

Order code	Manufacturer code	Description
72-9732	n/a	KPA-2106QWF-D LED SMT 90DEG WHT 350MCD R
72-9738	n/a	KPA-2106QWF-D RL2000 LED WHT 350MCD RC

	Page 1 of 7
The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

PRELIMINARY SPEC

P/N: KPA-1606QWF-D

WHITE



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Features

- 1.6mmx0.6mm RIGHT ANGLE SMT LED, 1.2mm THICKNESS.
- LOW POWER CONSUMPTION.
- WIDE VIEWING ANGLE.
- IDEAL FOR BACKLIGHT AND INDICATOR.
- VARIOUS COLORS AND LENS TYPES AVAILABLE.
- PACKAGE :2000PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 3.
- RoHS COMPLIANT.

Description

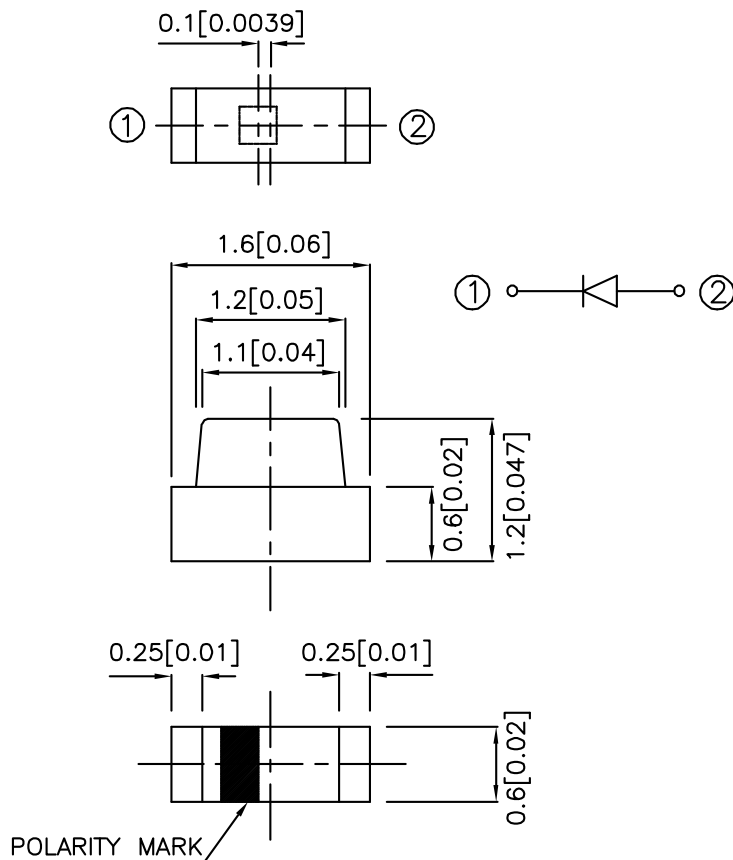
The source color devices are made with GaN on Sapphire Light Emitting Diode.

Static electricity and surge damage the LEDs.

It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1(0.004)$ unless otherwise noted.
3. Specifications are subject to change without notice.

Selection Guide

Part No.	Dice	Lens Type	Iv (mcd) [2] @ 20mA		Viewing Angle[1]
			Min.	Typ.	2θ1/2
KPA-1606QWF-D	WHITE (GaN)	YELLOW FLUORESCENT	110	350	110°

Notes:

- 1.θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
- 2.Luminous Intensity/ Luminous Flux: +/-15%.

Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
V _F [1]	Forward Voltage	White	3.5	4.0	V	I _F =20mA
I _R	Reverse Current	White		10	uA	V _R = 5V
X [2]	Chromaticity Coordinates	White	0.33			
Y [2]			0.34			
C	Capacitance	White	100		pF	V _F =0V;f=1MHz

Notes:

1. Forward Voltage: +/-0.1V.
2. Chromaticity Coordinates X, Y: +/-0.01.

Absolute Maximum Ratings at TA=25°C

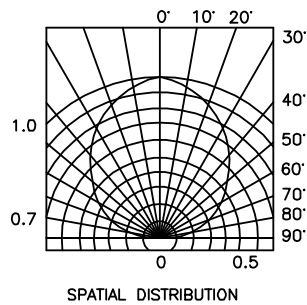
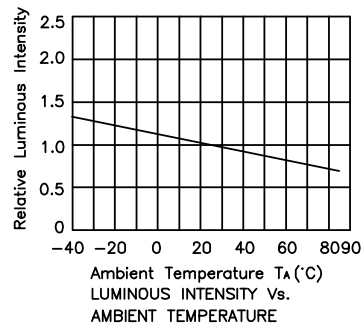
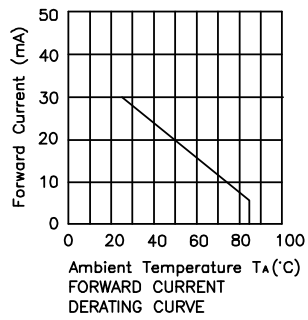
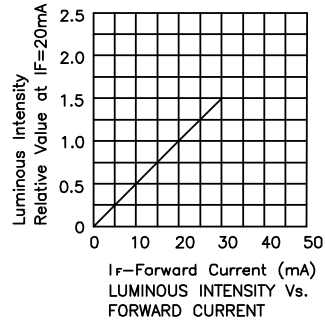
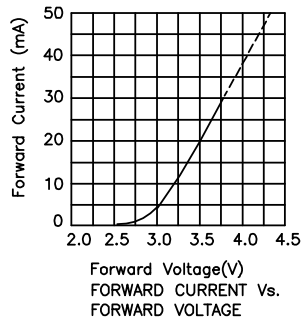
Parameter	White	Units
Power dissipation	105	mW
Forward Current	30	mA
Peak Forward Current [1]	150	mA
Reverse Voltage	5	V
Operating / Storage Temperature	-40°C To +85°C	

Note:

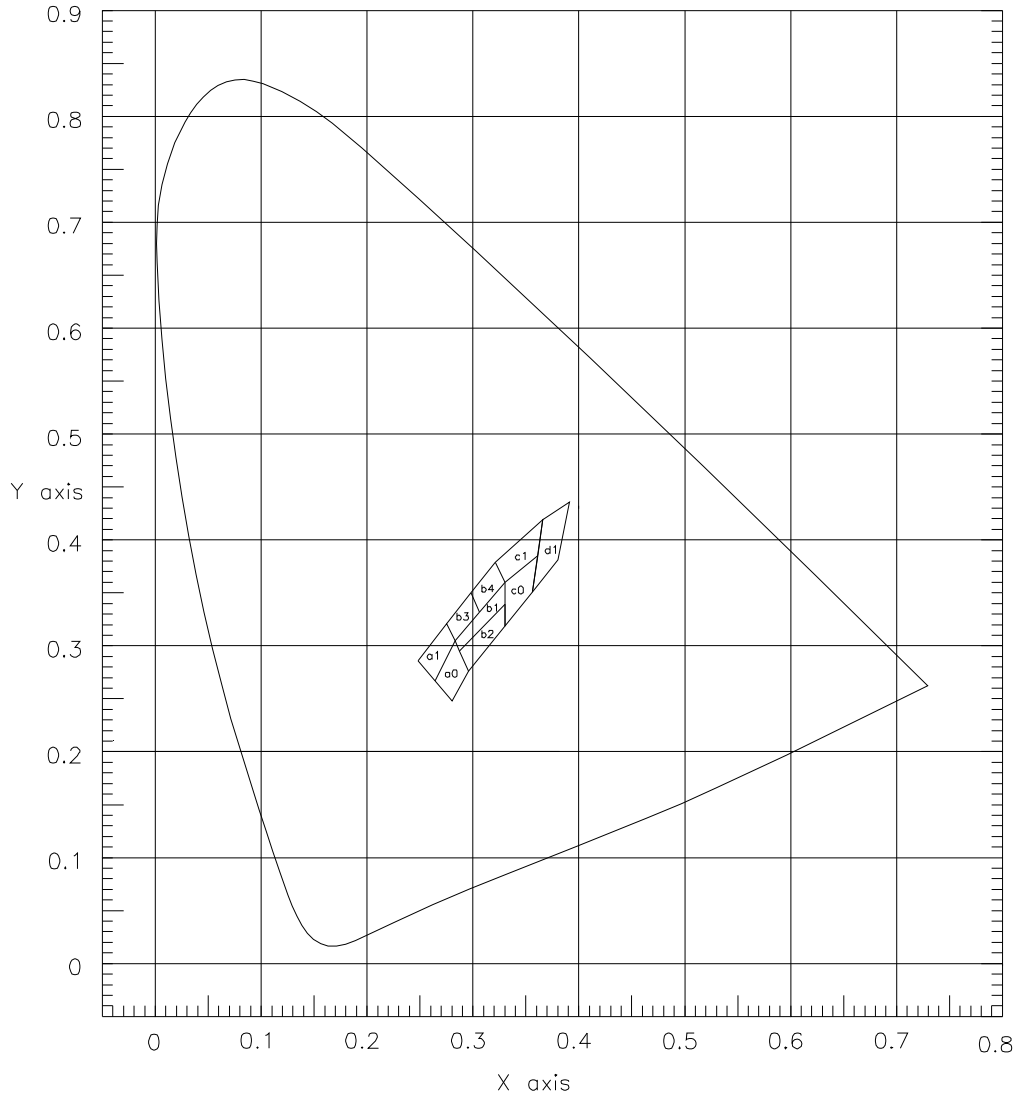
1. 1/10 Duty Cycle, 0.1ms Pulse Width.

White

KPA-1606QWF-D



KPA-1606QWF-D



a1				
X	0.248	0.275	0.283	0.264
Y	0.286	0.321	0.305	0.267
b1				
X	0.283	0.330	0.330	0.287
Y	0.305	0.360	0.339	0.295
c1				
X	0.321	0.366	0.361	0.330
Y	0.379	0.419	0.385	0.360

a0				
X	0.264	0.283	0.296	0.280
Y	0.267	0.305	0.276	0.248
b2				
X	0.287	0.330	0.330	0.296
Y	0.295	0.339	0.318	0.276
c0				
X	0.330	0.361	0.356	0.330
Y	0.360	0.385	0.351	0.318

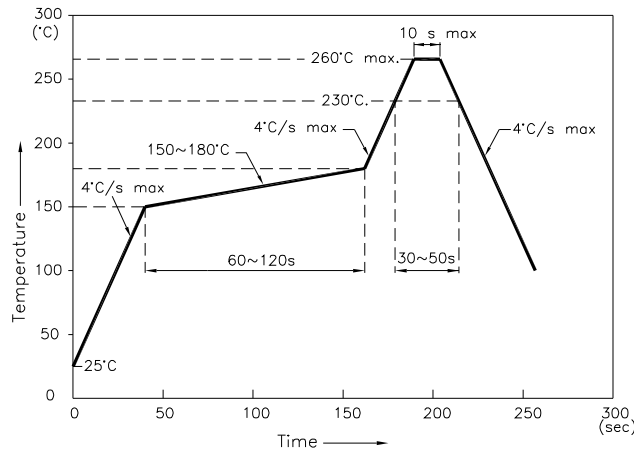
b3				
X	0.275	0.298	0.306	0.283
Y	0.321	0.350	0.332	0.305
b4				
X	0.298	0.321	0.330	0.306
Y	0.350	0.379	0.360	0.332
d1				
X	0.366	0.391	0.380	0.356
Y	0.419	0.436	0.381	0.351

Ta=25°, IF=20mA

Measurement Uncertainty of the Color Coordinates: +/-0.01

KPA-1606QWF-D

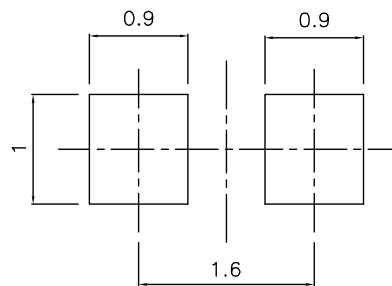
Reflow Soldering Profile For Lead-free SMT Process.



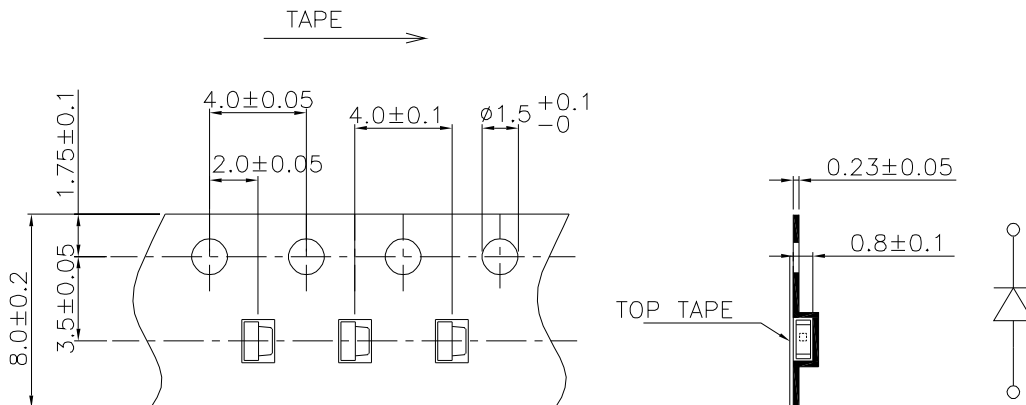
NOTES:

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)



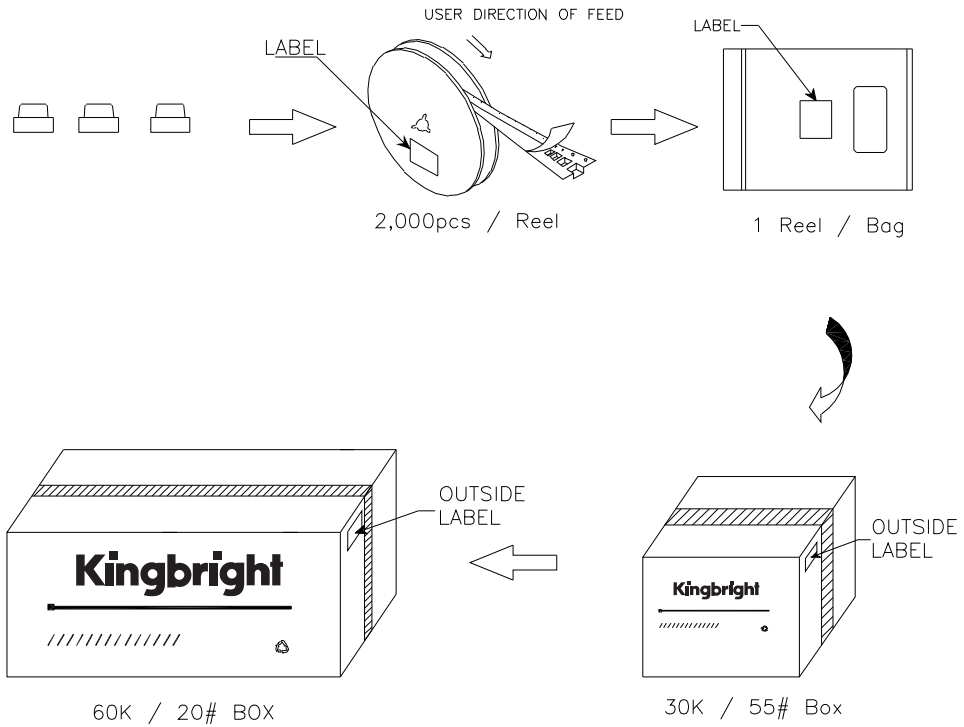
Tape Specifications (Units : mm)




Note: Tolerance is ± 0.25 unless otherwise noted.

PACKING & LABEL SPECIFICATIONS

KPA-1606QWF-D



Kingbright	
P/NO: KPA-1606XXX	
QTY: 2,000 pcs	Q.C. Q C xx xx xxxx PASSED
S/N: XXXX	
CODE: XXX	
LOT NO:	
	
MADE IN CHINA	RoHS Compliant