



BRIGHTTEK
BRIGHTTEK (EUROPE) LIMITED

Brighten up The World With LED!



ISO/TS 16949:2009



BS EN ISO 14001:2004



QC 080000 IECQ HSPM

PRODUCT DATASHEET

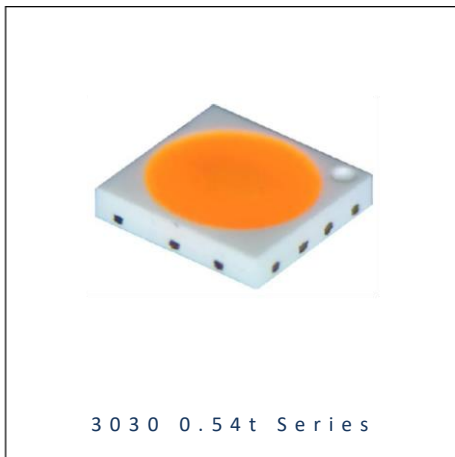


- ▶ EMC SMD
- ▶ 3030 0.54t Series
- ▶ Gold White (PC Amber)

NOW60S61ZPC



Release Date: 30 May 2022 Version: A1.1



3030 0.54t Series

RoHS
Compliant



FEATURES:

- **Package:** Top View EMC White SMD Package
- **Forward Current:** 150mA
- **Forward Voltage (typ.):** 3.2V
- **Luminous Intensity (typ.):** 50mcd@150mA
- **Colour:** Gold White (PC Amber)
- **Colour Temperature (CCT):** 1700K
- **Viewing angle:** 120°
- **Materials:**
 - Die: InGaN
 - Resin: Silicon (Yellow Diffused)
 - L/T Finish: Ag plated
- **Operating Temperature:** -40~+105°C
- **Storage Temperature:** -40~+105°C
- **ESD (HBM):** 2kV
- **Grouping parameters:**
 - Forward Voltage
 - Luminous Flux
 - CIE Chromaticity
- **Soldering methods:** Reflow Soldering
- **Preconditioning:** MSL2 according to J-STD020
- **Packing:** 12mm tape with max.2000/reel, ø180mm (7")

APPLICATIONS:

- Automotive
- Portable Lighting
- Commercial Lighting
- Indoor Lighting
- Backlight for LCD
- General Lighting

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
DC Forward Current	I _F	240	mA
Pulse Forward Current @Duty 1/10, 0.1ms	I _{PF}	500	mA
Reverse Voltage	V _R	5	V
Reverse Current @10V	I _R	10	μA
Junction Temperature	T _j	150	°C
Thermal Resistance Junction to Solder Point	R _{thj-s}	10	°C/W
Electrostatic Discharge (HBM)	ESD	2000	V
Operating Temperature	T _{OPR}	-40~+105	°C
Storage Temperature	T _{STG}	-40~+105	°C
Soldering Temperature	T _{SOL}	260	°C

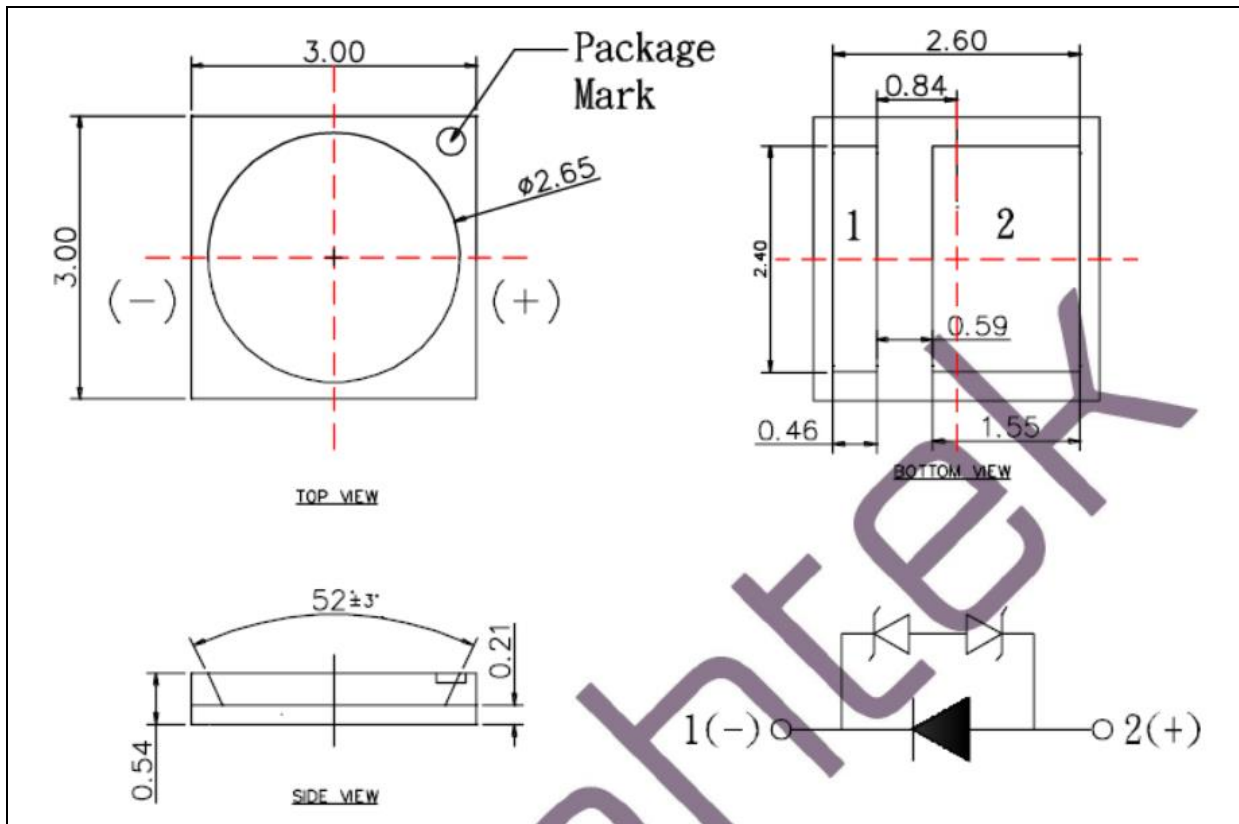
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V _F	2.8	---	3.6	V	I _F =150mA
Luminous Flux	Φ _V	40	---	60	lm	I _F =150mA
Colour Temperature	CCT	---	1700	---	K	I _F =150mA
Viewing Angle	2θ _{1/2}	---	120	---	deg	I _F =150mA

1. Luminous Intensity (Φ_V) ±10%, Forward Voltage (V_F) ±0.1V, Colour Coordinate: ±0.005, Viewing Angle(2θ_{1/2}) ±5%

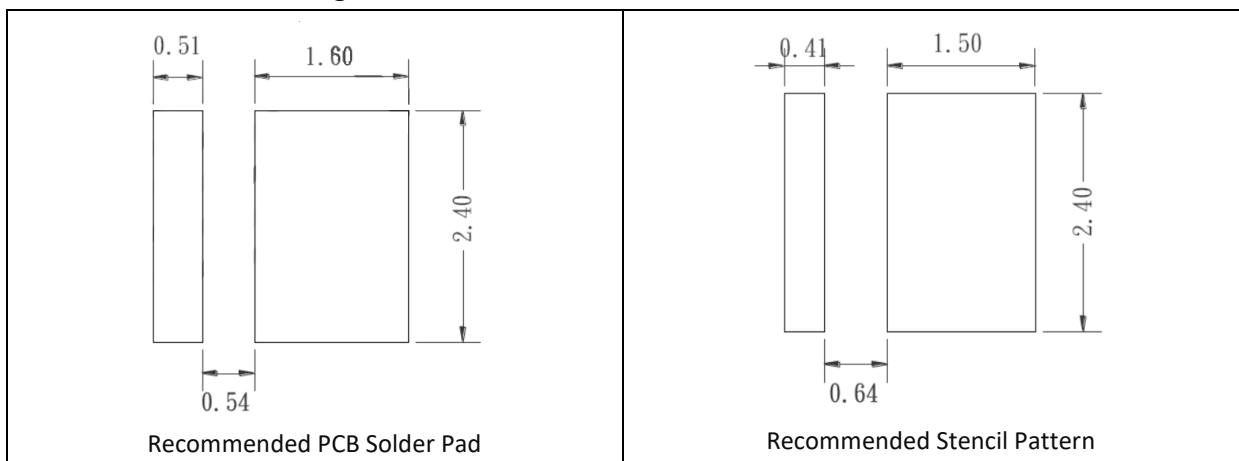
OUTLINE DIMENSION:

Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance ± 0.13 mm, unless otherwise noted.

Recommended Soldering Pad Dimension:



1. Dimensions are in millimetre (mm).
2. Tolerance ± 0.12 mm with angle tolerance $\pm 0.5^\circ$.

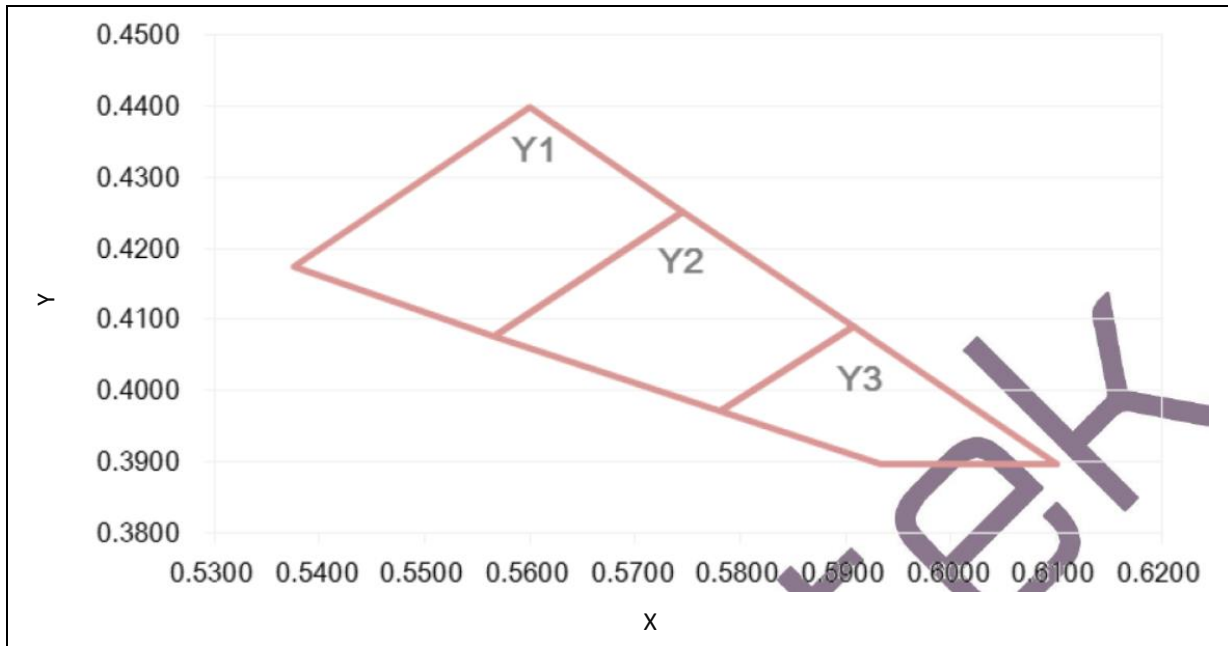
BINNING GROUPS:

 Forward Voltage Classifications ($I_F = 150\text{mA}$):

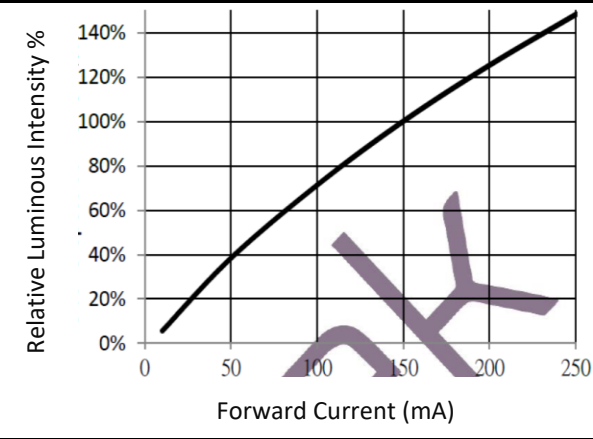
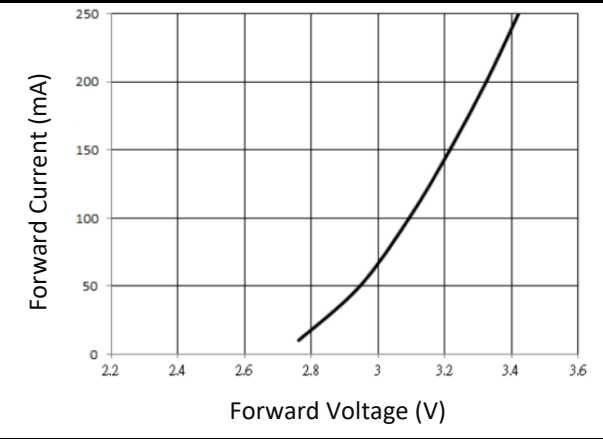
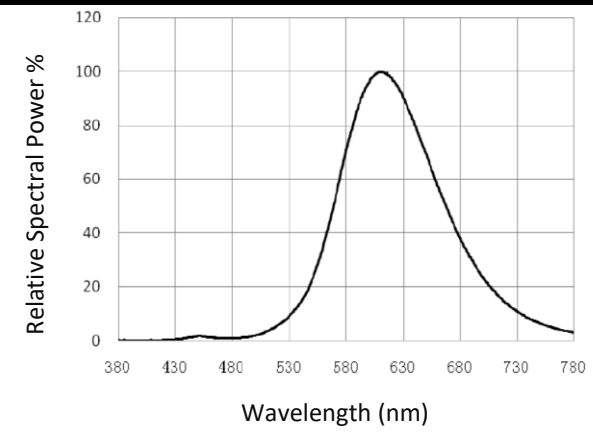
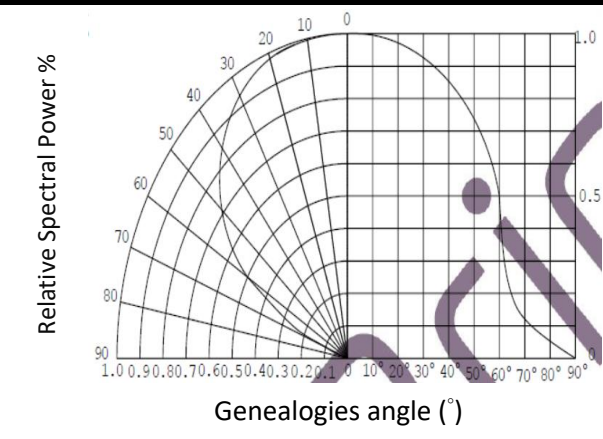
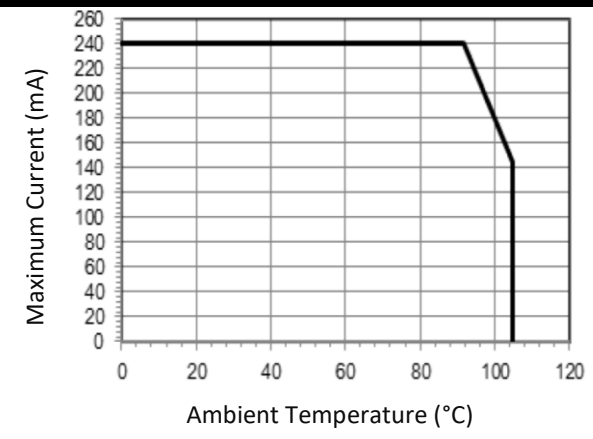
Code	Min.	Max.	Unit
V2830	2.8	3.0	V
V3032	3.0	3.2	
V3234	3.2	3.4	
V3436	3.4	3.6	

 Luminous Flux Classifications ($I_F = 150\text{mA}$):

Code	Min.	Max.	Unit
B23	40	45	mcd
B24	45	50	
B25	50	55	
B26	55	60	

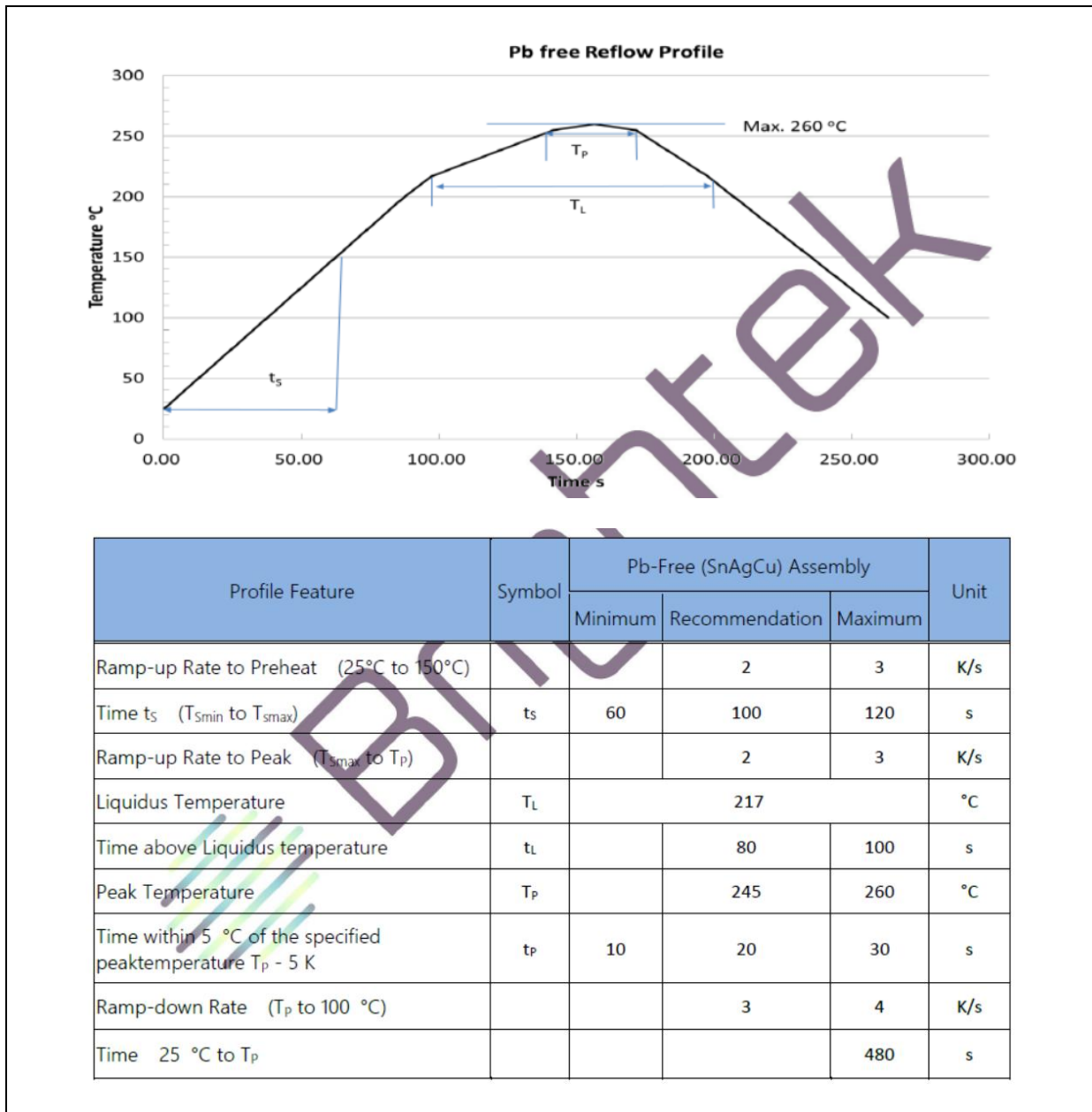
CIE CHROMATICITY DIAGRAM:

 Chromaticity Coordinates Classifications ($I_F = 150\text{mA}$):

	1		2		3		4	
	X	Y	X	Y	X	Y	X	Y
Y1	0.5600	0.4400	0.5375	0.4174	0.5566	0.4076	0.5745	0.4253
Y2	0.5745	0.4253	0.5566	0.4076	0.5780	0.3972	0.5908	0.4090
Y3	0.5908	0.4090	0.5780	0.3972	0.5933	0.3896	0.6100	0.3896

ELECTRO-OPTICAL CHARACTERISTICS:
Relative Luminous Intensity v.s. Forward Current

Forward Current v.s. Forward Voltage

Relative Spectral Power v.s. Wavelength

Directive Radiation

Forward Current Derating Curve


RECOMMENDED SOLDERING PROFILE:

IR Reflow Lead-free Solder:

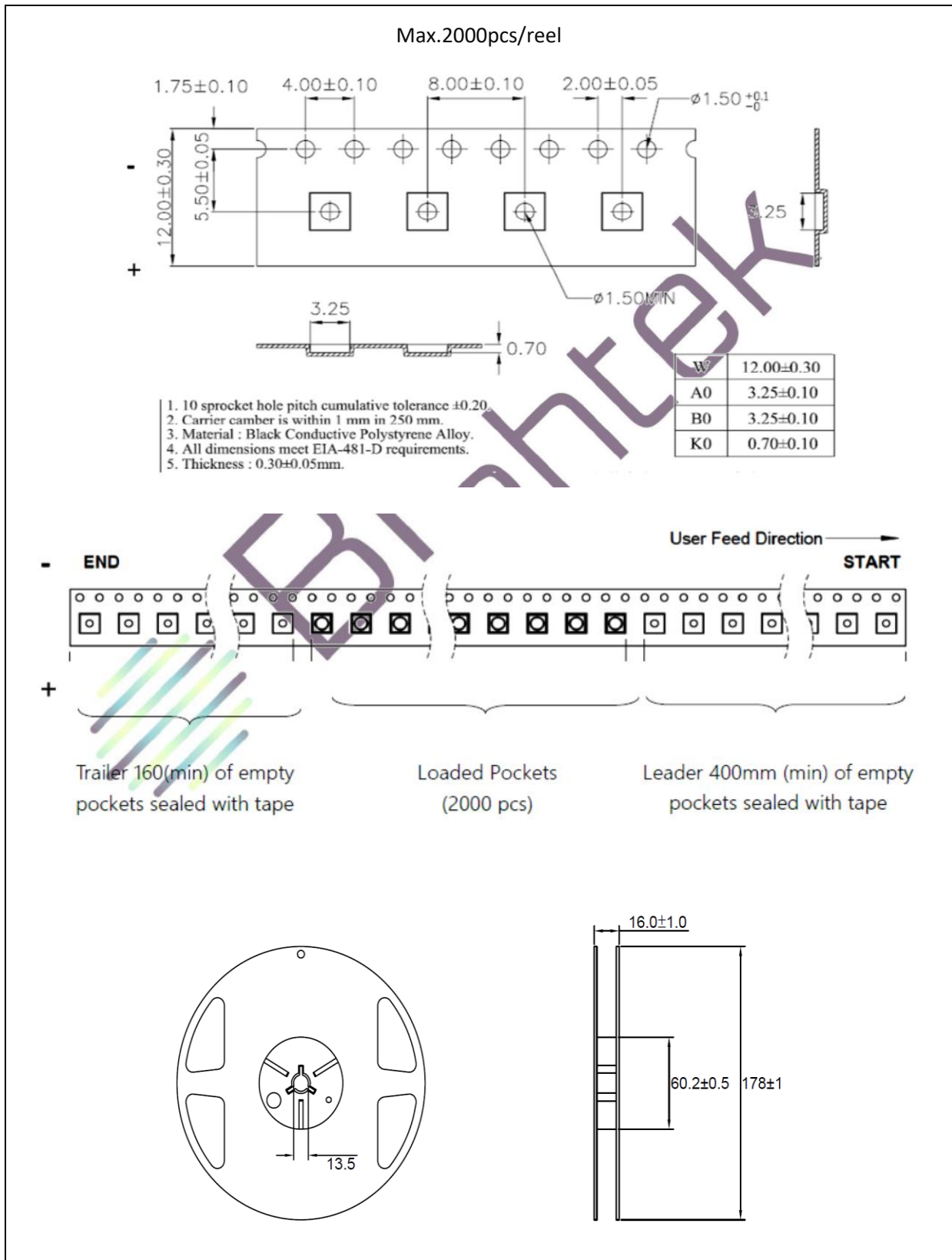


Note:

1. Recommended soldering temperature: 240°C. The maximum soldering temperature should be limited to 260°C.
2. Maximum reflow soldering: 2 times.
3. Before, during, and after soldering, should not apply stress on the components and PCB board.

PACKING SPECIFICATION:

Reel Dimension:



PRECAUTIONS OF USE:

Storage:

It is recommended to store the products in the following conditions:

- Humidity: 60% R.H. Max.
- Temperature: 5°C~30°C (41°F ~86°F).

Shelf life in sealed bag: 12 months at 5°C~30°C and <60% R.H.

Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with desiccating agent <10% R.H. and apply baking.

Baking:

It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs. The suggested baking conditions are as followings:

- 60±3°C x 24hrs and <5%RH, taped / reel package.

It's normal to see slight color fading of carrier (light yellow) after baking in process.

Testing Circuit:



Must apply resistor(s) for protection (over current proof).

Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED carrier / package. Avoid putting any stress force directly on to the LED lens.

ESD (Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrosatic glove is recommended when handling the LED all time. All devices, equipment, machinery, work tables, and storage racks must be properly grounded.

In the events of manual working in process, make sure the devices are well protected from ESD at any time.

REVISION RECORD:

Version	Date	Summary of Revision
A1.0	04/06/2019	Datasheet set-up.
A1.1	30/05/2022	New datasheet format.