalent XSM.

Q Does XTM Cost less than XSM?

A Yes. Xicato developed a next generation Corrected Cold Phosphor technology which is used in the XTM. This new technology allows us to maintain our core values of quality of light and reliability at a lower cost.

Q What does Zhaga compatible mean?

A Zhaga is a proprietary manufacturer specification for light sources. OEMs that are using Zhaga-light sources can easily integrate the XTM into their luminaire.

Q Are you Zhaga compliant? If not, why?

A Xicato is not a member of Zhaga and therefore XTM cannot be certified. LED technology is in its infancy and being legally bound to Zhaga terms and conditions and hampered by restrictive “books” approach constrains innovation. A good example is the new XIM module for which there is no “book”.

Q Can I drop XTM into my existing fixtures like I can with Zhaga compliant sources?

A Zhaga standards change and new books are constantly created. Today, there are provisions for up to 190 permutations. Therefore, Zhaga modules of three years ago may not work as intended with Zhaga modules of today. Contrary to some people’s understanding, various Zhaga modules from different light source manufacturers cannot be switched and be expected to perform as they did in the original luminaire system. The integration of a light source into a luminaire requires care and expertise. Xicato Application Support teams work closely with each customer to help them design great luminaires that deliver quality of light.

Q I read that XTM efficacies are considerably improved. How do they compare with the prevailing efficacies in the market?

A XTM efficacies are over 100 lm/W, but to best answer this question, a technically sound metric is required as data from manufacturers can be misleading and difficult to compare. The best metric is “efficacy normalized to operating temperature at a given flux”. When this “apples to apples” comparison is done, Xicato is typically 20% higher than competitor’s products. Details can be obtained by contacting Xicato.

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Q Can we purchase just the Corrected Cold Phosphor source without the plastic ring?

The module is sold as an integrated assembly to facilitate design-in by the OEM and their delivery of reliable, high quality of light, from their luminaire. Upon request, Xicato provides the module without the plastic holder. Recommendations for mounting the module without the holder are documented in "XCA Assembly Instructions" available on www.xicato.com/support/documents-and-tools".

Technical Overview

Q What is the performance of the XTM?

A Technical details on XTM can be found on the Product Data Sheet posted to the website.

Q What drivers, optics, and heatsinks can I use?

A There are hundreds of drivers, optics, heat sinks available that are compatible with the XTM. This information can be obtained by contacting a Xicato Application Support Engineer. This information will be posted to the website in Q2.

Q Can I use this instead of XSM? Will it drop in?

A The XTM has a different mechanical, electrical, and thermal interface compared to the XSM so it cannot be substituted without some design work.

Q Can I use the same optics/drivers/heatsinks as my current Zhaga module?

A It may be possible but as with changing Zhaga modules, each case may be different. Explain the electrical interface.

A The XTM uses "flying leads"; wires permanently attached to the module itself. This provides the most secure and reliable electrical connection.

Q What about the thermal interface?

A Xicato includes a thermal interface material (thermal pad) for a more reliable interface. Most Zhaga modules do not offer this.

Q Do you have an LM-80 report?

A The LM-80 report will be available in late 2014.

Q How do I place an order?

A Samples are available in April and can be obtained by contacting a Xicato Account Manager. Production is scheduled for June. Lead times are 15 days.

Q What is the product offering?

A The XTM will initially be offered in standard series (83 CRI) and Vibrant Series (V80), in 1300lm, 2000lm, and 3000lm flux packages. 2700K, 3000K, 3500K, 4000K color temperatures will be offered. This will expand to include Artist Series as well as flux packages between 400 lumens and 5000 lumens.

Q Whose LEDs are inside?

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- A** Xicato uses LEDs from well-known and trusted manufacturers.
- Q** Is it Chip on Board?
- A** No.
- Q** Is there a list of drivers that are compatible with XTM?
- A** Yes, and they offer various options for dimming, input voltage, output current, safety certifications, etc. Contact Xicato's application team for an up to date list.
- Q** Can the XTM be "overdriven" at a current higher than what is listed on the datasheet?
- A** No. Xicato's reliability testing is performed at the drive currents and temperature listed on the datasheet. Operation above rated temperature or current voids all warranties.
- Q** Can the XTM be "under driven"? If so, what are the implications?
- A** The XTM can be driven at lower currents to achieve higher efficacies. However, the module is color tuned at the highest rated drive current, so operation at lower currents will slightly change color point. Contact Xicato for further details.
- Q** Is the XTM dimmable?
- A** Yes. Dimming however resides in the driver, so it is important to select a driver that is compatible with the specified control system.
- Q** Can the XTM be "hot plugged" or connected to an electrically live driver?
- A** No. connection to a live driver will cause electrical overstress and may permanently damage the XTM.
- Q** Is there a list of heatsinks that are compatible with the XTM?
- A** Yes. There are off the shelf heatsinks in various sizes and technologies that are compatible with XTM. Contact Xicato's application team for more details.
- Q** I am Thermally Validated luminaires. Do I have to do anything if I want to use XTM?
- A** Although XTM may be rated at the same or lower thermal class than existing products, the change in form factor and thermal interface requires you to at a minimum verify performance and temperatures are within specified limits. Re-validation may or may not be necessary. Additionally, there are new design rules for using XTM with heatsinks that have voids, holes or cutouts directly below the array. Contact Xicato's application team for more details.
- Q** Does the XTM need to have screws torqued to specific values to ensure adequate thermal contact?
- A** Yes, torque values for 2-hole and 3-hole mounting are listed on the interface control drawing.
- Q** Is there a list of optics that are compatible with the XTM?
- A** Yes. There are off the shelf optics in various sizes, beam angles, and attachment options that are compatible with XTM. Contact Xicato's application team for more details.
- Q** Will the XTM have a method for quick tool less change of optics?

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- A** The XTM will have multiple adapter rings for attaching optics. This includes a 2-hole and 3-hole adapter ring that integrates with bayonet based optics that are offered from numerous manufacturers. Contact Xicato's application team for more details.
- Q** Are the existing XSM bayonet system optics compatible with XTM?
- A** No. Xicato will be working directly with the reflector manufacturers to launch slightly modified versions that are tailored to work with XTM. Contact Xicato's application team for more details.
- Q** Will IES and LDT files be available for all compatible optics?
- A** Xicato is in the process of measuring all compatible optics with XTM. Contact Xicato's application team for more information on photometric file availability.
- Q** Are raysets available for XTM to allow secondary optics design?
- A** Yes. Raysets are available in various file formats for optical simulation. Xicato has created an application note to assist with this process. It is recommended that OEMs read this application note prior to using these rayset files.