

WP138A8QMP/ID/TG

HIGH EFFICIENCY RED

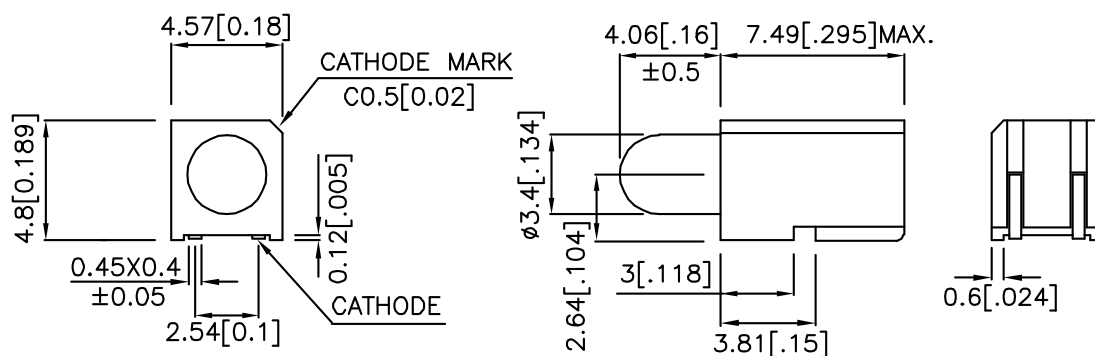
Features

- PRE-TRIMMED LEADS FOR PC MOUNTING.
- CAN BE ASSEMBLED WITH EACH OTHER.
- I.C.COMPATIBLE.
- BLACK CASE ENHANCES CONTRAST RATIO.
- WIDE VIEWING ANGLE.
- HIGH RELIABILITY LIFE MEASURED IN YEARS.
- HOUSING MATERIAL:PPA.
- PACKAGE:1000PCS / REEL.
- HIGH TEMPERATURE RESISTANT HOUSING.
- HIGH GLASS TRANSITION TEMPERATURE EPOXY.
- IN ACCORD WITH Kingbright ENVIRONMENTAL POLICY (DOCUMENT WI-QC-G-0442).
- 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



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) @ 10 mA		Viewing Angle
			Min.	Typ.	2θ1/2
WP138A8QMP/ID/TG	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	12	20	60°

Note:

1. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical / Optical Characteristics at T_A=25°C

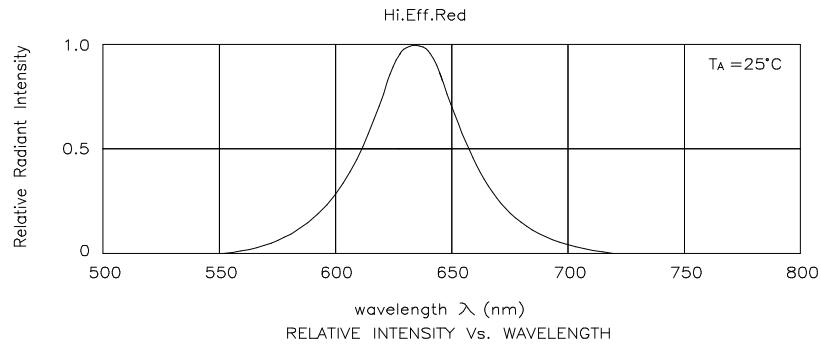
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λ_{peak}	Peak Wavelength	High Efficiency Red	627		nm	I _F =20mA
λ_D	Dominant Wavelength	High Efficiency Red	625		nm	I _F =20mA
$\Delta\lambda_{1/2}$	Spectral Line Half-width	High Efficiency Red	45		nm	I _F =20mA
C	Capacitance	High Efficiency Red	15		pF	V _F =0V; f=1MHz
V _F	Forward Voltage	High Efficiency Red	2.0	2.5	V	I _F =20mA
I _R	Reverse Current	High Efficiency Red		10	uA	V _R = 5V

Absolute Maximum Ratings at T_A=25°C

Parameter	High Efficiency Red	Units
Power dissipation	105	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

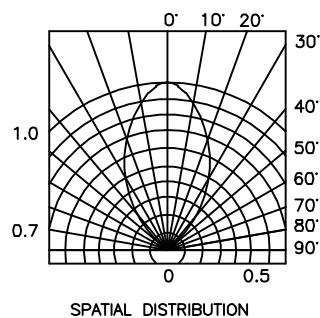
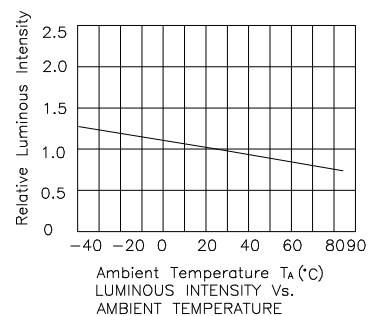
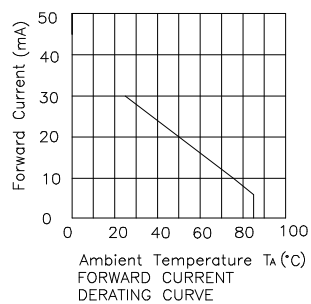
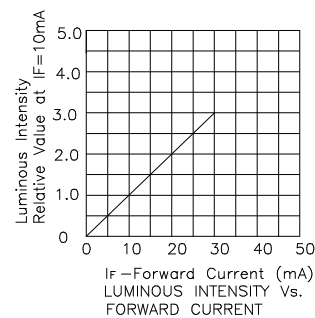
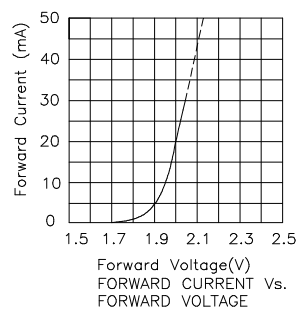
Note:

1. 1/10 Duty Cycle, 0.1ms Pulse Width.



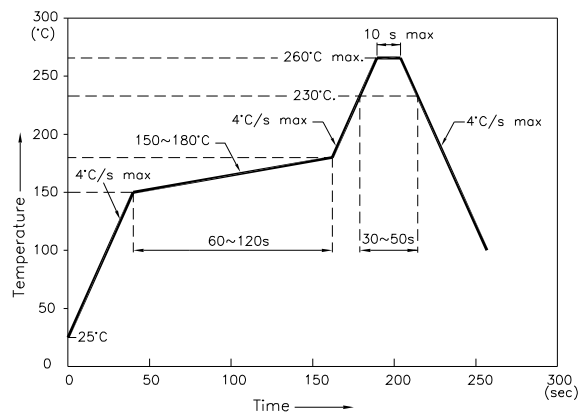
High Efficiency Red

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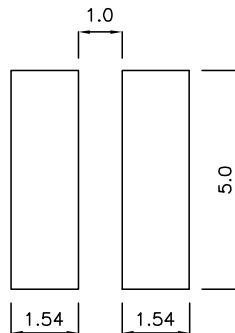
Reflow Soldering Profile For Lead-free SMT Process.



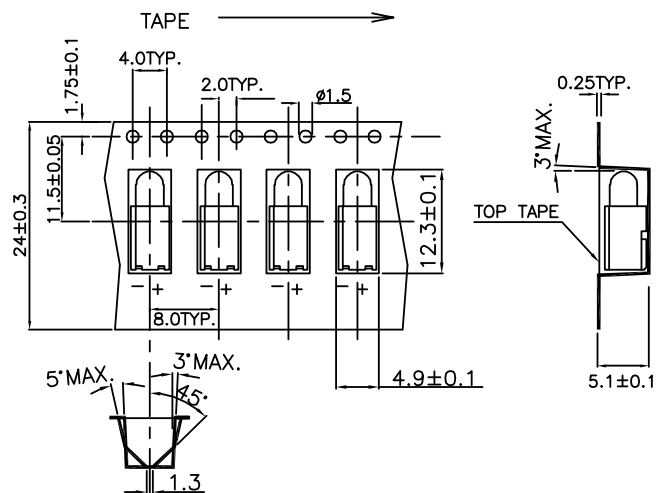
NOTES:

1. We recommend the reflow temperature 245°C(+/-5°C). The maximum soldering temperature should be limited to 260°C.
2. Don't cause stress to the epoxy resin while it is exposed to high temperature.
3. Number of reflow process shall be 2 times or less.

Recommended Soldering Pattern (Units : mm)

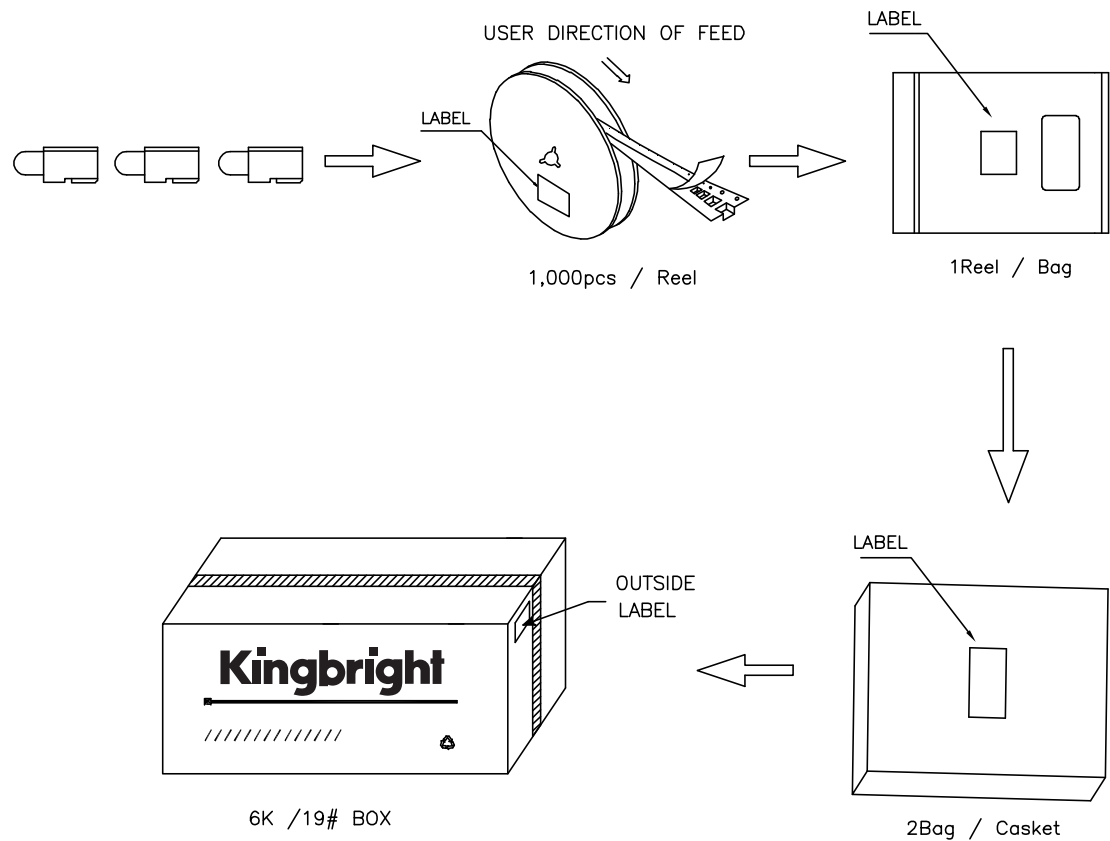


Tape Specifications (Units : mm)



PACKING & LABEL SPECIFICATIONS

WP138A8QMP/ID/TG



Kingbright	
Q.C.	
TYPE NO : WP138A8QMP/xxx	QC xx xx: xxxx PASSED
QUANTITY : 2,000 pcs	Date
S/N : XXX	CODE: XXX
LOT NO: 	
MADE IN CHINA	RoHS Compliant

Remarks:

If special sorting is required (e.g. binning based on forward voltage, Luminous intensity/ luminous flux, or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous intensity/ Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.