Kingbright

3.4mm RIGHT ANGLE LED INDICATOR

WP138A8QMP/ID/TG HIGH EFFICIENCY RED

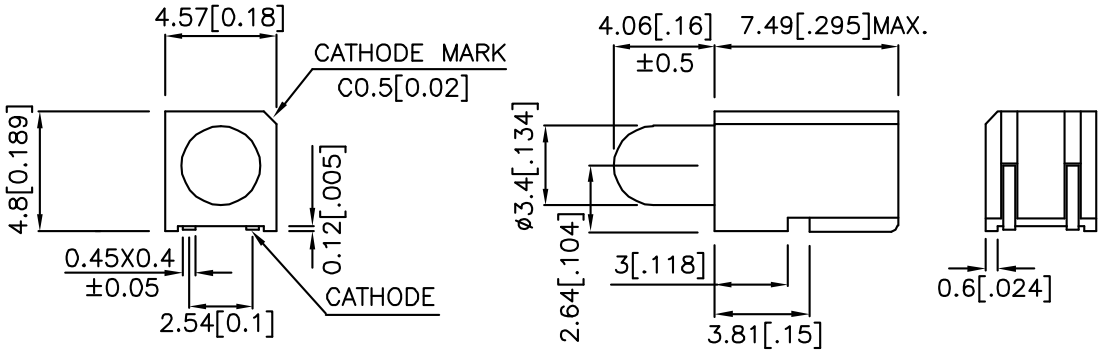
Features

- ●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.

Kingbright

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. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

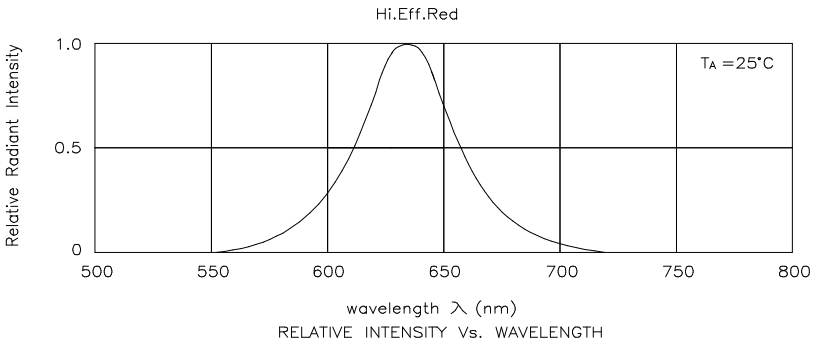
Electrical / Optical Characteristics at T_A=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
λpeak	Peak Wavelength	High Efficiency Red	627		nm	I_F=20mA
λD	Dominant Wavelength	High Efficiency Red	625		nm	I_F=20mA
Δλ1/2	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

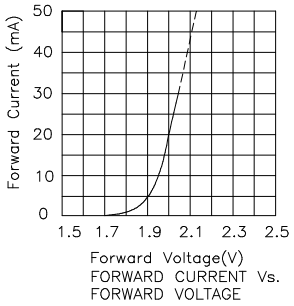
Parameter	High Efficiency Red	Units
Power dissipation	105	mW
DC Forward Current	30	mA
Peak Forward Current [1]	160	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

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

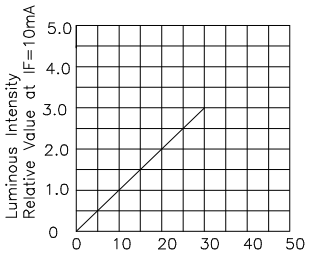


RELATIVE INTENSITY Vs. WAVELENGTH

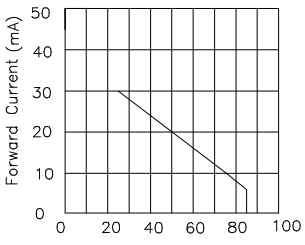
High Efficiency Red **WP138A8QMP/ID/TG**



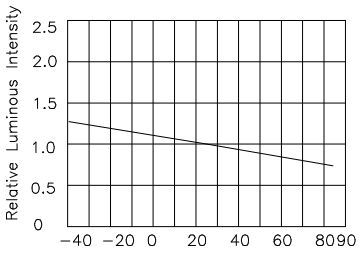
FORWARD CURRENT Vs.
FORWARD VOLTAGE



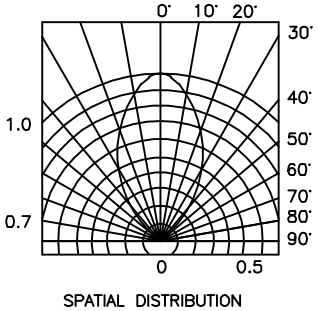
LUMINOUS INTENSITY Vs.
FORWARD CURRENT



FORWARD CURRENT
DERATING CURVE



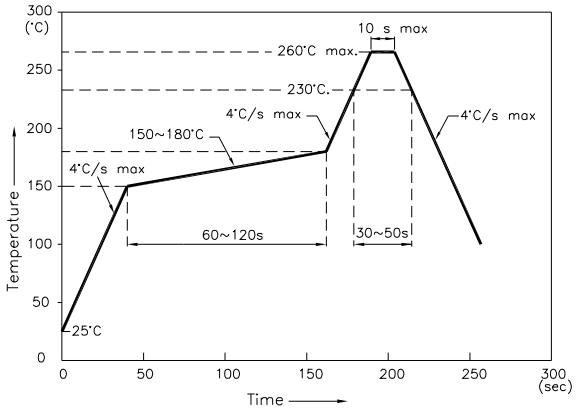
LUMINOUS INTENSITY Vs.
AMBIENT TEMPERATURE



SPATIAL DISTRIBUTION

WP138A8QMP/ID/TG

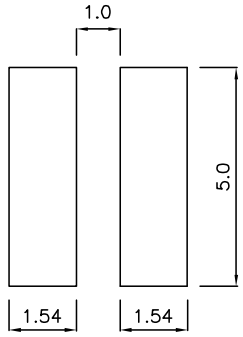
Reflow Soldering Profile For Lead-free SMT Process.



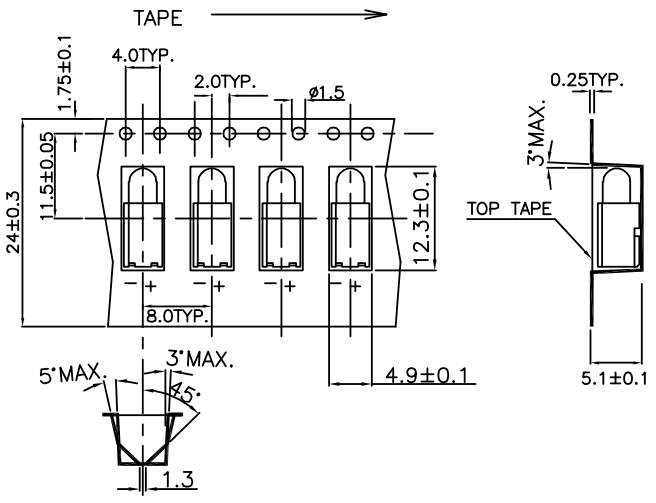
NOTES:

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.

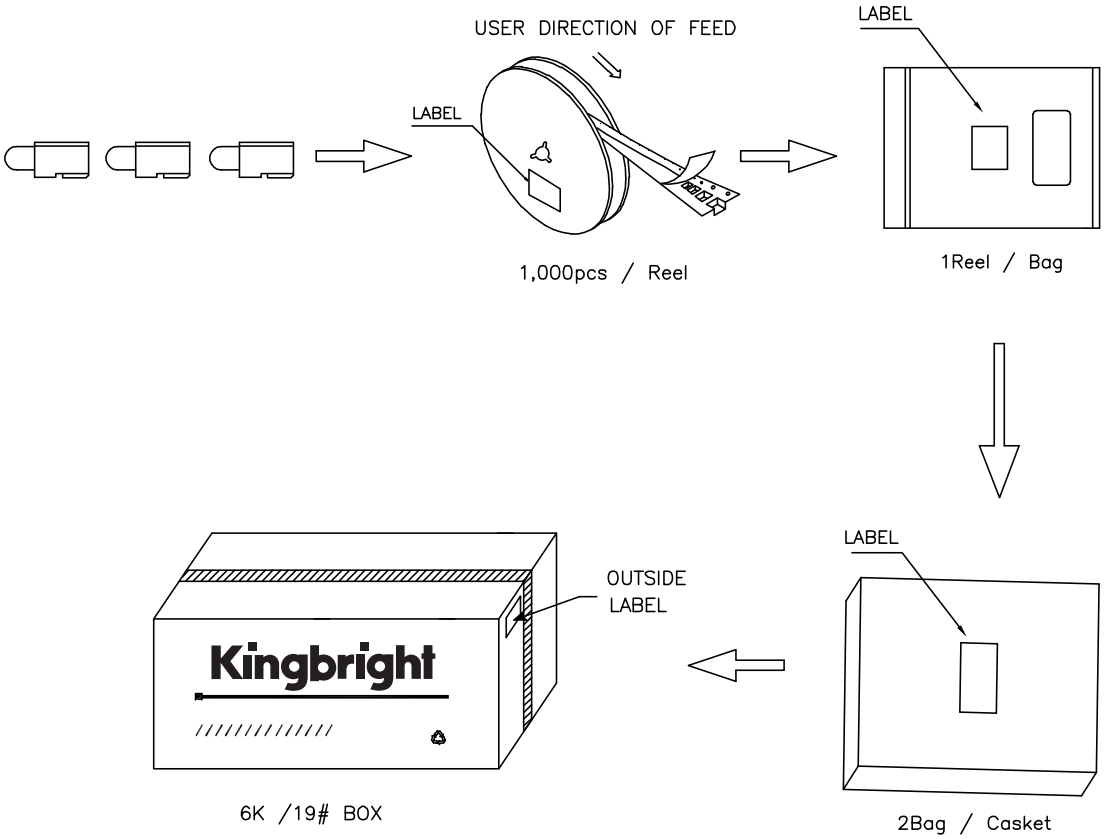
Recommended Soldering Pattern
(Units : mm)

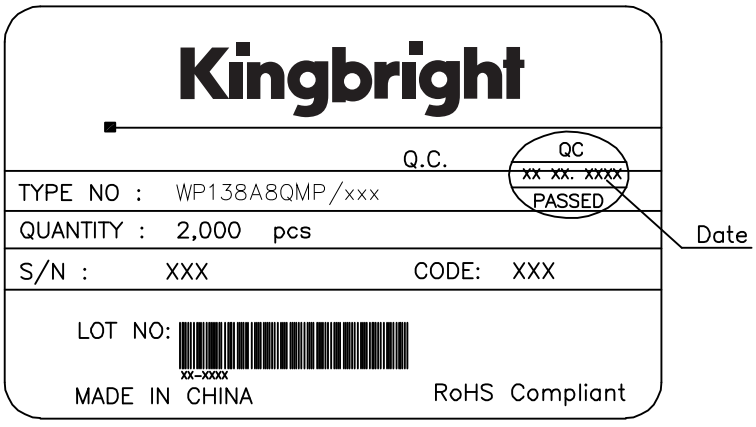


Tape Specifications
(Units : mm)



PACKING & LABEL SPECIFICATIONS **WP138A8QMP/ID/TG**





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.