

# Introduction

## Purpose

- Provide an Overview of Cree's XLamp XR-E LED Component

## Objective

- Provide a quick history of the XR-E
- Detail the Features & Characteristics of XR-E
- Reviews XR-E Standard Order Codes & Bins

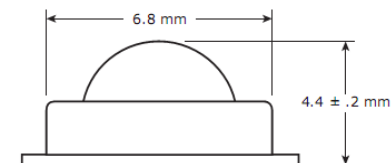
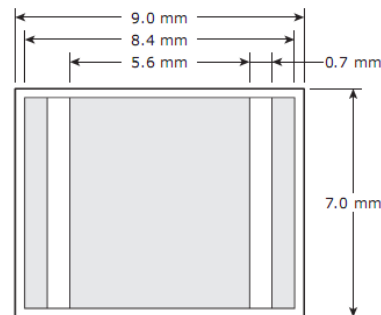
## Content

- 7 slides

## Content

- 5 Minutes

# XLamp XR-E & XR-C White



- Long history of LED innovation and reliability:

**2006**

First lighting-class cool white LED

**2007**

First lighting-class warm white LED

First LED offered in ANSI C78.377A chromaticity bins

First 100 lumen cool white LED to ship in volume

**2009**

Approved as DOE Energy Star SSL compliant for lumen maintenance

- Tens of millions of LEDs shipping per quarter
- Lighting up LED industry's most high-profile installations

# XLamp XR-E White Characteristics & Features

	Cool White	Neutral White	Warm White
CCT (K)	10,000K – 5,000K	5,000K – 3,700K	3,700K – 2,600K
Viewing Angle	90°	90°	90°
Thermal Resistance (°C/W)	8	8	8
Max Current (mA)	1000	700	700
Typical Vf @ 350 mA (V)	3.3	3.3	3.3

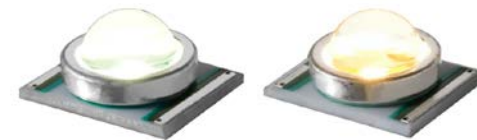
## Features

- Accepted by U.S. DOE for ENERGY STAR lumen maintenance
- Electrically neutral thermal path
- High maximum LED junction temperature: 150°C
- Reflow solderable JEDEC J-STD-020C compatible
- RoHS and REACH-compliant



# XLamp XR-C/XR-E White

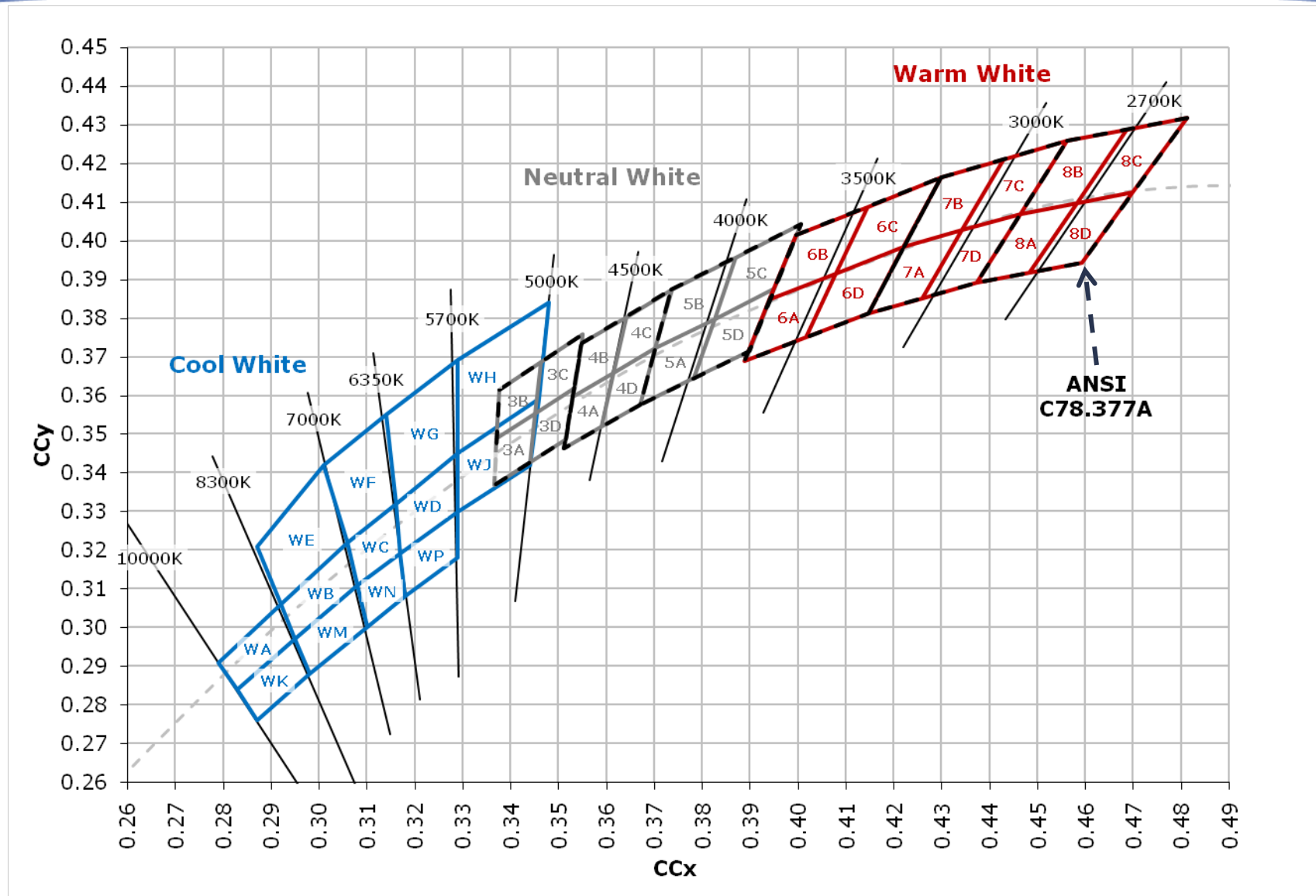
## Standard Order Codes



Min. Flux Bin	10,000K – 5,000K	5,000K – 4,200K	4,200K – 3,500K	3,500K – 3,200K	3,200K – 2,900K	2,900K – 2,700K
	01, 02, 03, ...	E3, F4, E4	F5, E5	F6, E6	F7, E7	F8
						XR-E
Q5 (D)	107					XR-E & XR-C
Q4 (C)	100	100				XR-C
Q3 (B)	93.9	93.9	93.9			
Q2 (A)	87.4	87.4	87.4	87.4		
P4 (9)	80.6	80.6	80.6	80.6	80.6	
P3 (8)	73.9	73.9	73.9	73.9	73.9	73.9
P2 (7)		67.2	67.2	67.2	67.2	67.2
N4 (6)			62.0	62.0	62.0	62.0
N3 (5)				56.8	56.8	56.8
N2 (4)						51.7

Minimum luminous flux @ 350 mA (lm)

# XLamp XR-E/XR-C Chromaticity Bins



# XLamp XR-E – Summary

- Cree XLamp XR-E was the first Lighting Class cool white LED introduced in 2006
- Cree XLamp XR-E has over five years of innovation and performance history and is installed in millions of lighting installations across the world
- XR-E offers the features and characteristics you have come to expect from Cree XLamp LEDs
- XR-E is available in color temperatures ranging from 2,700 Kelvin to 10,000 Kelvin



PORTABLE



RESIDENTIAL



OFFICE



RETAIL



ARCHITECTURAL



OUTDOOR

**LED lighting: Energy efficient & planet friendly.**

**Cree. Leading the LED lighting revolution.**

Join Cree's LED lighting revolution. We invite you to see how our high-performance, high-efficiency LEDs are lighting up the world.

**CREE** 