



XLAMP® PORTABLE LEDs

- High-power LEDs that deliver leading ANSI FL 1 lumens and beam distance
- Industry's first portable-specific overdrive current testing enables higher maximum lumen outputs
- Excellent customer support and product quality
- Most valuable portable LED brand for over 10 years

April 2023 (FS15R8)

LUMEN-OPTIMIZED LEDs

Lumen is a measure of luminous flux, which is light output emitted in all directions.

		XLamp LED	Footprint (mm)	Voltage Class	Lumens @ Max Current ¹ (lm)	Lumens @ Overdrive Current ² (lm)	Overdrive Flux Bin Tested	Light Source Size ³ (mm)
		XT-E HE	3.45	3V	511 @ 1.5A	762 @ 3.0A	S4	2.0 x 2.0
		XP-G3		3V	776 @ 2.0A	1,316 @ 4.5A	S7	2.3 x 2.3
		XP-L2		3V	1,172 @ 3.0A	1,858 @ 6.0A	W3	3.0 x 3.0
		XM-L3	5.00	3V	1,526 @ 5.0A	1,967 @ 6.1A	U5	3.0 x 3.0
		XHP50.3 HD		3V 6V	2,067 @ 6.0A 2,067 @ 3.0A	3,066 @ 10A 3,066 @ 5.0A	K2	3.9 x 3.9
		XHP70.3 HD		6V	4,857 @ 7.2A	N/R ⁴	---	5.3 x 5.3

BEAM-DISTANCE-OPTIMIZED LEDs

Beam distance is the distance from the flashlight where illuminance is equivalent to a full moon on a clear night.

		XLamp LED	Footprint (mm)	Voltage Class	Lumens @ Max Current ¹ (lm)	Lumens @ Overdrive Current ² (lm)	Overdrive Flux Bin Tested	Light Source Size ³ (mm)
		XD16 Premium	1.6	3V	642 @ 2.0A	856 @ 3.0A	S3	1.4 x 1.4
		XE-G	2.05 x 1.6	3V	711 @ 3.0A	N/R ⁴	---	1.3 x 1.3
		XP-P	3.45	3V	614 @ 3.0A	N/R ⁴	---	1.0 x 1.0
		XP-L HI		3V	992 @ 3.0A	1,399 @ 5.0A	V3	2.1 x 2.1
		XHP50.3 HI	5.00	3V 6V	1,929 @ 6.0A 1,929 @ 3.0A	2,752 @ 10A 2,752 @ 5.0A	J4	3.0 x 3.0
		XHP70.3 HI		6V	4,523 @ 7.2A	N/R ⁴	---	3.9 x 3.9

1. Simulated light output with highest available flux bin, maximum rated current, steady-state operation at T_c = 85°C (≤3.45 mm footprint) or T_c = 105°C (≥5.0 mm footprint)
2. Measured light output with stated flux bin after 30 seconds of operation. LED was mounted on standard MCPCB starboard (2 W/mK) with good thermal management. More lumens at higher current may be achieved with excellent thermal management. Conversely, poor thermal management may result in lower lumen output than the values stated. Overdrive performance ratings are provided for reference in portable lighting applications only and are not a specification.
3. Apparent optical source size as seen by the optic. In general, smaller source sizes will yield smaller beam angles through an optic. These values are not LED die sizes.
4. Running this LED above maximum current is not recommended since peak lumen output occurs at maximum current.

CRI & CCT OPTIONS

● = 70 CRI min/typ | ◆ = 80 CRI min | ○ = 90 CRI min | + = 95 CRI min available

CCT	XT-E High Eff.	XP-G3 Standard	XP-G3 S Line	XP-L2	XM-L3	XD16 Premium	XE-G	XP-P	XP-L HI	XHP50.3* HD & HI	XHP70.3* HD & HI
6500K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
5700K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
5000K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
4000K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
3500K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
3000K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
2700K	●◆○+	●◆○+	●○+	●◆○+	●○+	●◆○+	●◆○+	●◆○+	●○+	●◆○+	●◆○+
2200K	●◆○+	●○+	●○+	●○+	●○+	●◆○+	●◆○+	●○+	●○+	●○+	●○+

* XHP50.3 HD & HI 3V version only available in 5000K+ CCT and <70 CRI

CRI & CCT EXPLAINED

Correlated color temperature (CCT) describes the apparent tint of white light to humans with a single number.

- CCTs ≥ 5000K have a blue tint (“cool”)
- CCTs 3500-4000K have little color tint (“neutral”)
- CCTs ≤ 3000K have an orange tint (“warm”)

Color rendering index (CRI) measures how much a test light source distorts the color of objects illuminated by that source, when compared against the same colors being illuminated by a known-good light source of the same CCT.

- Lights with higher CRI values (closer to 100) will have less color distortion than lights with lower CRI values

LEDs with CCT ≥ 4000K and lower CRI will be brighter and more efficient than LEDs in warmer CCTs and high CRI.

PORTFOLIO: LUMEN DENSITY & LUMEN OUTPUT

