



SPECIFICATION FOR GoPro SIDE VIEW

Part No.: GPTM8524RGBD1-D1

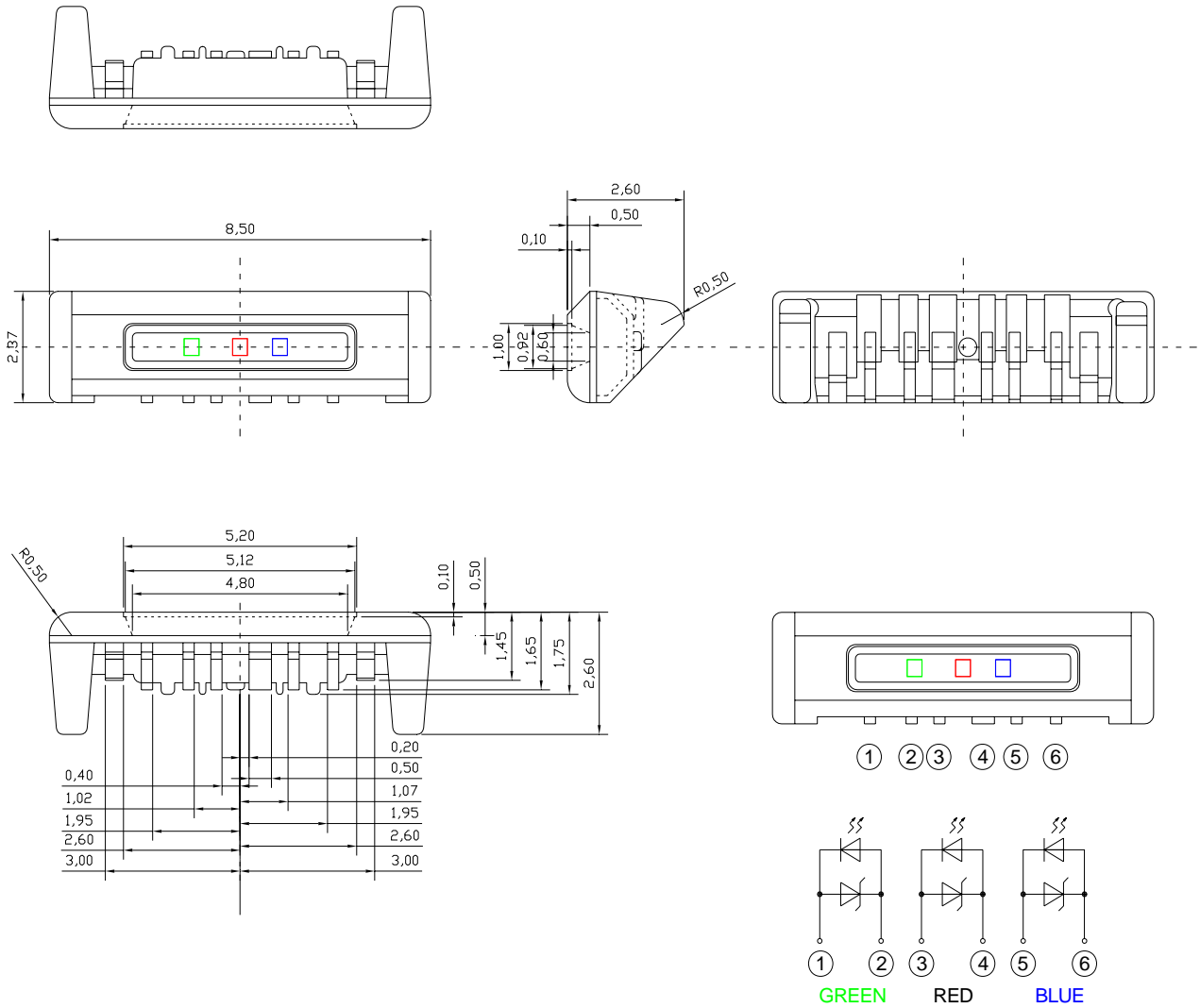
REV: 1.0

RECEIVED	
<input checked="" type="checkbox"/>	MASS PRODUCTION
<input type="checkbox"/>	PRELIMINARY
<input type="checkbox"/>	CUSTOMER DESIGN
DEVICE NUMBER : YG214-07064	
PAGE:	13
CUSTOMER'S APPROVAL	

Designed By	Checked By	Approved By
林弦聰	柳艺伟	黄兆武



● **Package Dimensions:**



Notes :

1. All dimensions are in millimeters
2. Tolerance is ± 0.1 mm unless otherwise noted

● **Features:**

1. Chip material: Green/Blue InGaN
 Red AlInGaP
2. Emitted color: Green (Pin 1,2)
 Red (Pin 3,4)
 Blue (Pin 5,6)
3. Resin Color: White Diffuser
4. Low power consumption.
5. High efficiency.
6. Compatible with infrared and vapor phase reflow solder process.
7. Low current requirement.
8. Tape/3000pcs.
9. This product don't contained restriction substance, compliance RoHS standard.

● **Applications:**

1. TV set
2. Monitor
3. Computer

● **Absolute maximum ratings(Ta=25°C)**

Parameter	Symbol	Rating	Unit	Remark
Power Dissipation	Pd	75 / 120 / 120	mW	R / G / B
Forward Current	IF	40	mA	R / G / B
Peak Forward Current*1	IFP	100	mA	R / G / B
Reverse Voltage	VR	5	V	R / G / B
Operating Temperature	Topr	-40~+85	°C	R / G / B
Storage Temperature	Tstg	-40~+100	°C	R / G / B
Soldering Temperature	Tsol	260 (for 10±1s)	°C	R / G / B
ESD(Air Discharge)	ESD	±8K	V	R / G / B

*1Condition for IFP is pulse of 1/10 duty and 0.1msec width

● Electrical and Optical Characteristics(Ta=25°C)

Parameter	Symbol		Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V _F	R	I _F =35mA	1.80	2.10	2.50	V
		G	I _F =40mA	2.90	3.40	3.60	
		B	I _F =20mA	2.70	3.10	3.50	
Luminous Flux	Φ	R	I _F =35mA	4.0	--	6.3	lm
		G	I _F =40mA	8.0	--	14.5	
		B	I _F =20mA	0.75	--	1.2	
		W21	I _{FR} =35mA I _{FG} =40mA	15.5	--	17.5	
		W22	I _{FB} =20mA	17.5	--	20.0	
Reverse Current	I _R	R	V _R =5V	0.0	0.0	10.0	uA
		G		0.0	0.0	10.0	uA
		B		0.0	0.0	10.0	uA
Dominant Wave Length	λ _d	R	I _F =35mA	--	620.0	--	nm
		G	I _F =40mA	--	523.0	--	nm
		B	I _F =20mA	--	458.0	--	nm

* Tolerance of Luminous Flux: ±10%

* Tolerance of Forward Voltage: ±0.1V

* Tolerance of Dominant Wavelength: ±1nm

* Caution in ESD

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic glove when handing the LED. All devices, equipment and machinery must be properly grounded.

* CAS140B is the test standard for the chromaticity coordinates IV

● Bin Code of Chromaticity Coordinates

Parameter	Bin	Symbol	Min	Symbol	Min	Unit	Condition
CIE Range	R	R_X1	0.6750	R_Y1	0.3130	--	I _{FR} =35mA
		R_X2	0.7051	R_Y2	0.3130		
		R_X3	0.7051	R_Y3	0.2950		
		R_X4	0.6750	R_Y4	0.2950		
	G	G_X1	0.1130	G_Y1	0.8050		I _{FG} =40mA
		G_X2	0.1760	G_Y2	0.8050		
		G_X3	0.2170	G_Y3	0.6870		
		G_X4	0.1680	G_Y4	0.6870		
	B	B_X1	0.1360	B_Y1	0.0585		I _{FB} =20mA
		B_X2	0.1500	B_Y2	0.0585		
		B_X3	0.1500	B_Y3	0.0275		
		B_X4	0.1360	B_Y4	0.0275		
	W	W_X1	0.2550	W_Y1	0.2850		I _{FR} =35mA I _{FG} =40mA I _{FB} =20mA
		W_X2	0.3050	W_Y2	0.2850		
		W_X3	0.3050	W_Y3	0.2050		
		W_X4	0.2550	W_Y4	0.2050		

* Tolerance of Chromaticity Coordinates: ±0.01

● **Bin Code of Chromaticity Coordinates**

R: 35mA / G: 40mA / B: 20mA

Bin Code	X	Y	Bin Code	X	Y
W01	0.2550	0.2050	W02	0.2550	0.2150
	0.2650	0.2050		0.2650	0.2150
	0.2650	0.2150		0.2650	0.2250
	0.2550	0.2150		0.2550	0.2250
W03	0.2550	0.2250	W04	0.2550	0.2350
	0.2650	0.2250		0.2650	0.2350
	0.2650	0.2350		0.2650	0.2450
	0.2550	0.2350		0.2550	0.2450
W05	0.2550	0.2450	W06	0.2550	0.2550
	0.2650	0.2450		0.2650	0.2550
	0.2650	0.2550		0.2650	0.2650
	0.2550	0.2550		0.2550	0.2650
W07	0.2550	0.2650	W08	0.2550	0.2750
	0.2650	0.2650		0.2650	0.2750
	0.2650	0.2750		0.2650	0.2850
	0.2550	0.2750		0.2550	0.2850
W09	0.2650	0.2050	W10	0.2650	0.2150
	0.2750	0.2050		0.2750	0.2150
	0.2750	0.2150		0.2750	0.2250
	0.2650	0.2150		0.2650	0.2250
W11	0.2650	0.2250	W12	0.2650	0.2350
	0.2750	0.2250		0.2750	0.2350
	0.2750	0.2350		0.2750	0.2450
	0.2650	0.2350		0.2650	0.2450
W13	0.2650	0.2450	W14	0.2650	0.2550
	0.2750	0.2450		0.2750	0.2550
	0.2750	0.2550		0.2750	0.2650
	0.2650	0.2550		0.2650	0.2650

* Tolerance of Chromaticity Coordinates: ±0.01

Bin Code of Chromaticity Coordinates

R: 35mA / G: 40mA / B: 20mA

Bin Code	X	Y	Bin Code	X	Y
W15	0.2650	0.2650	W16	0.2650	0.2750
	0.2750	0.2650		0.2750	0.2750
	0.2750	0.2750		0.2750	0.2850
	0.2650	0.2750		0.2650	0.2850
W17	0.2750	0.2050	W18	0.2750	0.2150
	0.2850	0.2050		0.2850	0.2150
	0.2850	0.2150		0.2850	0.2250
	0.2750	0.2150		0.2750	0.2250
W19	0.2750	0.2250	W20	0.2750	0.2350
	0.2850	0.2250		0.2850	0.2350
	0.2850	0.2350		0.2850	0.2450
	0.2750	0.2350		0.2750	0.2450
W21	0.2750	0.2450	W22	0.2750	0.2550
	0.2850	0.2450		0.2850	0.2550
	0.2850	0.2550		0.2850	0.2650
	0.2750	0.2550		0.2750	0.2650
W23	0.2750	0.2650	W24	0.2750	0.2750
	0.2850	0.2650		0.2850	0.2750
	0.2850	0.2750		0.2850	0.2850
	0.2750	0.2750		0.2750	0.2850
W25	0.2850	0.2050	W26	0.2850	0.2150
	0.2950	0.2050		0.2950	0.2150
	0.2950	0.2150		0.2950	0.2250
	0.2850	0.2150		0.2850	0.2250
W27	0.2850	0.2250	W28	0.2850	0.2350
	0.2950	0.2250		0.2950	0.2350
	0.2950	0.2350		0.2950	0.2450
	0.2850	0.2350		0.2850	0.2450

* Tolerance of Chromaticity Coordinates: ± 0.01

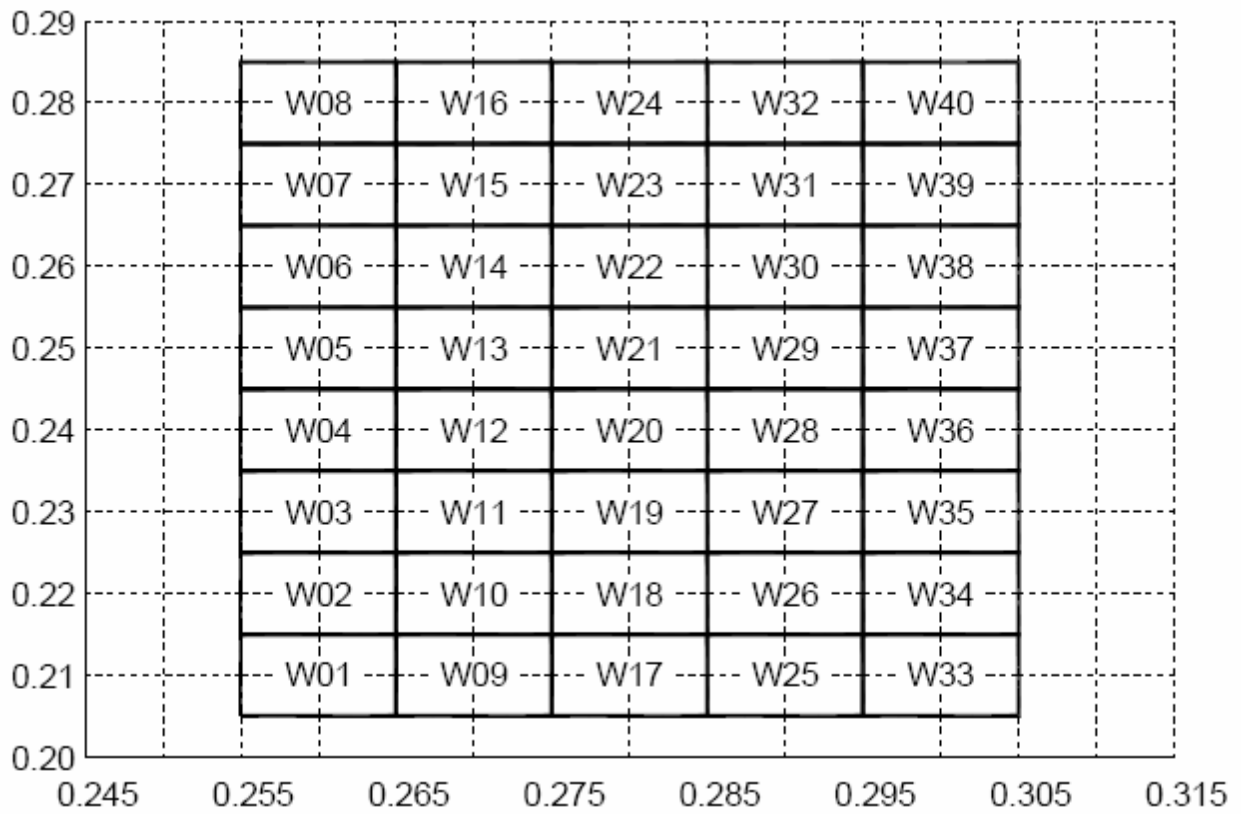
Bin Code of Chromaticity Coordinates

R: 35mA / G: 40mA / B: 20mA

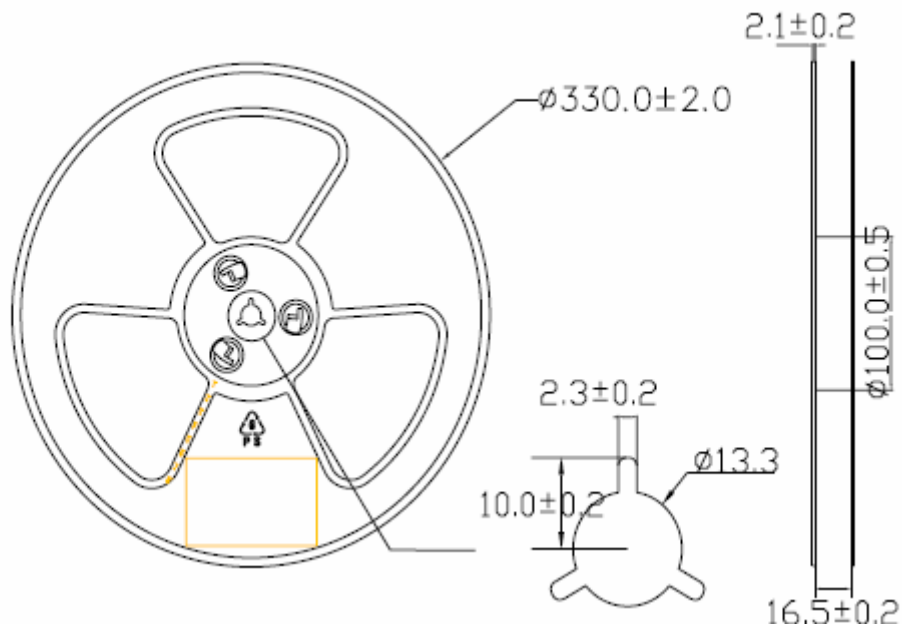
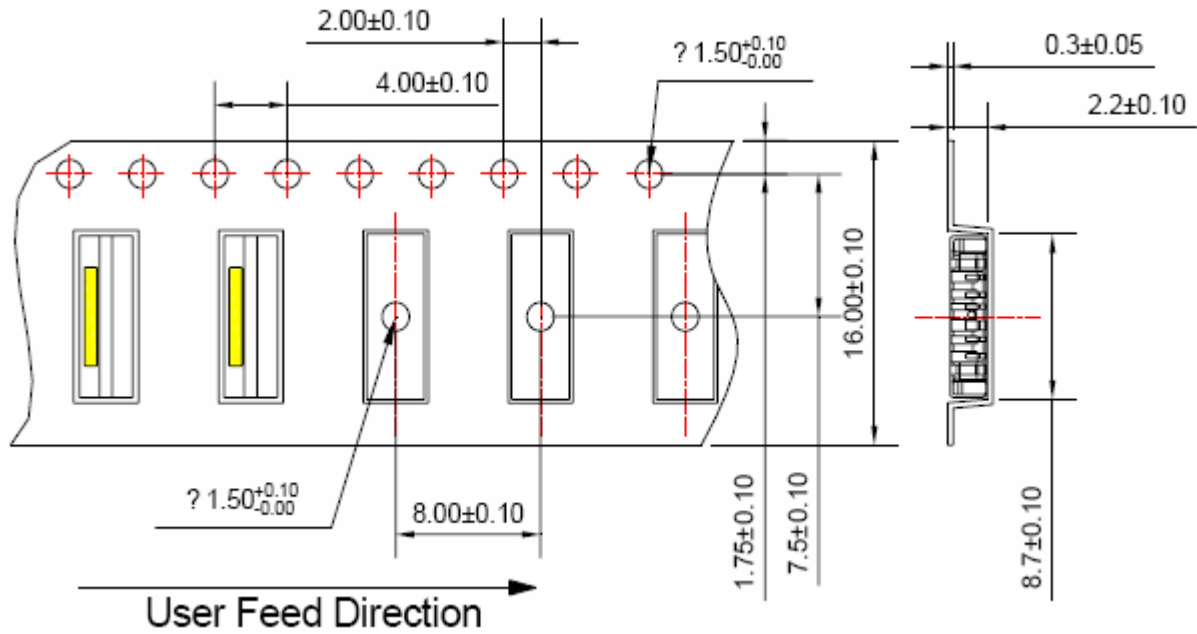
Bin Code	X	Y	Bin Code	X	Y
W29	0.2850	0.2450	W30	0.2850	0.2550
	0.2950	0.2450		0.2950	0.2550
	0.2950	0.2550		0.2950	0.2650
	0.2850	0.2550		0.2850	0.2650
W31	0.2850	0.2650	W32	0.2850	0.2750
	0.2950	0.2650		0.2950	0.2750
	0.2950	0.2750		0.2950	0.2850
	0.2850	0.2750		0.2850	0.2850
W33	0.2950	0.2050	W34	0.2950	0.2150
	0.3050	0.2050		0.3050	0.2150
	0.3050	0.2150		0.3050	0.2250
	0.2950	0.2150		0.2950	0.2250
W35	0.2950	0.2250	W36	0.2950	0.2350
	0.3050	0.2250		0.3050	0.2350
	0.3050	0.2350		0.3050	0.2450
	0.2950	0.2350		0.2950	0.2450
W37	0.2950	0.2450	W38	0.2950	0.2550
	0.3050	0.2450		0.3050	0.2550
	0.3050	0.2550		0.3050	0.2650
	0.2950	0.2550		0.2950	0.2650
W39	0.2950	0.2650	W40	0.2950	0.2750
	0.3050	0.2650		0.3050	0.2750
	0.3050	0.2750		0.3050	0.2850
	0.2950	0.2750		0.2950	0.2850

* Tolerance of Chromaticity Coordinates: ± 0.01

● The C.L.E.1931 Chromaticity Diagram



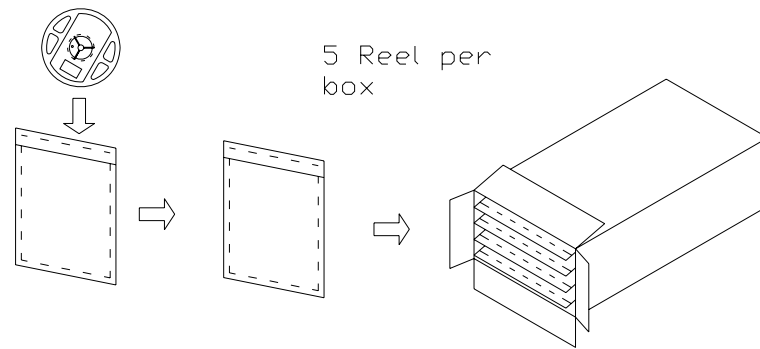
● Carrier Tape Dimensions



Notes:

1. All dimensions are in millimeters(inches), Tolerance is $\pm 0.1\text{mm}$ Unless otherwise noted .
2. 3000pcs/Tape

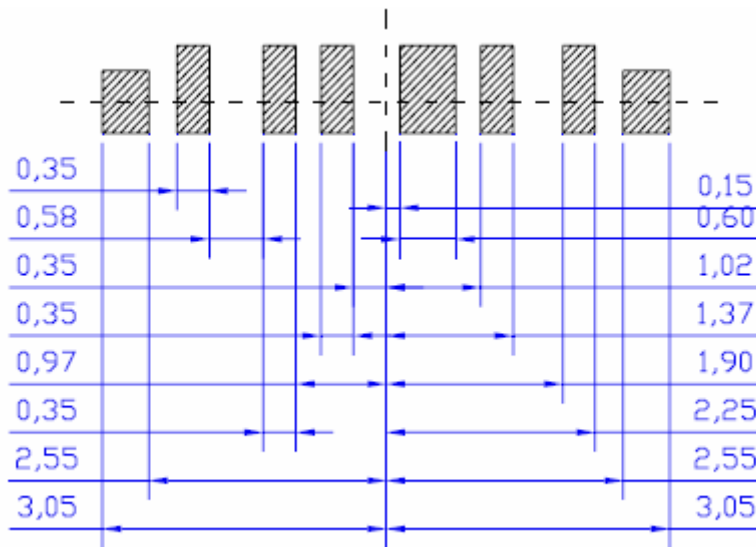
● **Moisture Resistant Packaging**



Notes:

1. All Dimensions are in millimeters, Tolerance is $\pm 2.0\text{mm}$ Unless otherwise noted .
2. Specifications are subject to change without notice.
3. 1Bag:3000pcs , 1Box15,000pcs.
4. ESD Resistant Package.
5. Used vacuum packing mode ,Moisture Resistant Package.
6. Desiccant are put into the each bag.

● **Suggest Soldering Pad Dimensions:**

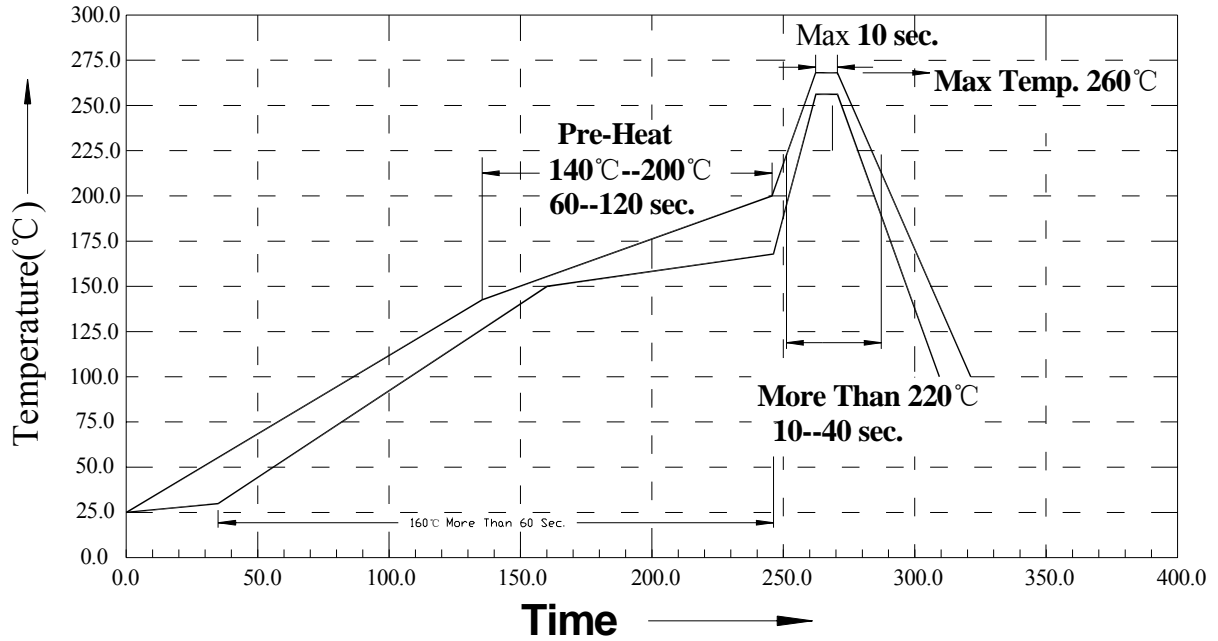


Notes:

1. All Dimensions are in millimeters(inches).

● Suggestion IR Reflow Profile For Pb Free Process

Degree.C. Recommended Profile between Assemble And Heat-Resistance Line



The Profile is available that must to use SnAg_(x=3.3-3.8)Cu_(y=0.2-0.7)Solder paste

● Reliability Test Item And Condition

No	TEST ITEM	CONDITION	DURATION	SAMPLE SIZE
1	Resistance to soldering heat JEITA ED-4701 300 301	IR soldering according attached Lead free (Refer to J-STD-020D.1)	10sec 3 times	100pcs
2	Life test	Ta=60°C IF(R/G/B)=25/30/15mA	1000hrs	100pcs
3	Temperature cycle	- 20°C ~ 25°C ~ 85°C 30min 30min 30min	100cycles	100pcs
4	Thermal shock (TS)	-40°C ~ 105°C 5min 5min	100cycles	30pcs
5	High Temperature Storage	Ta=100°C	1000hrs	30pcs
6	Low Temperature Storage	Ta=-40°C	1000hrs	30pcs
7	High Temperature / High Humidity	Ta=85°C RH=85%	1000hrs	30pcs

● ESD NOTES:

Static Electricity or power surge will damage the LED.

Suggestions to prevent ESD damage:

- Use of a conductive wrist band or anti-electrostatic glove when handling these LEDs.
- All devices, equipment, and machinery must be properly grounded.
- Work tables, storage racks, etc. should be properly grounded.
- Use ion blower to neutralize the static charge which might have built up on surface of the LED's plastic lens as a result of friction between LEDs during storage and handling.

● STORAGE

This product is qualified as Moisture sensitive Level 3 per JEDEC J-STD-020 Precaution when handling this moisture sensitive product is important to ensure the reliability of the product.

The package is sealed:

The LEDs should be stored at 30°C or less and 90%RH or less. And the LEDs are limited to use within one year, while the LEDs is packed in moisture-proof package with the desiccants inside.

The package is opened:

The LEDs should be stored at 30°C or less and 60%RH or less. Moreover, the LEDs are limited to solder process within 168hrs. If the Humidity Indicator shows the pink color in 10% even higher or exceed the storage limiting time since opened, that we recommended to baking LEDs at 60°C at least 24hrs. To seal the remainder LEDs return to package, it's recommended to be with workable desiccants in original package.