

Convoy M3-C Torch Retrofit with XLamp® XHP70.3 HI LED



Convoy MC-3 Torch Summary

Goal: Highlight the ability of the XLamp XHP70.3 LED to boost candela & throw in an existing design

- The Convoy brand is well known amongst flashlight enthusiasts
- The MC3 uses a XLamp XHP70.2 LED off the shelf available in a variety of color temperatures
- Utilizes an orange-peel type optical reflector
- Compatible with 26650 or 18650 battery cell options
- Built-in USB-C charging port

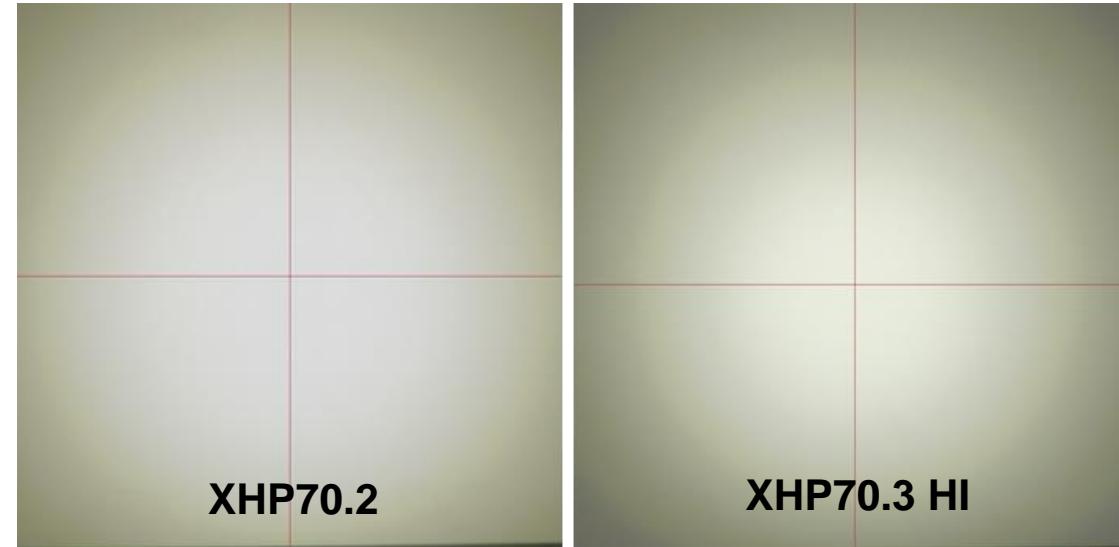


Convoy MC-3 Torch: XHP70.2 (stock) to XHP70.3 HI (retrofit)



Initial beam shot comparison

	XHP70.2 (stock)	XHP70.3 HI (retrofit)
Test Current (A)	2.1 A	2.1 A
Luminous Flux (lm)	1611	1574
CCT (K)	5500K	5600K
CRI	68	70
Beam Angle	19°	14°
Peak Candela	14,389	24,276
Candela/lumen	8.93	15.42
Peak Cd @ max current	27,339 (4.8A)	63,117 (7.2A)
Lf @ max current	3061 (4.8A)	4100 (7.2A)
Max Throw (calculated) (m)	331 m	502 m
Max delta u'v'	0.019	0.014



* beam projections taken at 2.1A with Radiant Imaging Colorimeter

70% improvement in peak candela at **matched** drive current
 72% improvement in candela per lumen, tighter beam angle
 131% improvement in peak candela at **max** drive current
 52% increased throw
 Improved color over angle

Application Photos – XHP70.3 HI Retrofit in Convoy MC-3 Torch



* Scoreboard photo taken with Nikon D7100, 1/8s, F3.8, ISO100, distance of 50m

* Woods photo taken with a Nikon D7100, 30s, F8 and ISO100, distance of 15m

Application Photos – XHP70.3 HI Retrofit in Convoy MC-3 Torch



* Rings photo taken with Nikon D7100, 18s, F/4, ISO100, distance of 60m

* Art photo taken with a Nikon D7100, 10s, F/10 and ISO100, distance of 30m

Parts List

Part	Details / P/N
Convoy MC-3 Torch	SKUG74277-SR1LP
XHP70.3 HI LED mounted on star board	E2 color, P2 brightness, 70 CRI
26650 Battery Cell, 3.7V, 5000mAh	Available from various retailers



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