

SUBMINIATURE SOLID STATE LAMP

Part Number: KM2520EH/1ID

High Efficiency Red

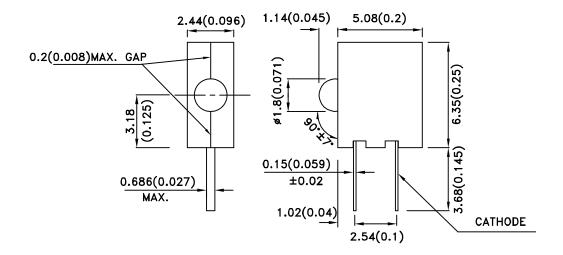
Features

- Black case enhances contrast.
- Vibration and shock resistant.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

Description

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

Package Dimensions





- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is $\pm 0.25(0.01")$ unless otherwise noted.
- Lead spacing is measured where the leads emerge from the package.
 The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

SPEC NO: DSAA9257 **REV NO: V.13A DATE: APR/05/2013** PAGE: 1 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: F.Cui ERP: 1102000009

Selection Guide

Part No.	Dice	Lens Type	lv (mcd) [2] @ 20mA		Viewing Angle [1]
	7.		Min.	Тур.	201/2
KM2520EH/1ID	High Efficiency Red (GaAsP/GaP)	Red Diffused	12	20	40°
		Rea Diliasea	*8	*16	

Notes:

- 1. θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red	627		nm	IF=20mA
λD [1]	Dominant Wavelength	High Efficiency Red	617		nm	IF=20mA
Δλ1/2	Spectral Line Half-width	High Efficiency Red	45		nm	I=20mA
С	Capacitance	High Efficiency Red	15		pF	VF=0V;f=1MHz
VF [2]	Forward Voltage	High Efficiency Red	2	2.5	V	I=20mA
lR	Reverse Current	High Efficiency Red		10	uA	VR = 5V

- 1.Wavelength: +/-1nm.
- 2. Forward Voltage: +/-0.1V.
- 3. Wavelength value is traceable to the CIE127-2007 compliant national standards.

Absolute Maximum Ratings at TA=25°C

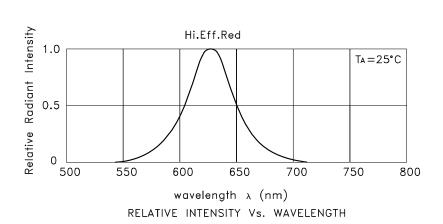
Parameter	High Efficiency Red	Units		
Power dissipation	75	mW		
DC Forward Current	30	mA		
Peak Forward Current [1]	160	mA		
Reverse Voltage	5	V		
Operating/Storage Temperature	-40°C To +85°C			
Lead Solder Temperature [2]	260°C For 3 Seconds			
Lead Solder Temperature [3]	260°C For 5 Seconds			

- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
- 2. 2mm below package base.
 5mm below package base.

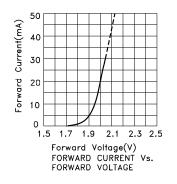
SPEC NO: DSAA9257 **REV NO: V.13A** DATE: APR/05/2013 PAGE: 2 OF 5 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: F.Cui ERP: 1102000009

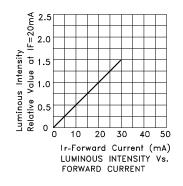
Luminous intensity/ luminous Flux: +/-15%.
 *Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

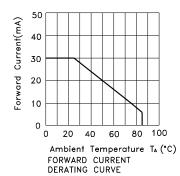
High Efficiency Red

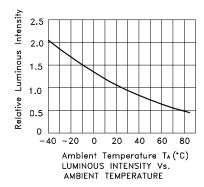


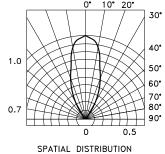
KM2520EH/1ID





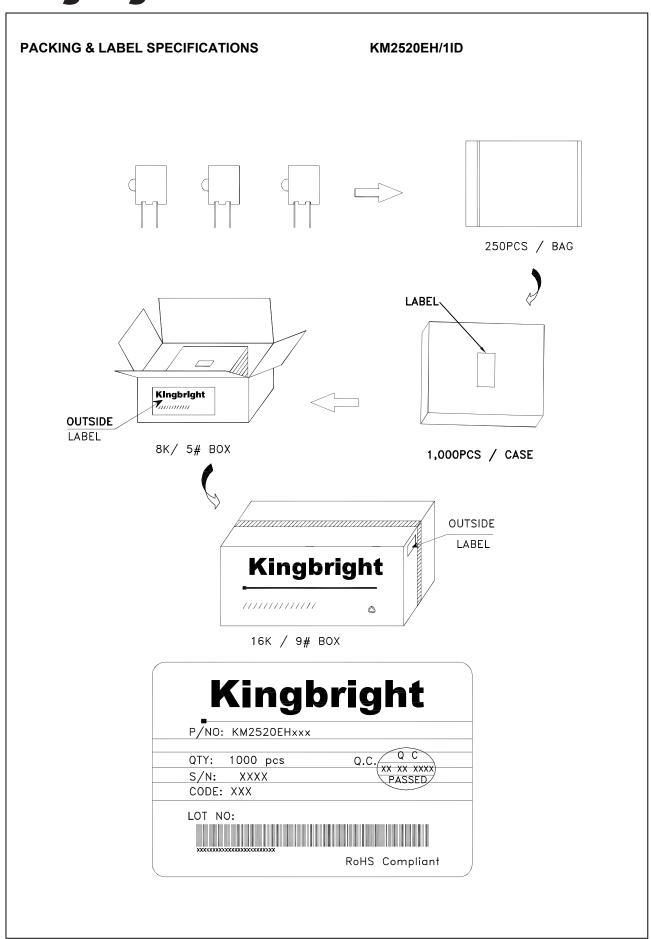






 SPEC NO: DSAA9257
 REV NO: V.13A
 DATE: APR/05/2013
 PAGE: 3 OF 5

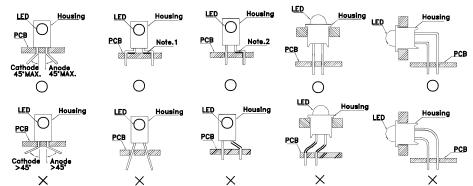
 APPROVED: WYNEC
 CHECKED: Allen Liu
 DRAWN: F.Cui
 ERP: 1102000009



SPEC NO: DSAA9257 APPROVED: WYNEC REV NO: V.13A CHECKED: Allen Liu DATE: APR/05/2013 DRAWN: F.Cui PAGE: 4 OF 5 ERP: 1102000009

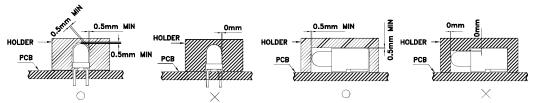
PRECAUTIONS

1. The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead—forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures.

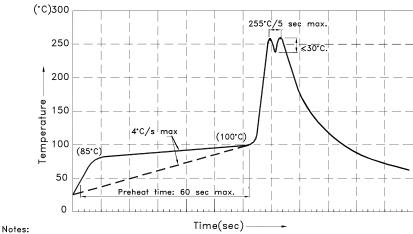


' \bigcirc " Correct mounting method "imes" Incorrect mounting method

2. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.



- 3. The tip of the soldering iron should never touch the lens epoxy.
- 4. Through—hole LEDs are incompatible with reflow soldering.
- 5. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.
- 6. Recommended Wave Soldering Profiles:



- 1.Recommend pre—heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
- 2.Peak wave soldering temperature between 245°C \sim 255°C for 3 sec (5 sec max).
- $3.\mbox{Do}$ not apply stress to the epoxy resin while the temperature is above $85\mbox{^{\circ}C}.$
- 4.Fixtures should not incur stress on the component when mounting and during soldering process.
- 5.SAC 305 solder alloy is recommended.
- 6.No more than one wave soldering pass.

Detailed application notes are listed on our website.

http://www.kingbright.com/application_notes

 SPEC NO: DSAA9257
 REV NO: V.13A
 DATE: APR/05/2013
 PAGE: 5 OF 5

 APPROVED: WYNEC
 CHECKED: Allen Liu
 DRAWN: F.Cui
 ERP: 1102000009