

Product Overview

An electrically isolated star capable of delivering over 500 lumens, the Endor Star combines high brightness with ease of integration into fixtures and OEM applications. The LUXdrive Endor StarTM features the LUXEON[®] Rebel emitter, and a footprint compatible with the LUXEON[®] Star. Inherent electrical isolation means thermal interface materials are not required to be electrically insulative. The Endor StarTM is available in ANSI binned white from 2700K to 6500K, red, blue, green, and amber configurations. The Endor StarTM is also available in an RGB tri-emitter configuration.



Features

- Electrically isolated heat sinking surface
- Pb free reflow solder connections
- RoHS Compliant
- Autoclave compliant JESD22 A-102
- Thin, low profile package
- Simple, clearly marked electrical connections
- Superior life span and reliability
- Energy efficient
- Easy mounting

Typical Applications

- Solar & Landscape Lighting
- Architectural Lighting
- General Illumination
- Automotive & Marine Lighting
- Point of Purchase Lighting
- Signal & Marker Lighting
- Cabinet & Display Case Lighting
- Sign Lighting
- Flashlights

MADE IN

U. S. A.



RoHS
Compliant
2002/95/EC

Luminous Flux

The Endor Star[™] is available with a single or tri-emitter configuration. The color code and luminous flux figures are adapted from the LUXEON[®] Rebel data sheet.

Table 1
Typical Luminous Flux at LED Thermal Pad Temperature of 25°C

Part Number	Color	CRI	Number of LEDs	Typ. Lumens at 350mA	Typ. Lumens at 700mA
7040-PW765-N	6500K White	70 typ	1	105	180
7007-PW765-N	6500K White	70 typ	3	315	540
7040-PW757-N	5700K White	70 typ	1	105	180
7007-PW757-N	5700K White	70 typ	3	315	540
7040-PW750-N	5000K White	70 typ	1	105	180
7007-PW750-N	5000K White	70 typ	3	315	540
7040-PW740-N	4000K White	70 typ	1	105	180
7007-PW740-N	4000K White	70 typ	3	315	540
7040-PW835-L	3500K White	85 typ	1	80	135
7007-PW835-L	3500K White	85 typ	3	240	405
7040-PW835-K	3500K White	85 typ	1	75	125
7007-PW835-K	3500K White	85 typ	3	225	375
7040-PW830-K	3000K White	85 typ	1	77	130
7007-PW830-K	3000K White	85 typ	3	230	390
7040-PW827-K	2700K White	85 typ	1	73	125
7007-PW827-K	2700K White	85 typ	3	225	375
7040-PW827-J	2700K White	85 typ	1	65	115
7007-PW827-J	2700K White	85 typ	3	195	350
7007-PRGB0-0	Red, Green, Blue	N/A	3	N/A	N/A
7040-PD000-F	Red	N/A	1	35	65
7007-PD000-F	Red	N/A	3	105	195
7040-PM000-L	Green	N/A	1	85	145
7007-PM000-L	Green	N/A	3	255	435
7040-PB000-D	Blue	N/A	1	20	38
7007-PB000-D	Blue	N/A	3	60	114
7040-PL000-F	Amber	N/A	1	35	65
7007-PL000-F	Amber	N/A	3	105	195

Custom units available upon request. Contact LUXdrive for additional details.

See LUXEON[®] Rebel data sheet for more details

Part Number Identification

The part number is explained below:

70xx- P B C DD - E

Where:

7040 designates the LUXdrive Product ID for an optically centered LED board

7007 designates the LUXdrive Product ID for a three LED board

P designates Radiation Pattern (P for Lambertian 120° typ)

B designates LED color (W= White, D= Red, M=Green, B=Blue, L=Amber)

C designates CRI value (7= 70 typ, 8=85 typ, 0 for direct color variants)

DD designates Color Variant (30=3000K White, 40=4000K White, 50=5000K White, 00 for direct color variants)

E designates Typical Luminous Flux (D=20 Lumens, F=35 Lumens, H=55 Lumens, J=65 Lumens, K=75 Lumens, L=85 Lumens, N=105 Lumens, 0 for RGB)

Temperature Ratings

Table 2

Color	Number of LEDs	Thermal Resistance (LED junction to bottom of MCPCB)
White	1	12°C/W
White	3	6.3°C/W
RGB	3	7°C/W
Red	1	15°C/W
Red	3	7°C/W
Green	1	12°C/W
Green	3	6.3°C/W
Blue	1	12°C/W
Blue	3	6.3°C/W
Amber	1	15°C/W
Amber	3	7°C/W

Storage Temperature..... <135°C

Recommended Operating Temperature (T_{opr})..... <135°C³

See LUXEON® Rebel data sheet for more details

³ Junction temperature

Drivers

LUXdrive offers a line of drivers designed for use with high-power LED modules such as the Endor Star[™]. The choice of driver will depend upon number of modules to be driven, the input voltage source, and the desired forward drive current. See the full line of LUXdrive products at www.LUXdrive.com

Heat Sinking and Mounting

The Endor Star[™] has six mounting points for #4 screws. It should be attached to additional heat sinking for proper thermal management. At minimum, a heat sink of a metal plate (copper or aluminum), attached using a thermal interface material, (such as LUXdrive HexaTherm[™] A001), should be used to increase the area exposed to free air. The Endor Star[™] Metal Core Printed Circuit Board has a backing plate that is electrically isolated from the emitter. It is not necessary to use an electrically insulated thermal interface material.

Optics

The Endor Star[™] can be fitted with many different optics from major optics manufacturers. There is one 3-up optic offered by LUXdrive. This optic allows the output of the three LEDs to combine and be collimated into a wide 25° illumination pattern. The part number is DB-OPML-3-025. (Note that LED type and color will have a slight effect on illumination pattern, e.g., non-white LEDs give a narrower distribution). On the 7040 there are four indentations on the board, designed as registration holes for the Carclo1041x series of optics. These small 10mm optics are available in multiple viewing angles and work extremely well in applications where a low profile is desired.

Physical Dimensions

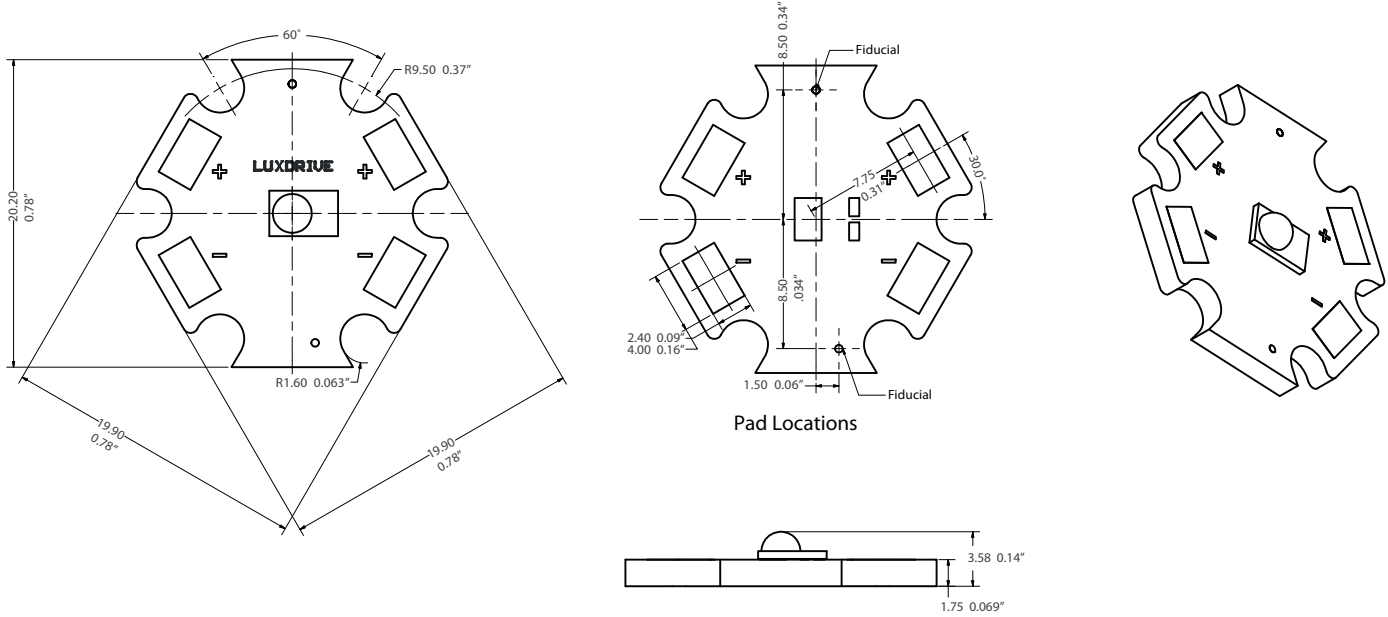


Figure 1
7040 1-up

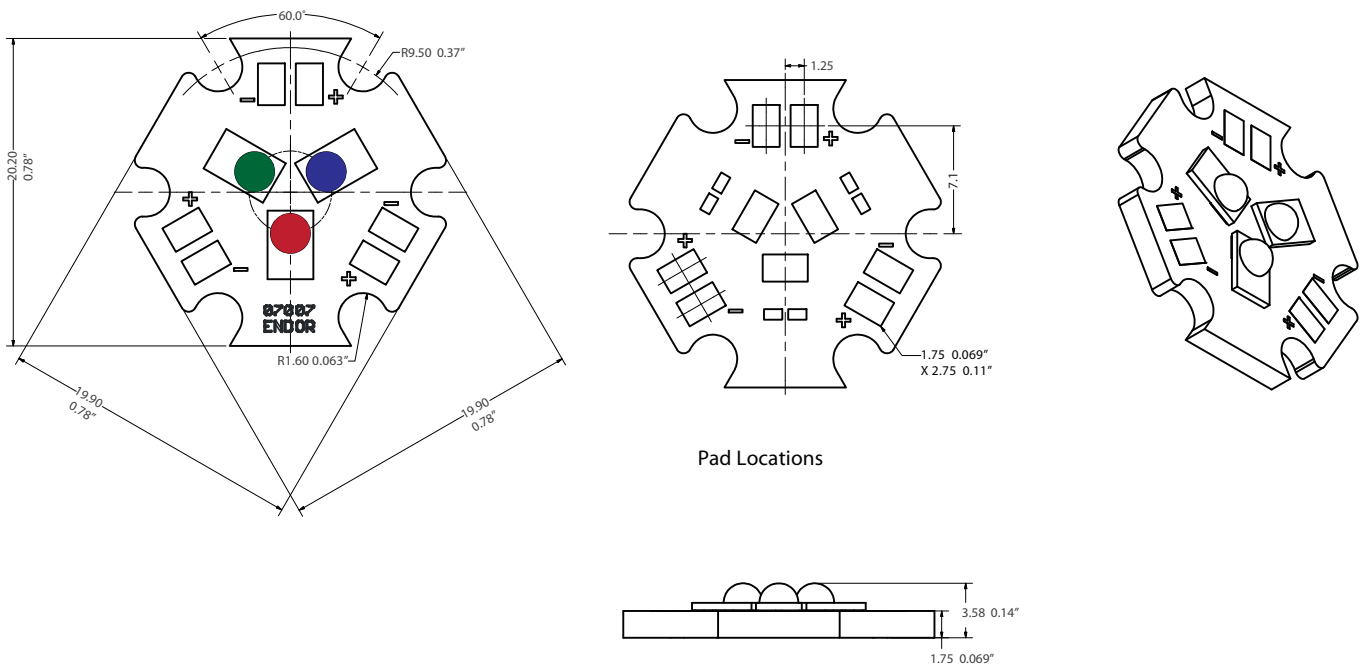


Figure 2
7007 3-up