

Cree High Power Starboards Data Sheet

Power of Cree in Standard and Custom LED Starboards

Illumination Accelerated

Evaluate Cree's latest LEDs
Full range of white and color options
Easy to use setup
Prototype faster, test multiple options
Flexibility for easy integration

Detailed Labeling



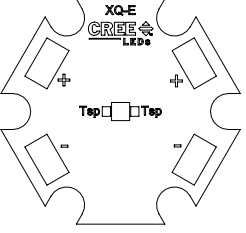
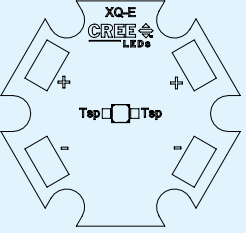
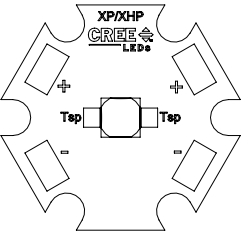
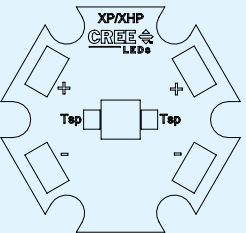
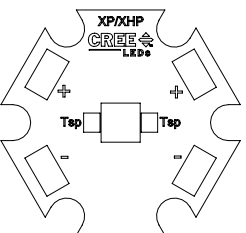
Built with proven Cree XLamp LED technology, the Cree star board series from Opulent North America delivers high efficacy across a range luminous flux options in a small, easy to use setup. These starboard configurations are tested, ensuring optimal performance. Star boards allow for flexibility, rapid prototyping and sampling of the latest LEDs in an easy to use footprint.

Features and Benefits

- Cree SC5 Technology available
- 70 and 80 CRI available
- 2700-6500K CCT
- Metal Core PCB for optimal thermal dissipation
- Configurable with a variety off-the-shelf optics

Cree High Power Starboards

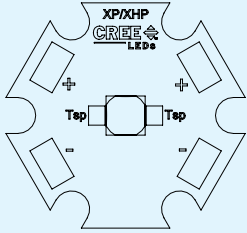
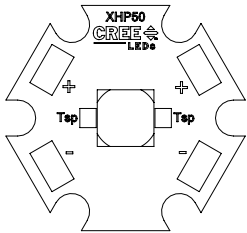
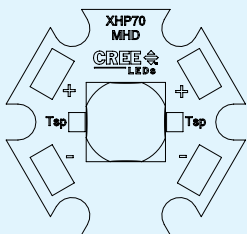
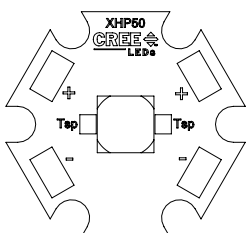
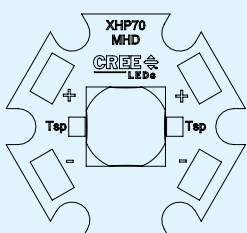
White Product Selection Guide

Link to Cree Datasheet	Part Number	CCT	CRI	Luminous Flux (lm)	
	XQ-E HI	XQEAWT-H0-0000-00000HDE8-SB01	2700K	80	93.9
	XQ-E HI	XQEAWT-H0-0000-00000LEE5-SB01	4000K	75	114
	XQ-E HI	XQEAWT-H0-0000-00000BFE1-SB01	6500K	70	122
	XQ-E HD	XQEAWT-00-0000-00000HBE8-SB01	2700K	80	93.9
	XQ-E HD	XQEAWT-00-0000-00000HDE5-SB01	4000K	80	107
	XQ-E HD	XQEAWT-00-0000-00000BFE1-SB01	6500K	70	122
	XHP35 HD	XHP35A-00-0000-0D0BD430E-SB01	3000K	70	550
	XHP35 HD	XHP35A-00-0000-0D0BE240E-SB01	4000K	70	590
	XHP35 HD	XHP35A-00-0000-0D0BE450E-SB01	5000K	70	635
	XHP35 HI	XHP35A-H0-0000-0D0BC230E-SB01	3000K	70	440
	XHP35 HI	XHP35A-H0-0000-0D0BC440E-SB01	4000K	70	475
	XHP35 HI	XHP35A-H0-0000-0D0BC450E-SB01	5000K	70	475
	XP-L HI	XPLAWT-H0-0000-000HU40F8-SB01	2850K	80	340
	XP-L HI	XPLAWT-H0-0000-000BV20E5-SB01	4000K	70	400
	XP-L HI	XPLAWT-H0-0000-000BV20E1-SB01	6500K	70	400

Product performance at binning current $T_c = 85^\circ\text{C}$.
CRI and Flux values are minimum. Please reference the Bin Code marking on the star board back side for actual values.

Cree High Power Starboards

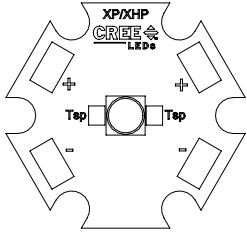
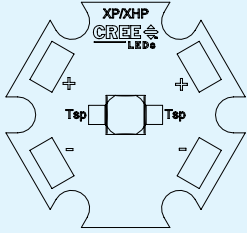
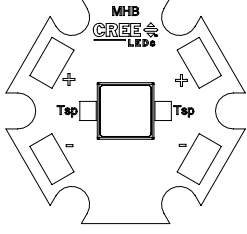
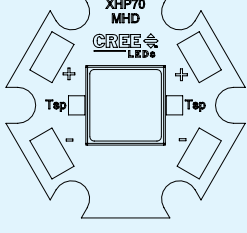
White Product Selection Guide

Link to Cree Datasheet	Part Number	CCT	CRI	Luminous Flux (lm)	
	XP-L HD	XPLAWT-00-0000-000HU60E8-SB01	2700K	80	380
	XP-L HD	XPLAWT-00-0000-000BV50E5-SB01	4000K	70	460
	XP-L HD	XPLAWT-00-0000-0000V60E1-SB01	6500K	65	480
	XHP50	XHP50A-00-0000-0D0BH430E-SB01	3000K	70	970
	XHP50	XHP50A-00-0000-0D0BJ440E-SB01	4000K	70	1120
	XHP50	XHP50A-00-0000-0D0BJ450E-SB01	5000K	70	1120
	XHP70	XHP70A-00-0000-0D0BM430E-SB01	3000K	70	1485
	XHP70	XHP70A-00-0000-0D0BN240E-SB01	4000K	70	1590
	XHP70	XHP70A-00-0000-0D0BN450E-SB01	5000K	70	1710
	XHP50.2 - New	XHP50B-00-0000-0D0HH227G-SB01	2700K	80	900
	XHP50.2 - New	XHP50B-00-0000-0D0BJ440E-SB01	4000K	70	1120
	XHP50.2 - New	XHP50B-00-0000-0D0BJ40CB-SB01	6500K	70	1120
	XHP70.2 - New	XHP70B-00-0000-0D0HM427G-SB01	2700K	80	1485
	XHP70.2 - New	XHP70B-00-0000-0D0BP240E-SB01	4000K	70	1830
	XHP70.2 - New	XHP70B-00-0000-0D0BN40E1-SB01	6500K	70	1710

Product performance at binning current $T_c = 85^\circ\text{C}$.
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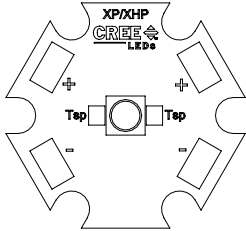
White Product Selection Guide

Link to Cree Datasheet	Part Number	CCT	CRI	Luminous Flux (lm)	
	XP-G3 - New	XPGDWT-H1-0000-00H8E-SB01	2700K	80	139
	XP-G3 - New	XPGDWT-B1-0000-00L5E-SB01	4000K	70	164
	XP-G3 - New	XPGDWT-01-0000-00LE1-SB01	6500K	70	164
	XP-L2 - New	XPLBWT-00-0000-000HV227G-SB01	2700K	80	400
	XP-L2 - New	XPLBWT-00-0000-000BV640E-SB01	4000K	70	480
	XP-L2 - New	XPLBWT-00-0000-000BV50CB-SB01	6500K	70	460
	MHB-B - New	MHBBWT-0000-000C0HC427G-SB01	2700K	80	475
	MHB-B - New	MHBBWT-0000-000C0BE240E-SB01	4000K	70	590
	MHB-B - New	MHBBWT-0000-000C0BE265E-SB01	6500K	70	590
	MHD-G - New	MHDGWT-0000-000N0HK427G-SB01	2700K	80	1290
	MHD-G - New	MHDGWT-0000-000N0BM440E-SB01	4000K	70	1485
	MHD-G - New	MHDGWT-0000-000N0BN265E-SB01	6500K	70	1590

Product performance at binning current $T_c = 85^\circ\text{C}$.
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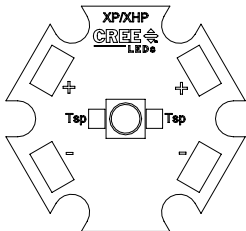
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Color Product Selection Guide



Link to Cree Datasheet	Part Number	Color	DW/Bin	Luminous Flux (lm)
XPEBAM	XPEBAM-L1-0000-00901-SB01	Amber	585-595	80.6
XPEBBL	XPEBBL-L1-0000-00301-SB01	Blue	465-485	45.7
XPEBGR	XPEBGR-L1-0000-00G01-SB01	Green	520-535	130
XPEBGR	XPEBGR-L1-0000-00F03-SB01	Green	525-535	122
XPEBRD	XPEBRD-L1-0000-00901-SB01	Red	620-630	80.6
XPEBPA	XPEBPA-L1-0000-00D01-SB01	PC Amber	Y2	107

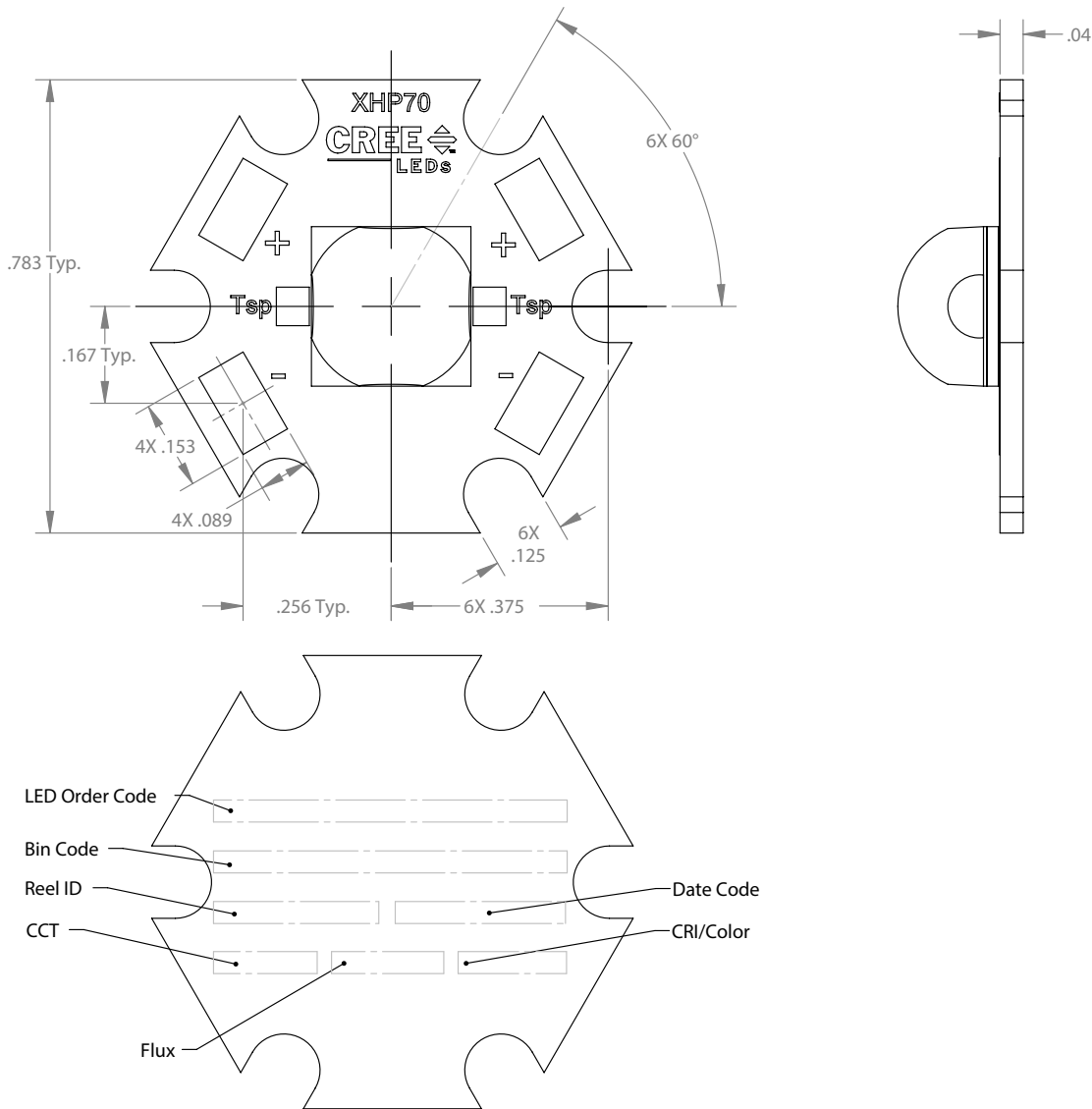
Specialty Color Product Selection Guide



Link to Cree Datasheet	Part Number	Color	DW/Bin	Radiant Flux (mW)
XPEFAR	XPEFAR-L1-0000-00601-SB01	Far Red	720-740	210
XPEPHR	XPEPHR-L1-0000-00901-SB01	Photo Red	650-670	350
XPEBRY	XPEBRY-L1-0000-00R01-SB01	Royal Blue	450-465	625
XPEBRD	XPERDO-L1-0000-00A01-SB01	Red Orange	610-620	87.4

Product performance at binning current $T_c = 85^\circ\text{C}$.
Flux values are minimum. Please reference the Bin Code marking on the star board back side for actual values.

Opulent North America Starboard Mechanical



MPCB Fabrication

- 2oz copper
- 5052 Al
- White solder mask
- Lead free Immersion Gold

Intended for connection to a class 2 power source with a maximum operating voltage of 50 Vdc.

Maximum Ratings

See Cree's Datasheets [HERE](#)

Max Solder Point Verse Drive Current

See Cree's Datasheets [HERE](#)

Thermal Interface Guidance

Current derating must be observed to maintain junction temperature below the maximum, see Cree's application note for additional information on thermal management guidelines [HERE](#)