

## Cree High Power Starboards

Power of Cree in Standard and Custom LED Starboards

## Data Sheet

Version 1.3

### Lean & Fast. Made Smarter.

**Superior Performance** – Stay current with the highest intensity LEDs

**Design Faster** – Use industry standard starboards to shorten development time

**Maximum Flexibility** – Design to your exact specifications using NewEnergy starboards

**Rapid Innovation** – Work with NewEnergy on your custom solution

### Primary Applications



Prototyping

Flashlight

Downlight

Architectural

Directional

Horticulture

Portable

Vehicle

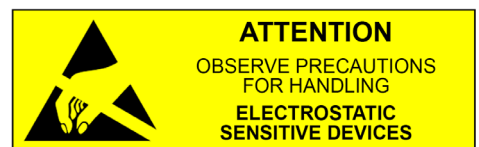


### Custom Solutions

NewEnergy operates facilities globally with ISO certifications for the LED lighting, automotive and medical industries. Our North Carolina based office provides quick engineering & sales support with a R&D lab for prototype development and custom solutions. Our in-house global manufacturing capabilities allow for both building in the United States as well as overseas at scale.

### About NewEnergy

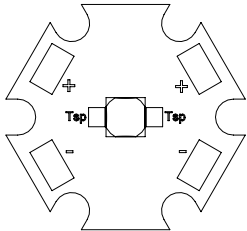
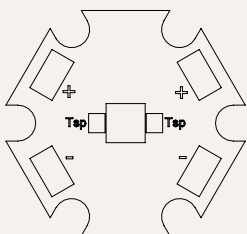
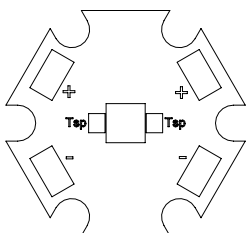
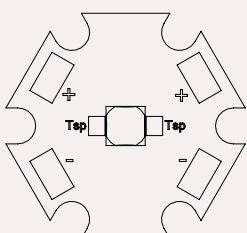
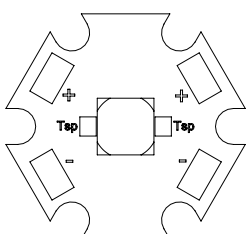
NewEnergy accelerates the adoption of LED technology through simple, modular products and custom designs. Through 30 years of experience, state of the art manufacturing, full traceability and advanced quality controls, NewEnergy offers leading solid state lighting components, modules and custom solutions. NewEnergy customers get to market faster, with less resources, at lower costs. Visit [new-energyllc.com](http://new-energyllc.com) for more information.



RoHS 

# Cree High Power Starboards

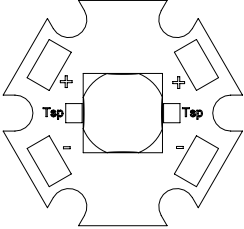
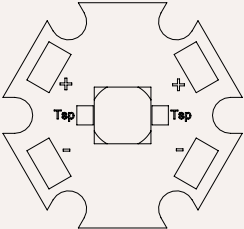
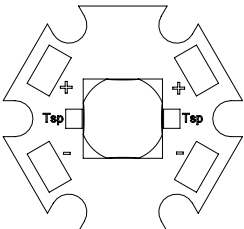
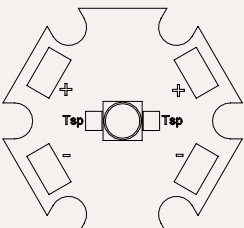
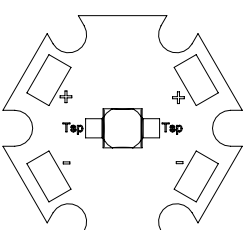
## White Product Selection Guide

| Product Family                                                                                     | Part Number                   | CCT   | CRI | Luminous Flux (lm) |
|----------------------------------------------------------------------------------------------------|-------------------------------|-------|-----|--------------------|
|  <b>XHP35 HD</b>  | XHP35A-00-0000-0D0BD430E-SB01 | 3000K | 70  | 550                |
|                                                                                                    | XHP35A-00-0000-0D0BE240E-SB01 | 4000K | 70  | 590                |
|                                                                                                    | XHP35A-00-0000-0D0BE450E-SB01 | 5000K | 70  | 635                |
|  <b>XHP35 HI</b>  | XHP35A-H0-0000-0D0BC230E-SB01 | 3000K | 70  | 440                |
|                                                                                                    | XHP35A-H0-0000-0D0BC440E-SB01 | 4000K | 70  | 475                |
|                                                                                                    | XHP35A-H0-0000-0D0BC450E-SB01 | 5000K | 70  | 475                |
|  <b>XP-L HI</b>  | XPLAWT-H0-0000-000HU40F8-SB01 | 2850K | 80  | 340                |
|                                                                                                    | XPLAWT-H0-0000-000BV20E5-SB01 | 4000K | 70  | 400                |
|                                                                                                    | XPLAWT-H0-0000-000BV20E1-SB01 | 6500K | 70  | 400                |
|  <b>XP-L HD</b> | XPLAWT-00-0000-000HU60E8-SB01 | 2700K | 80  | 380                |
|                                                                                                    | XPLAWT-00-0000-000BV50E5-SB01 | 4000K | 70  | 460                |
|                                                                                                    | XPLAWT-00-0000-0000V60E1-SB01 | 6500K | 65  | 480                |
|  <b>XHP50</b>   | XHP50A-00-0000-0D0BJ440E-SB01 | 4000K | 70  | 1120               |
|                                                                                                    | XHP50A-00-0000-0D0BJ450E-SB01 | 5000K | 70  | 1120               |

Product performance at binning current  $T_c = 85^\circ\text{C}$ .  
CRI and Flux values are minimum.

# Cree High Power Starboards

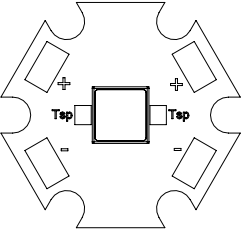
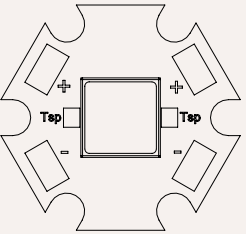
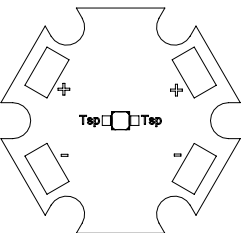
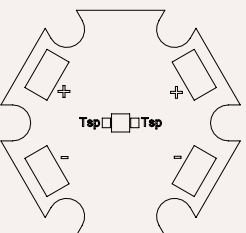
## White Product Selection Guide

| Product Family                                                                                    | Part Number                   | CCT   | CRI | Luminous Flux (lm) |
|---------------------------------------------------------------------------------------------------|-------------------------------|-------|-----|--------------------|
|  <b>XHP70</b>    | XHP70A-00-0000-0D0BM430E-SB01 | 3000K | 70  | 1485               |
|                                                                                                   | XHP70A-00-0000-0D0BN240E-SB01 | 4000K | 70  | 1590               |
|                                                                                                   | XHP70A-00-0000-0D0BN450E-SB01 | 5000K | 70  | 1710               |
|  <b>XHP50.2</b>  | XHP50B-00-0000-0D0HH227G-SB01 | 2700K | 80  | 900                |
|                                                                                                   | XHP50B-00-0000-0D0BJ440E-SB01 | 4000K | 70  | 1120               |
|                                                                                                   | XHP50B-00-0000-0D0BJ40CB-SB01 | 6500K | 70  | 1120               |
|  <b>XHP70.2</b> | XHP70B-00-0000-0D0HM427G-SB01 | 2700K | 80  | 1485               |
|                                                                                                   | XHP70B-00-0000-0D0BP240E-SB01 | 4000K | 70  | 1830               |
|                                                                                                   | XHP70B-00-0000-0D0BN40E1-SB01 | 6500K | 70  | 1710               |
|  <b>XP-G3</b>  | XPGDWT-H1-0000-00HE8-SB01     | 2700K | 80  | 139                |
|                                                                                                   | XPGDWT-B1-0000-00L5E-SB01     | 4000K | 70  | 164                |
|                                                                                                   | XPGDWT-01-0000-00LE1-SB01     | 6500K | 70  | 164                |
|  <b>XP-L2</b>  | XPLBWT-00-0000-000HV227G-SB01 | 2700K | 80  | 400                |
|                                                                                                   | XPLBWT-00-0000-000BV640E-SB01 | 4000K | 70  | 480                |
|                                                                                                   | XPLBWT-00-0000-000BV50CB-SB01 | 6500K | 70  | 460                |

Product performance at binning current  $T_c = 85^{\circ}\text{C}$ .  
CRI and Flux values are minimum.

# Cree High Power Starboards

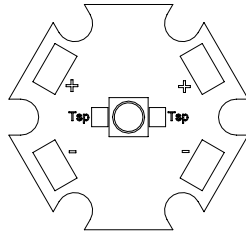
## White Product Selection Guide

| Product Family                                                                                     | Part Number                   | CCT   | CRI | Luminous Flux (lm) |
|----------------------------------------------------------------------------------------------------|-------------------------------|-------|-----|--------------------|
|  <b>MHB-B</b>     | MHBBWT-0000-000C0HC427G-SB01  | 2700K | 80  | 475                |
|                                                                                                    | MHBBWT-0000-000C0BE240E-SB01  | 4000K | 70  | 590                |
|                                                                                                    | MHBBWT-0000-000C0BE265E-SB01  | 6500K | 70  | 590                |
|  <b>MHD-G</b>     | MHDCGT-0000-000N0HK427G-SB01  | 2700K | 80  | 1290               |
|                                                                                                    | MHDCGT-0000-000N0BM440E-SB01  | 4000K | 70  | 1485               |
|                                                                                                    | MHDCGT-0000-000N0BN265E-SB01  | 6500K | 70  | 1590               |
|  <b>XQ-E HD</b>  | XQEAWT-00-0000-00000HBE8-SB01 | 2700K | 80  | 93.9               |
|                                                                                                    | XQEAWT-00-0000-00000HDE5-SB01 | 4000K | 80  | 107                |
|                                                                                                    | XQEAWT-00-0000-00000BFE1-SB01 | 6500K | 70  | 122                |
|  <b>XQ-E HI</b> | XQEAWT-H0-0000-00000HDE8-SB01 | 2700K | 80  | 93.9               |
|                                                                                                    | XQEAWT-H0-0000-00000LEE5-SB01 | 4000K | 75  | 114                |
|                                                                                                    | XQEAWT-H0-0000-00000BFE1-SB01 | 6500K | 70  | 122                |

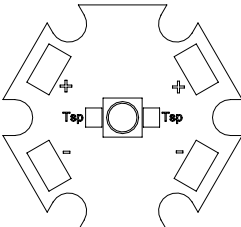
Product performance at binning current  $T_c = 85^\circ\text{C}$ .  
CRI and Flux values are minimum.

# Cree High Power Starboards

## Color Product Selection Guide

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

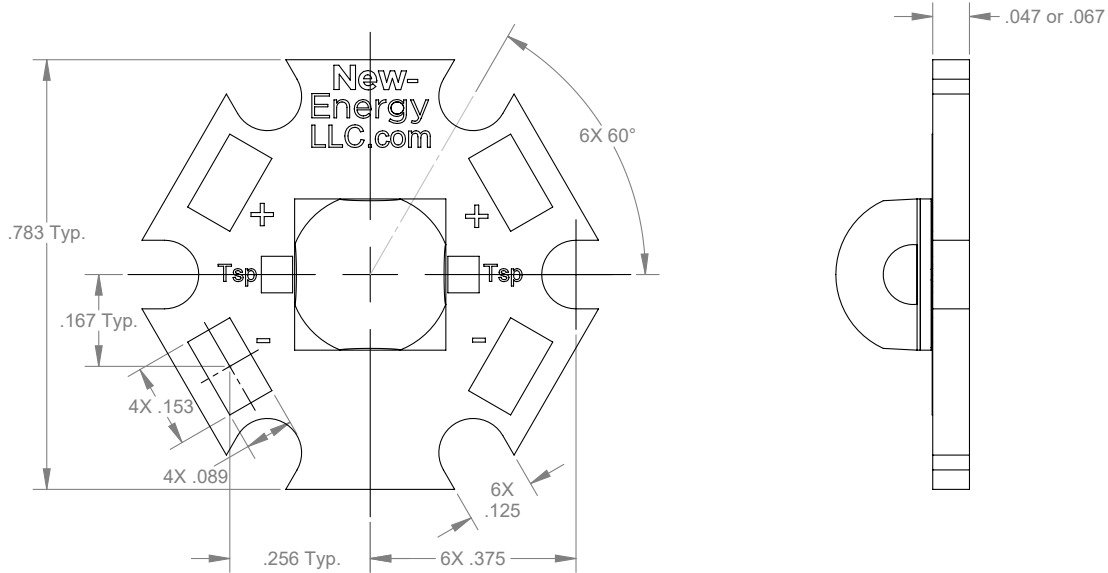
## Specialty Color Product Selection Guide

| Product Family                                                                      | Part Number   | Color                     | DW/Bin       | Radiant Flux (mW) |      |
|-------------------------------------------------------------------------------------|---------------|---------------------------|--------------|-------------------|------|
|  | <b>XPEBFR</b> | XPEBFR-L1-0000-00901-SB01 | Far Red      | 720-740           | 350  |
|                                                                                     | <b>XPEPHR</b> | XPEPHR-L1-0000-00901-SB01 | Photo Red    | 650-670           | 350  |
|                                                                                     | <b>XPEBRY</b> | XPEBRY-L1-0000-00R01-SB01 | Royal Blue   | 450-465           | 625  |
|                                                                                     | <b>XPEBRD</b> | XPEDO-L1-0000-00A01-SB01  | Red Orange   | 610-620           | 87.4 |
|                                                                                     | <b>XPGDRY</b> | LST1-01C32-RYL1-00        | Royal Blue   | 440-455           | 730  |
|                                                                                     | <b>XQEROY</b> | LST1-01C40-RYL1-00        | Royal Blue   | 450-465           | 600  |
|                                                                                     | <b>XQEEPR</b> | LST1-01C40-PRD1-00        | HE Photo Red | 650-670           | 375  |

Product performance at binning current  $T_c = 85^\circ\text{C}$ .  
Flux values are minimum.

# NewEnergy Starboard Mechanical

(Units: Inches)



## 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.