Personal & Portable Lighting

LED light has taken the personal and portable lighting markets by storm! Cree believes strongly that many traditional light bulbs will eventually be replaced by LED lighting. Nowhere is this revolution more apparent than in the personal and portable lighting markets. LEDs have swept the market for several important reasons.

- *LEDs are more efficient than traditional portable light bulbs*. Incandescent bulbs convert less than 10% of power consumed to light. Because of their efficiency, LEDs extend battery life or allow the use of smaller batteries.

- *LED light sources have a much longer lifetime than traditional portable light bulbs*. Incandescent portable light bulbs have lifetimes as short as 20 hours. LED lifetimes are typically 50,000 hours.

- *LED operational lifetime is not affected by shock or vibration damage*. Shocks and vibration shorten the lifespan of a traditional light bulb.

- *LED light sources give better light-beam uniformity than conventional light sources*. LEDs simplify optical-system design.

XLamp® XR-E and XR-C LEDs in Portable Lighting

Cree's new XLamp XR-C and award-winning XR-E LEDs have several key features that make them ideal light sources for portable and personal lighting applications:

HIGH LIGHT OUTPUT
With 80 lumens typical @ 350 mA and output up to 210 lumens @ 1000 mA, XLamp XR-E LEDs are the brightest white power LEDs available! With narrow angle TIR optics, XLamp XR-C LEDs can put out around 50% more peak light intensity than XLamp XR-E for maximum LED light throw.

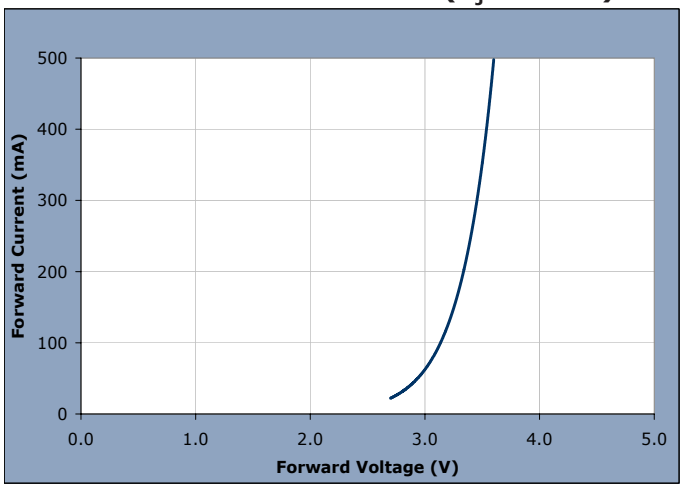
SMALL OPTICAL SOURCE SIZE
Both XLamp XR-E and XR-C LEDs have small optical source size, which makes optical design much easier.

VASTLY IMPROVED COLOR UNIFORMITY
XLamp XR-E and XR-C LEDs offer a significant improvement in color uniformity from previous generations of XLamp LEDs. The beam output is a white that is pure from all angles and against all surfaces.

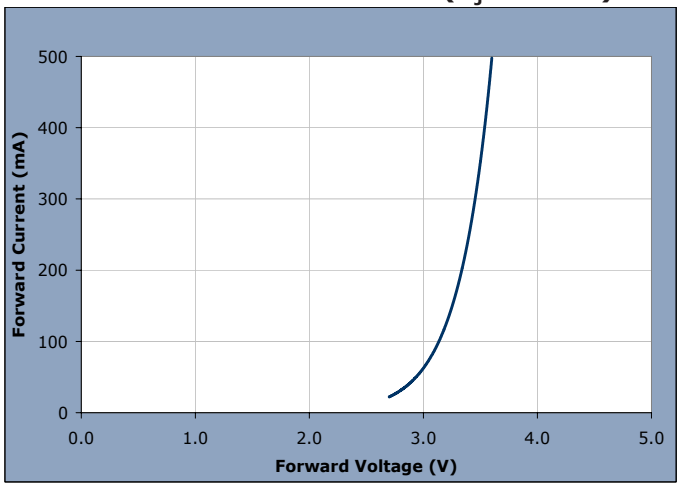
OUTSTANDING THIRD-PARTY OPTICS AND DRIVER SUPPORT

All XLamp 7090 LEDs have the same broad support from optics and LED driver companies. We can help find a solution for any personal or portable lighting application!

XLamp XR-E
Electrical Characteristics (T_J = 25˚C)



XLamp XR-C
Electrical Characteristics (T_J = 25˚C)



A: ON/OFF Switch, **B**: Mechanical Spring, **C**: Battery, **D**: Driver, **E**: PCB/Thermal, **F**: LED, **G**: Secondary Optic

Characteristic	Unit	XLamp XR-E	XLamp XR-C
Typical Luminous Flux @ 350 mA	lm	80	60
Typical Luminous Flux @ 500 mA	lm	-	78
Typical Luminous Flux @ 1000 mA	lm	176	-
Maximum LED Junction Temperature	˚C	145	145
Thermal Resistance, junction to solder point	˚C/W	8	12
Viewing Angle	degrees	90	90
Maximum DC Forward Current	mA	1000	500

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