

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



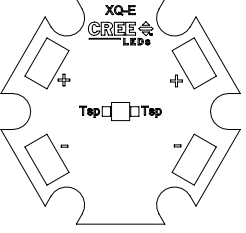
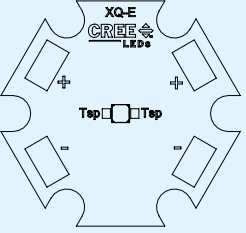
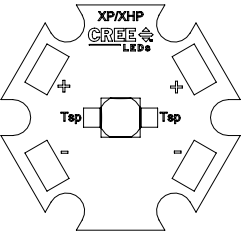
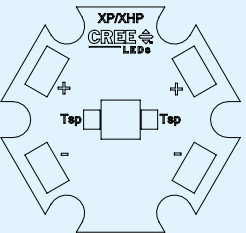
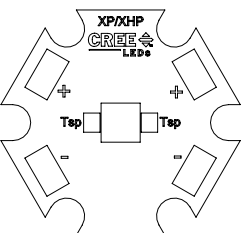
Built with proven Cree XLamp LED technology, the Cree star board series from Opulent North America delivers high efficacy across a range luminous flux options in a small, easy to use setup. These starboard configurations are tested, ensuring optimal performance. Star boards allow for flexibility, rapid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

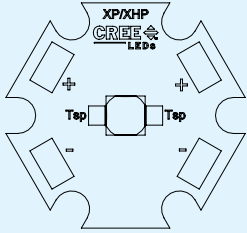
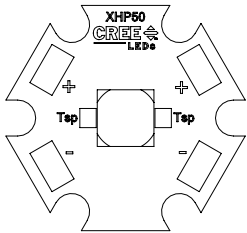
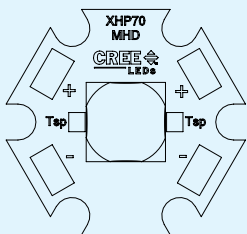
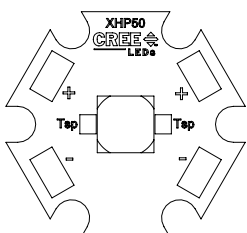
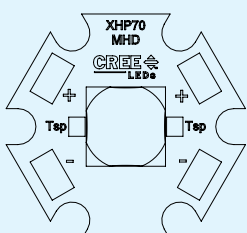
White Product Selection Guide

| 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.

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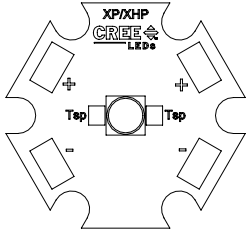
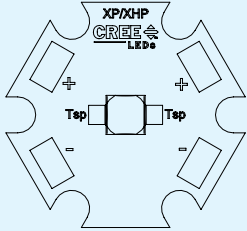
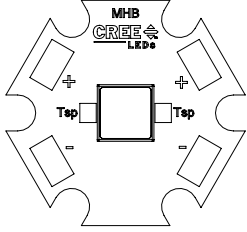
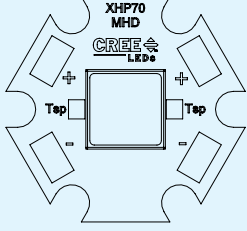
White Product Selection Guide

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

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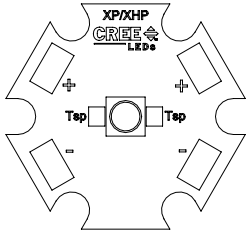
White Product Selection Guide

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

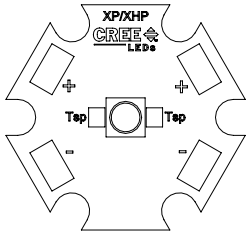
Cree High Power Starboards

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 |
| 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.

MCPCB 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](#)

Opulent North America Starboard Mechanical

