HLMP-EJ37-R0PDD

T-1 ¾ (5mm) Precision Optical Performance AlInGaP LED Lamp

Data Sheet

Description

This Precision Optical Performance AlInGaP LED provide superior light output for excellent readability in sunlight and are extremely reliable. AlInGaP LED technology provides extremely stable light output over long periods of time. Precision Optical Performance lamps utilize the Aluminium Indium Gallium Phosphide (AlInGaP) technology.

This LED lamp is orange tinted, nondiffused, T-1 ¾ package incorporating second generation optics producing well defined spatial radiation at specific viewing cone angle. This lamp is made with an advanced optical grade epoxy, offering superior high temperature and high moisture resistance performance in outdoor signal and sign applications.

The high maximum LED junction temperature limit of +130°C enables high temperature operation in bright sunlight conditions. The package epoxy contains both uv-a and uv-b inhibitors to reduce the effects of long term exposure to direct sunlight.

Features

- Well defined Spatial radiation Patterns
- High Luminous Output
- AlInGaP Orange
- High Operating Temperature: T_{JLED} = +130°C
- Superior Resistance to moisture

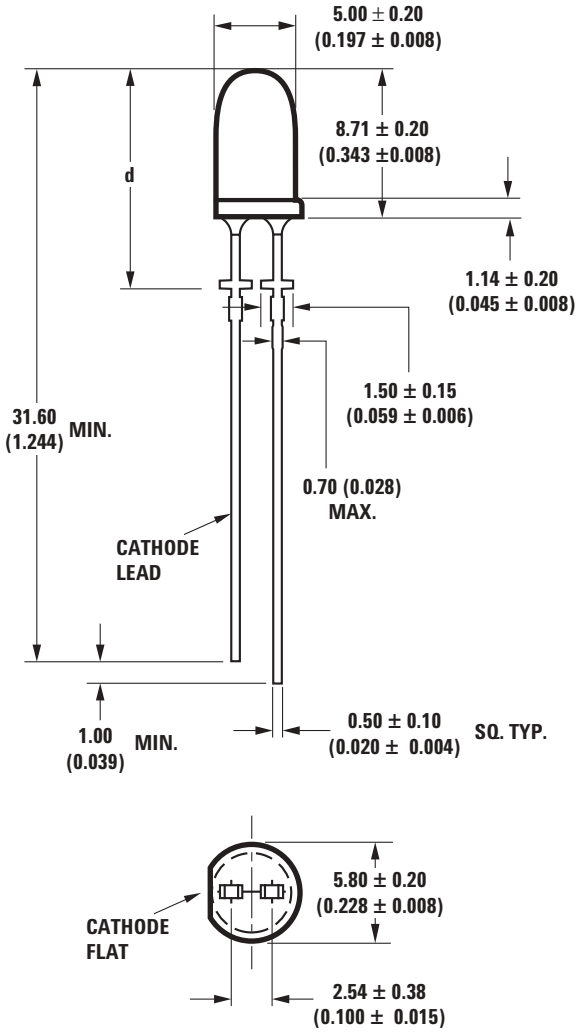
Applications

- Comercial Outdoor Advertising:
  - Signs
  - Marquees
- Variable Message Sign

Benefits

- Superior Light Output performance In Outdoor Environments
- Suitable for Auto-insertion into PC Boards

Package Dimensions



Notes :
1. All dimensions are in milimetres (inches).
2. Leads are mild steel, solder dipped.
3. Tapers shown at top of leads (bottom of lamp package) indicate an epoxy meniscus that may extend about 1mm (0.040in.) down the leads.
4. Recommended PC board hole diameters = 0.965/0.889 (0.038/0.035)
5. For dome heights above lead standoff seating plane, d = 11.96 ± 0.25 (0.471 ± 0.010).

Device Selection Guide

Part Number	Dominant Wavelength Range (nm)	Luminous Intensity, Min (mcd at 20mA)
HLMP-EJ37-R0PDD	605.5 -612.5	1500

Tolerance for luminous intensity is ±15%.
Tolerance for color bin limit is ± 0.5 nm

Notes:
1. The luminous intensity is measured on the mechanical axis of the lamp package.
3. The optical axis is closely aligned with the package mechanical axis.
4. The dominant wavelength, ld, is derived from the CIE Chromaticity Diagram and represents the color of the lamp.
5. θ1/2 is the off axis angle where the luminous intensity is one half the on-axis intensity.

Absolute Maximum Rating (T_A=25°C)

Parameters	Value
DC forward current[1]	50 mA
Peak pulsed forward current[2]	100 mA
Average forward current	30 mA
Reverse voltage (Ir = 100 mA)	5 V
LED junction temperature	130°C
Power Dissipation	120mW
Operating temperature	-40°C to +100°C
Storage temperature	-40°C to +120°C
Through the wave soldering temperature	250°C for 3 seconds

Note:
1. Derate linearly as shown in fugure 4.
2. For long terms performance with minimum light output degration, drive currents between 10mA and 30 mA are recommended. For more information on recommended drive condition, please refer to Application Brief I-024.
3. Operating at current below 1mA is not recommended. Please contact your local representative for further information.

Electrical and Optical Characteristics (T_A=25°C)

Parameters	Min	Typ	Max	Unit	Test Condition
Forward voltage		1.98	2.40	V	I_F= 20 mA
Reverse voltage	5	20		V	I_R= 100 µA
Peak Wavelength		609		nm	Peak wavelength of spectrral distribution at I_F= 20 mA
Spectral Halfwidth		17		nm	Wavelength width at spectral distribution ½ power point at I_F= 20 mA
Speed of Response		20		ns	Exponential time constant
Capacitance		40		pF	V_F=0, f=1 MHz
Thermal Resistance		240		°C/W	LED Junction to cathode

Notes:
1. The radiant intensity, Ie in watts per steradian, may be found from the equation Ie = Iv/hV where Iv is the luminous intensity in candelas and hV is the luminous efficacy in lumens/watt.

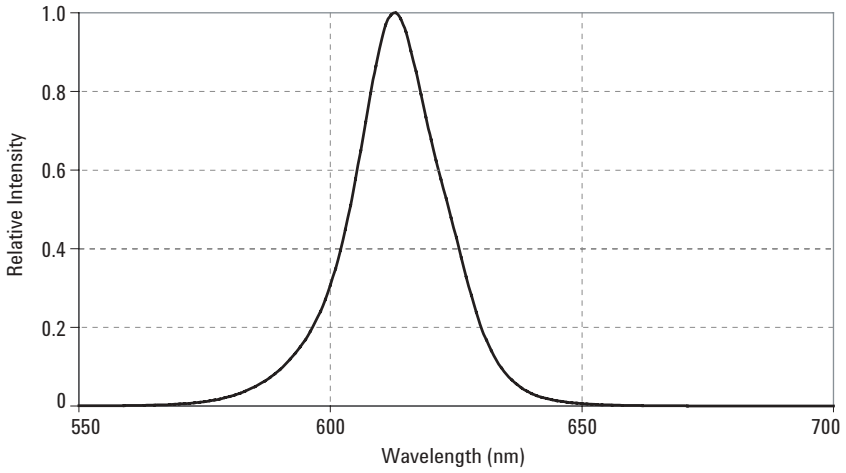


Figure 1. Relative Intensity vs. Peak Wavelength

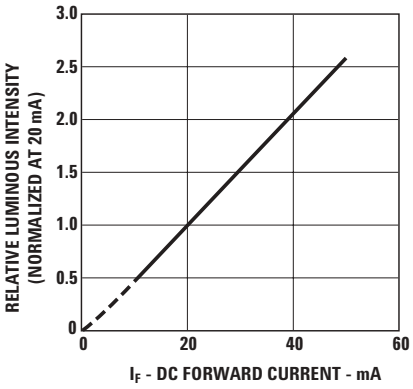


Figure 3. Relative Luminous Intensity vs. Forward Current

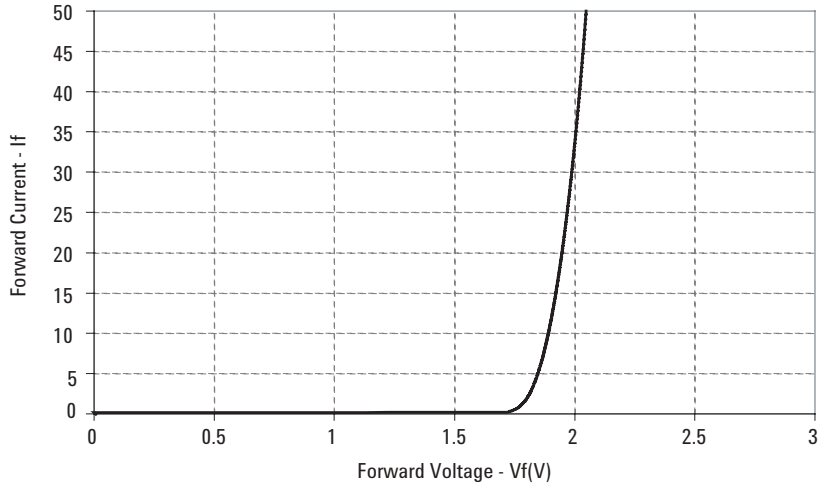


Figure 2. Forward Current vs. Forward Voltage

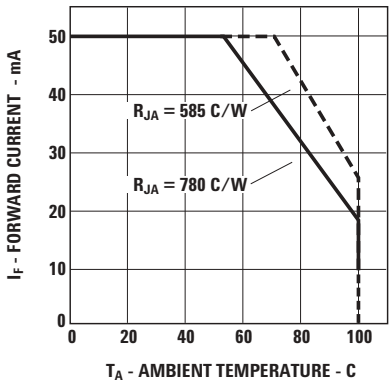


Figure 4. Maximum Forward Current vs. Ambient Temperature.

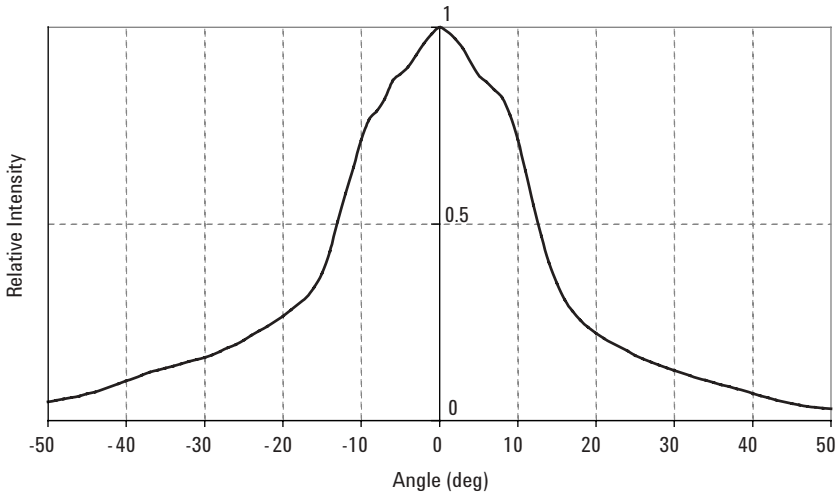


Figure 5. Spatial Radiation pattern

Intensity Bin Limits (mcd at 20 mA)

Bin Name	Min.	Max.
R	1500	1900
S	1900	2500
T	2500	3200
U	3200	4200
V	4200	5500

Tolerance for each bin limits is ±15%

Color Bin Limits (nm at 20 mA)

Bin Name	Min.	Max.
CA	605.5	609
CB	609	612.5

Tolerance for each bin limits is ±0.5nm
Note:

1. Bin categories are established for classification of products. Product may not be available in all bin categories.

For product information and a complete list of distributors, please go to our web site: **www.avagotech.com**

5989-1391EN - May 29, 2006

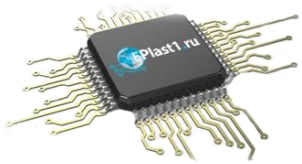
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.