

XB-D, XP-E2, XQ-E Red, Red-Orange Product Change Notification

Customer Name: XB-D, XP-E2, XQ-E Red,
Red-Orange Customers

PCN Reference Number: PCN-06064
Date Issued: May 13, 2024

Please be advised that Cree LED has qualified a change to XLamp® XB-D, XP-E2 and XQ-E red and red-orange LEDs and that we will begin shipping the affected product with the change 90 days after the PCN Issue Date.

Please review the additional PCN information below.

Affected Product

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

Table 1 Affected Products List

Cree LED Part Number
XBDRED-xx-xxxx-xxxxxxxxxx
XBDRDO-xx-xxxx-xxxxxxxxxx
XPEBRD-Lx-xxxx-xxxxx
XPEBRO-Lx-xxxx-xxxxx
XQERED-0x-xxxx-xxxxxxxxxx
XQERDO-0x-xxxx-xxxxxxxxxx

Description of the Change

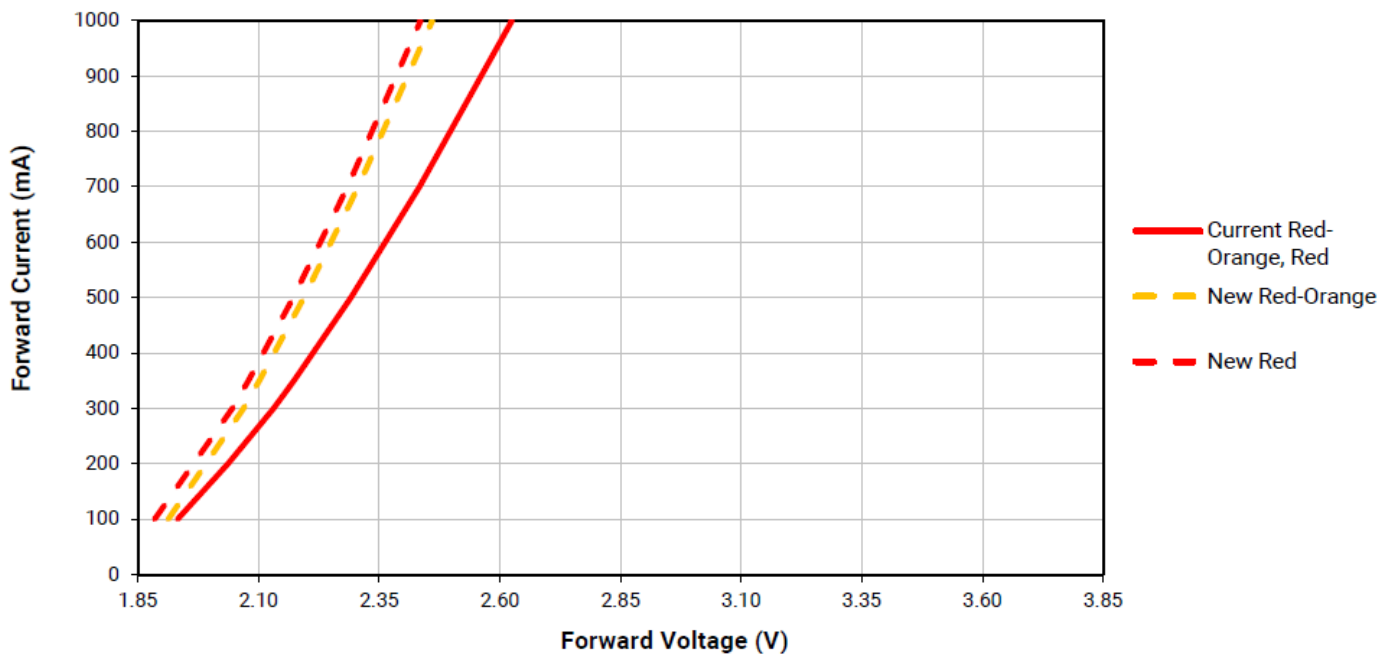
Cree LED will be improving the typical thermal resistance, temperature coefficient of voltage, and forward voltage characteristics for the affected LEDs. Table 2 shows the current and new values.

Table 2 LED Product Characteristics; Current Values & Estimated New Values

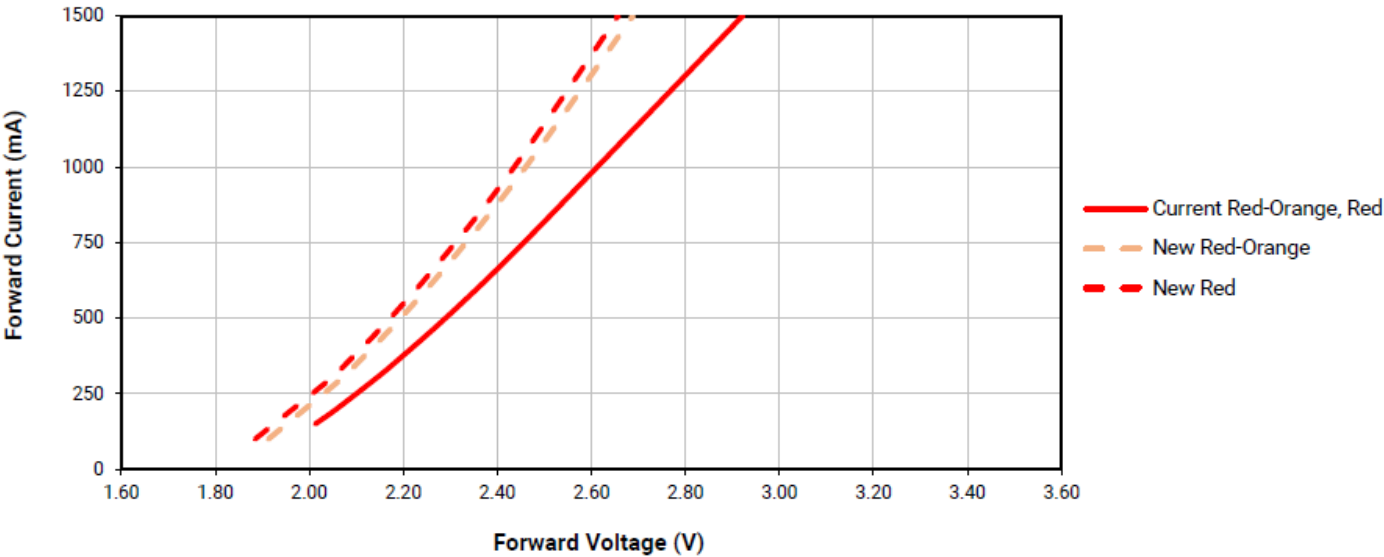
LED	Thermal Resistance, Junction to Solder Point (°C/W)		Forward Voltage (V) @350 mA, 25 °C		Temperature Coefficient of Voltage (mV/°C)	
	Current Typical	New Typical	Current Typical	New Typical	Current Typical	New Typical
XB-D Red	5	3.5	2.18	2.08	-1.8	-1.4
XB-D Red Orange	5	3.5	2.18	2.1	-1.8	-1.3
XP-E2 Red	6.5	2.5	2.18	2.08	-1.8	-1.4
XP-E2 Red Orange	6.5	2.5	2.18	2.1	-1.8	-1.3
XQ-E Red	3	2.1	2.18	2.08	-1.8	-1.4
XQ-E Red Orange	3	2.1	2.18	2.1	-1.8	-1.3

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

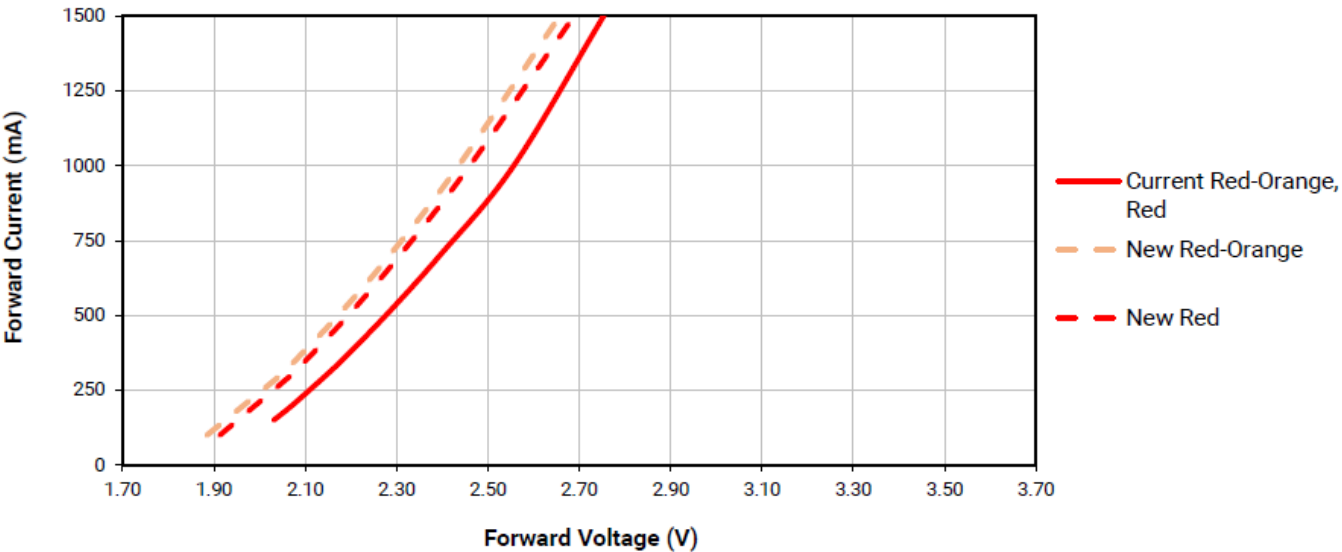
XB-D



XP-E2

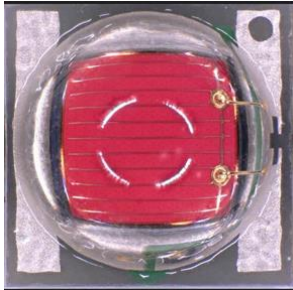


XQ-E

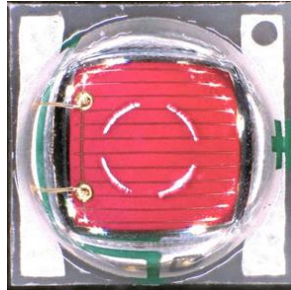


The visual appearance of the LED will be different with opposite polarity in new chip layout relative to the current package. There is no change to the backside pad dimension or polarity change for anode and cathode.

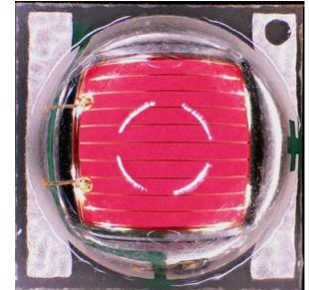
XB-D Current



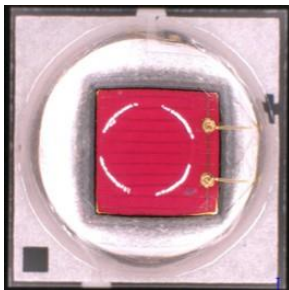
XB-D New Alternative 1



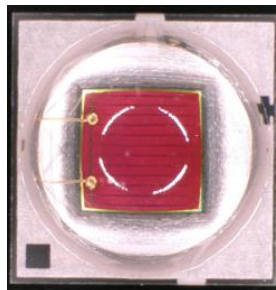
XB-D New Alternative 2



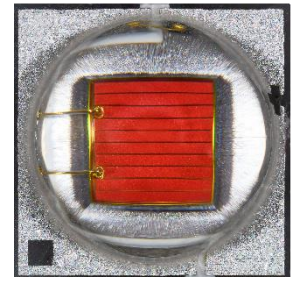
XP-E2 Current



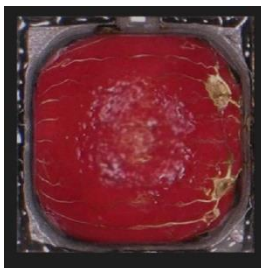
XP-E2 New Alternative 1



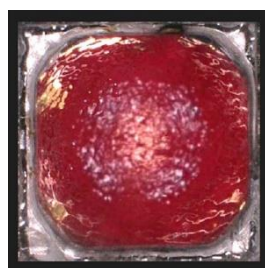
XP-E2 New Alternative 2



XQ-E Current



XQ-E New Alternative 1



XQ-E New Alternative 2



Reason for the Change

This change is being made for continuous performance and business continuity improvement.

Change Impact on Form, Fit, Function, or Reliability

This has no impact on the form, fit, function, or reliability of the above series LEDs.

Key Dates

Table 3 provides an estimated date for initial shipments of the LEDs affected by this change. Any updates to this date can be provided by the Cree LED contact listed in Table 4.

Table 3 Key PCN Estimated Dates

Estimated Initial Ship Date:	90 days from Issue Date
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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 either a 'B' or 'C' in the last character of the bin code. The bin code is clearly identified on each packaged reel.

Current and new performance LEDs will be contained in the same shipment. Customers purchasing through a distributor might be delayed seeing this change until the inventory with the current performance is depleted from distributor stock.

The current datasheets available on the Cree LED website will be updated with changes described in this PCN on or before the Estimated Initial Ship Date in Table 3.

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:	CS@cree-led.com
Contact Phone:	US toll free: 1-844-273-3533 Outside the US: +1 919-313-5301
Address:	Cree LED, Inc. 4001 E Hwy 54, Suite 2000 Durham, NC 27709 USA