



# XLamp<sup>®</sup> XHP70.3 HI Fresnel Lens Spotlight Reference Design

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## XHP70.3 HI Fresnel Lens Spotlight Reference Design Overview

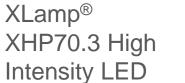
Goal: Demonstrate the excellent optical performance of the XLamp<sup>®</sup> XHP70.3 High Intensity LED in a high-lumen portable application

3D printed housing

Custom controls & interface

Rechargeable lithium battery





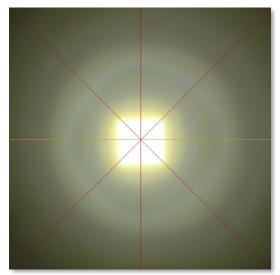


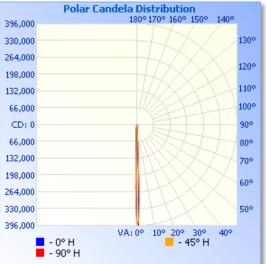


155 mm OD LEDIL FCP13895\_SEANNA-A TIR + Fresnel combination



## XHP70.3 HI Fresnel Lens Spotlight Reference Design Results



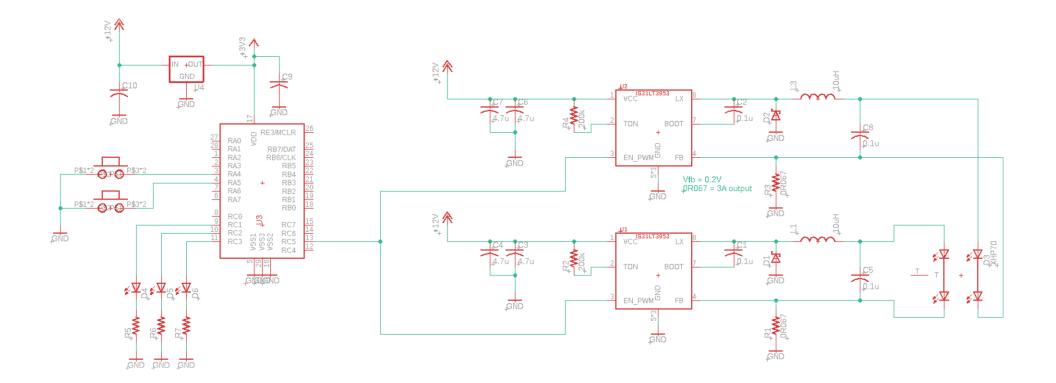


	As Measured	Estimated (Max Current)
LED	XHP70.3 HI 12V	
CCT (K)	5600K	
CRI	70	
Beam Angle	4.4°	
Candela/Lumen	123.3	
Max Δu'v'	0.025	
LED Current	2.4 A	3.6 A
Lum Flux (lm)	3212	~4,200
Peak Candela	395,984	~516,000
ANSI FL-1 Throw	1,259 m 0.78 miles	1,437 m 0.89 miles



#### XHP70.3 HI Fresnel Lens Spotlight Reference Design Electronics

- LED Driver: IS31LT3953, quantity 2 (LED used in 2x 6V configuration)
- Microcontroller: PIC18F26K40
- Battery: Samsung INR18650-25R, quantity 3 (3S configuration, 11.1V nominal)





#### Application Photos – 360 m Test





Measure distance

Click on the map to add to your path

Total distance: 1,182.35 ft (360.38 m)

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## Application Photo – 1,200 m Test





## Application Photo – 1,200 m Test







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