

Cree® XLamp® LED Product Change Notification

Customer Name: XHP50, XHP70, XP-E2,
& XQ-E customers

PCN Reference Number: CREE-PCN-1062
Date Issued: April 3, 2020

Please be advised that Cree is making improvements to the voltage characteristics of XLamp® XHP50, XHP70, XP-E2, and XQ-E LEDs.

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 Part Number |
|----------------------------|
| XHP50A-xx-xxxx-xxxxxxxxxx |
| XHP70A- xx-xxxx-xxxxxxxxxx |
| XPEBWT-xx-xxxx-xxxxx |
| XQEAWT-xx-xxxx-xxxxxxxxxx |

Description of the Change

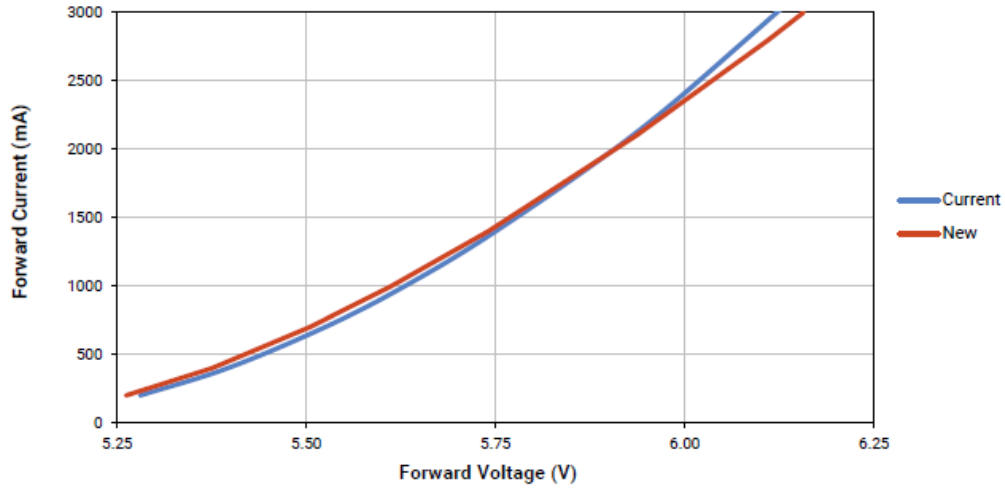
Cree will be changing the typical forward voltage and temperature coefficient of voltage characteristics for XHP50, XHP70, XP-E2, and XQ-E LEDs. Table 2 shows the current and new values.

Table 2 Current and New Values

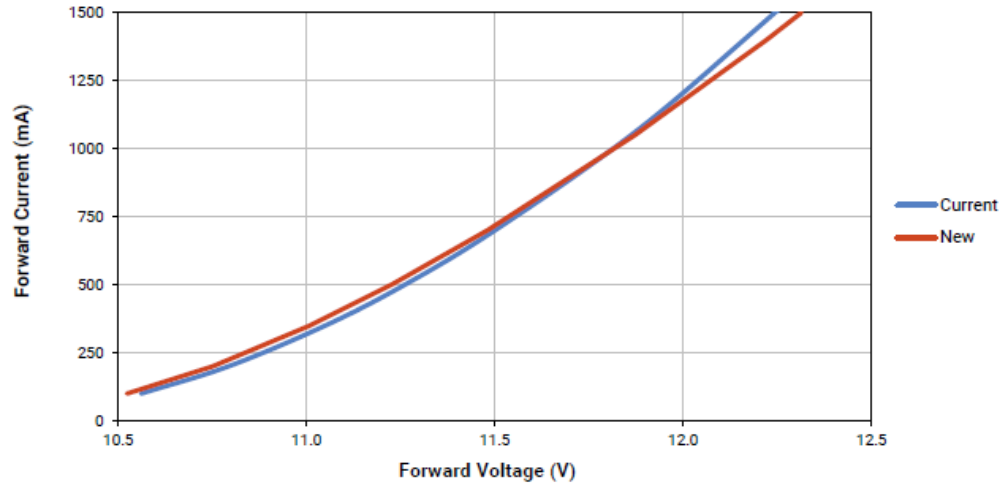
| LED | Forward Voltage | | Temperature Coefficient of Voltage | |
|------------|-------------------------|-------------------------|------------------------------------|------------|
| | Current | New | Current | New |
| XHP50 6 V | 5.75 V @ 1400 mA, 85 °C | 5.74 V @ 1400 mA, 85 °C | -4.5 mV/°C | -2.7 mV/°C |
| XHP50 12 V | 11.5 V @ 700 mA, 85 °C | 11.48 V @ 700 mA, 85 °C | -9 mV/°C | -5.4 mV/°C |
| XHP70 6 V | 5.8 V @ 2100 mA, 85 °C | 5.7 V @ 2100 mA, 85 °C | -4.25 mV/°C | -2.9 mV/°C |
| XHP70 12 V | 11.6 V @ 1050 mA, 85 °C | 11.4 V @ 1050 mA, 85 °C | -8.5 mV/°C | -5.8 mV/°C |
| XP-E2 | 2.9 V @ 350 mA, 85 °C | 2.83 V @ 350 mA, 85 °C | -2.3 mV/°C | -1.2 mV/°C |
| XQ-E | 2.9 V @ 350 mA, 85 °C | 2.8 V @ 350 mA, 85 °C | -2.3 mV/°C | -1.3 mV/°C |

The following graphs show the improved Forward Voltage vs. Current curves.

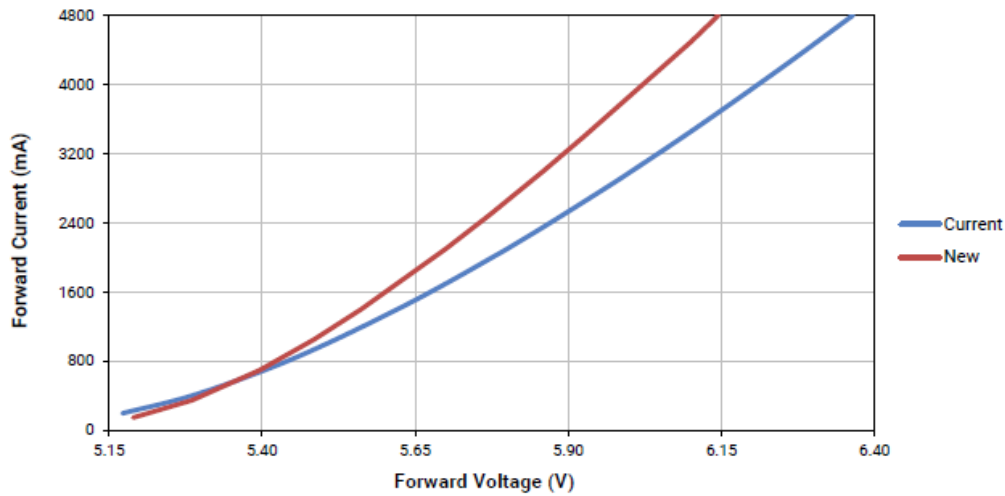
XHP50 6 V



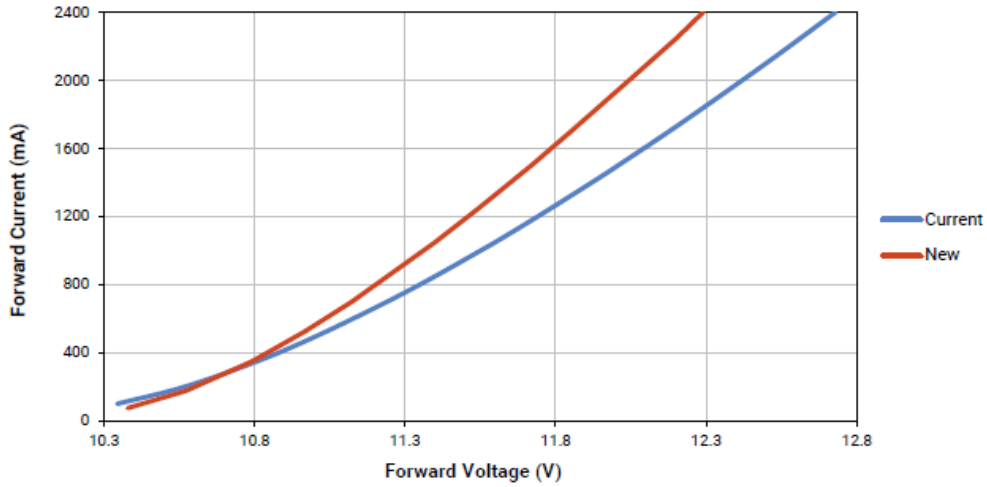
XHP50 12 V



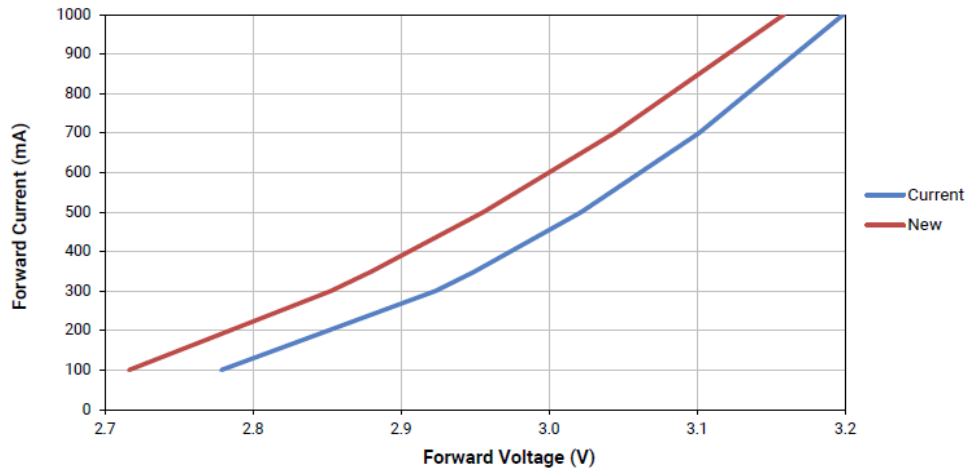
XHP70 6 V



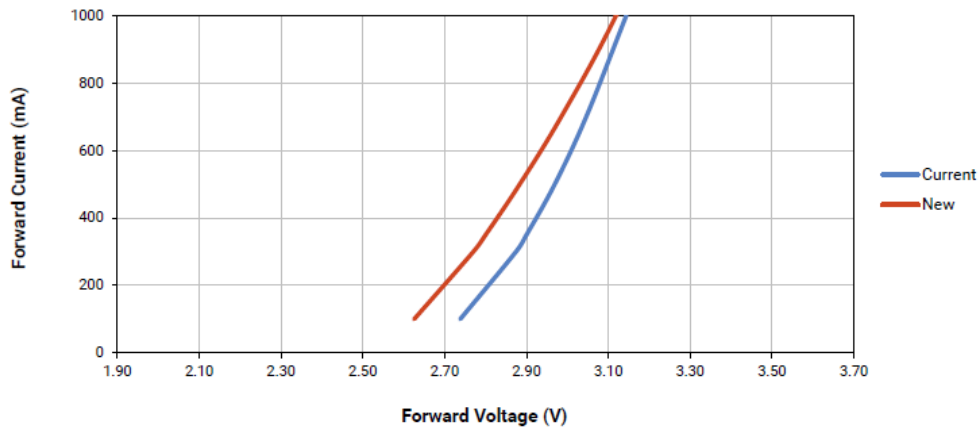
XHP70 12 V



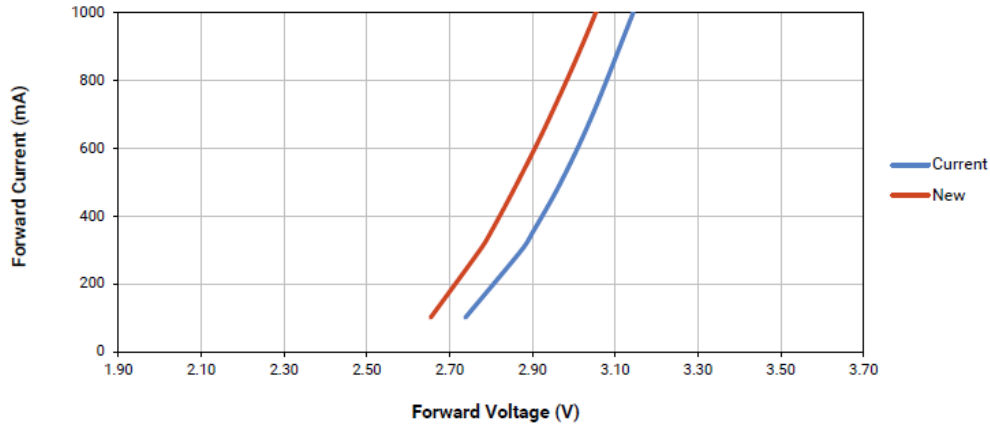
XP-E2



XQ-E High Density



XQ-E High Intensity



Reason for the Change

This change is being made to improve performance for our customers.

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 dates for initial shipments of the LEDs affected by this change.

Table 3 Estimated Initial Shipment Dates

| | |
|-------|-------------|
| XHP50 | May 1, 2020 |
| XHP70 | May 1, 2020 |
| XP-E2 | May 1, 2020 |
| XQ-E | May 1, 2020 |

Starting on the estimated shipment dates in Table 3, customers may receive LEDs with the improved characteristics. Each reel will contain only LEDs with the current performance or only LEDs with the new performance characteristics. Reels of new performance XHP50 and XHP70 LEDs can be identified by an “A” in the fifteenth alphanumeric character of the bin code. Reels of new performance XP-E2 and XQ-E LEDs can be identified by a “1” in the fourteenth alphanumeric character of the bin code. The bin code is clearly identified on each packaged reel.

Customers may receive shipments containing both the current and new performance LEDs in the same shipment until Cree’s inventory of the current performance LEDs is depleted. Customers purchasing through a distributor will be further delayed seeing this change until the inventory with the current performance is depleted from distributor stock.

Cree Contact Information

If you have any questions regarding this PCN please contact:

Table 4 PCN Contact

| | |
|-----------------------------|---|
| Cree Contact: | LEDs Customer Service |
| Cree Contact E-Mail: | xlampsales@cree.com |
| Address: | 4600 Silicon Dr. Durham, NC 27703 USA |