

XLamp® XP-E2 LED Product Change Notification

Customer Name: XP-E2 Far Red and Photo Red LED Customers

PCN Reference Number: PCN-06006
Date Issued: December 23, 2022

Please be advised that Cree LED is updating the XLamp® XP-E2 Far Red and Photo Red LEDs with improved performance and efficacy, utilizing our latest technology platform which will result in better manufacturing flexibility.

Please review the additional PCN information below.

Affected Product

Table 1 provides a list of products affected by this change:

Table 1 Affected Products List

Cree LED XLamp Family	Cree LED XLamp Product	Cree LED Part Number
XP-E2	Far Red	XPEBFR-L1-XXXX-XXXXX
	Photo Red	XPEBPR-L1-XXXX-XXXXX

Description of the Change

Cree LED will be changing the typical thermal resistance, typical and maximum forward voltage, typical temperature coefficient of voltage, reverse voltage, and view angle characteristics for the affected XP-E2 LEDs. Tables 2.1 and 2.2 show the current and new values.

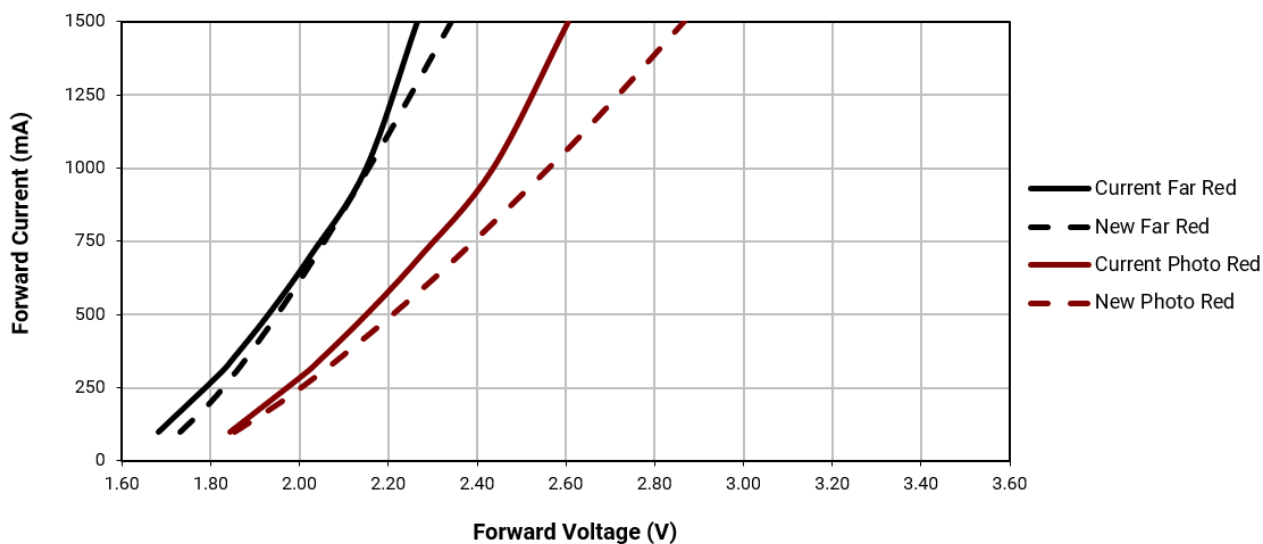
Table 2.1 LED Product Characteristics; Current Values & Estimated New Values

LED	Temperature Coefficient of Voltage (mV/°C)		Forward Voltage (V) @350mA, 25°C			
	Current Typical	New Typical	Current Typical	New Typical	Current Maximum	New Maximum
XP-E2 Far Red	-1.0	-1.3	1.85	1.88	2.4	2.2
XP-E2 Photo Red	-1.6	-1.3	2.05	2.09	2.5	2.2

Table 2.2 LED Product Characteristics; Current Values & Estimated New Values - continued

LED	Thermal Resistance, Junction to Solder Point (°C/W)		Reverse Voltage (V) @350mA, 25°C		View Angle (FWHM)	
	Current Typical	New Typical	Current	New	Current Typical	New Typical
XP-E2 Far Red	6.5	1.4	1	-10	140	130
XP-E2 Photo Red	6.5	2.5	1	-10	130	125

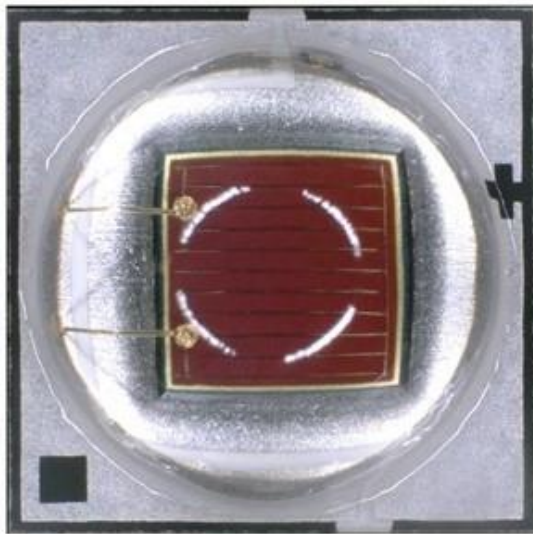
The following graph shows the improved Forward Voltage vs Current Curves.



The visual appearance of the LEDs will change. Examples of the current and new visual appearances are shown below.

Figure 1 XP-E2 Far Red Appearance Comparison

Current Appearance



New Appearance

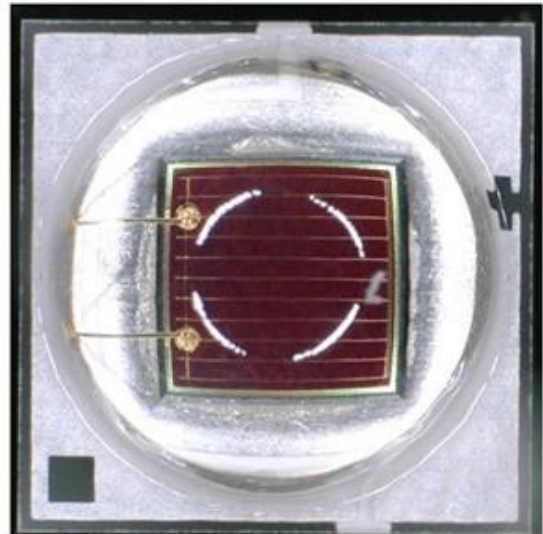
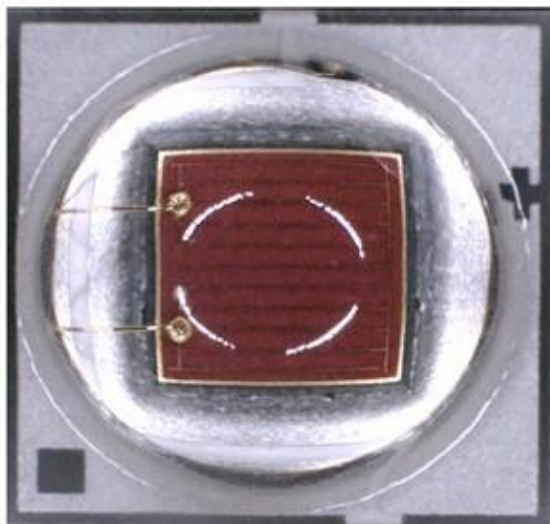
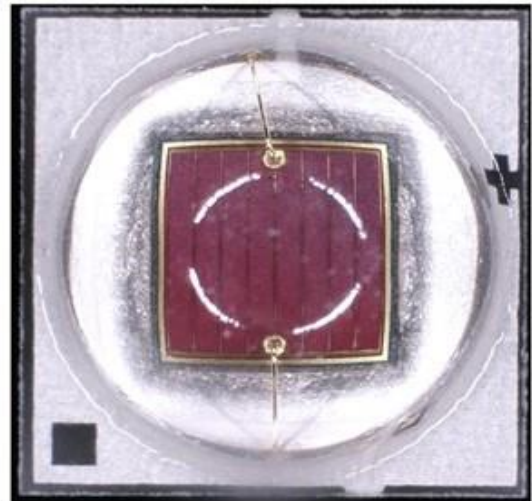


Figure 2 XP-E2 Photo Red Appearance Comparison

Current Appearance



New Appearance



Ray files for the new LEDs will be available on cree-led.com on or before March 20, 2023.

Reason for the Change

This change will upgrade the performance of XLamp® XP-E2 Far Red and Photo Red LEDs utilizing our latest technology platform. Additionally, this change will result in better manufacturing flexibility.

Change Impact on Form, Fit, Function, or Reliability

This change has no impact on the form, fit, or reliability of these LEDs beyond the changes listed above.

Key Dates

Table 3 provides estimated date for sample and initial shipments of the LEDs affected by this change. Any updates to these dates can be provided by the Cree LED contact listed in Table 3.

Table 3 Key PCN Estimated Dates

Samples Available:	January 24, 2023
Estimated Initial Ship Date:	March 22, 2023

Starting on the estimated shipment date in Table 3, customers may receive LEDs with the updated performance characteristics. Each reel will contain only LEDs with the current performance or only LEDs with the new performance characteristics. Reels of the new performance LEDs can be identified by a '2' in the last character of the bin code. The bin code is clearly identified on each packaged reel.

The XP-E2 LED datasheet available on Cree-LED.com will be updated with changes described in this PCN on or before the Estimated Initial Ship Date in Table 3.

Cree LED Contact Information

If you have any questions regarding this PCN please contact:

Table 4 PCN Contact

Contact:	Cree LED Customer Service
Contact E-Mail:	xlampsales@cree-led.com
Contact Phone:	US toll free: 1-844-273-3533 Outside the US: +1 919-313-5301
Address:	CreeLED, Inc. 4400 Silicon Dr Durham, NC 27703-8475 USA