Technical Data Sheet 3 mm Round LED (T-1)

Features

- Popular T-1 colorless 3mm package.
- High luminous power.
- Typical chromaticity coordinates x=0.29, y=0.28 according to CIE1931.
- Bulk, available taped on reel.
- ESD-withstand voltage: up to 4KV
- The product itself will remain within RoHS compliant version.



Descriptions

- The series is designed for application required high luminous intensity.
- ·com.cn • The phosphor filled in the reflector converts the blue emission of InGaN chip to ideal white.

Applications

- Outdoor Displays
- Optical Indicators
- Backlighting
- Marker Lights

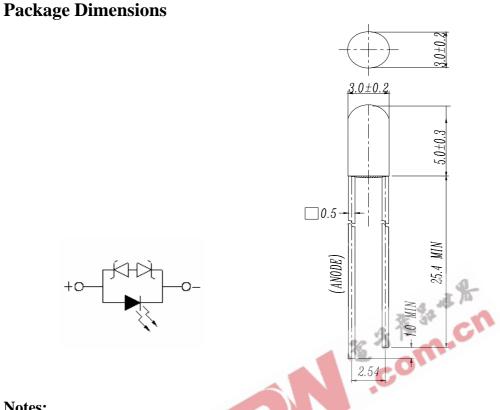
Device Selection Guide

DA DE NO	Cł		
PART NO.	Material	Emitted Color	Lens Color
234/T2C3-1PSB	InGaN	White	Water Clear

http\\:www.everlight.com Established date:07-07-2005

EVERLIGHT **Technical Data Sheet** 3 mm Round LED (T-1)

234/T2C3-1PSB



Notes:

1.All dimensions are in millimeters, and tolerance is 0.25mm except being specified. 2.Lead spacing is measured where the lead emerges from the package.

3.Protruded resin under flange is 1.5mm Max. LED.

Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Continuous Forward Current	$I_{\rm F}$	30	mA
Peak Forward Current(Duty /10 @ 1KHZ)	I_{FP}	100	mA
Reverse Voltage	V _R	5	V
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature (T=5 sec)	T _{sol}	260 ± 5	°C
Power Dissipation	P _d	100	mW
Zener Reverse Current	Iz	100	mA
Electrostatic Discharge	ESD	4K	V

Everlight Electronics Co., Ltd. Device Number: DLE-023-053

http\\:www.everlight.com Established date:07-07-2005

Rev 1 Page: 2 of 9 Established by: Amy Ma

Technical Data Sheet 3 mm Round LED (T-1)

234/T2C3-1PSB

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Тур.	Max.	Units
Forward Voltage	$V_{\rm F}$	I _F =20mA		3.5	4.0	V
Zener Reverse Voltage	Vz	Iz=5mA	5.2			V
Reverse Current	I _R	V _R =5V			50	uA
Luminous Intensity	Iv	I _F =20mA	2850		7150	mcd
Viewing Angle	2 0 1/2	I _F =20mA		30		deg
Chromaticity	Х	I _F =20mA		0.29	3	
Coordinates	у		··· 3	0.28	n,	
			122	011.		

Luminous Intensity Combination (mcd at 20mA)

I _V Ranks	Р	Q	R	S
Min.	2850	3600	4500	5650
Max.	3600	4500	5650	7150

*Measurement Uncertainty of Luminous Intensity: ±15%

Forward Voltage Combination (V at 20mA)

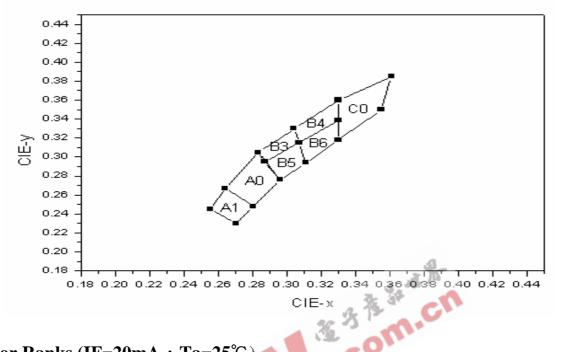
Group			В		
Rank	1	2	3	4	5
Min.	3.00	3.20	3.40	3.60	3.80
Max.	3.20	3.40	3.60	3.80	4.00

*Measurement Uncertainty of Forward Voltage : ±0.1V

http\\:www.everlight.com Established date:07-07-2005

234/T2C3-1PSB

CIE Chromaticity Diagram



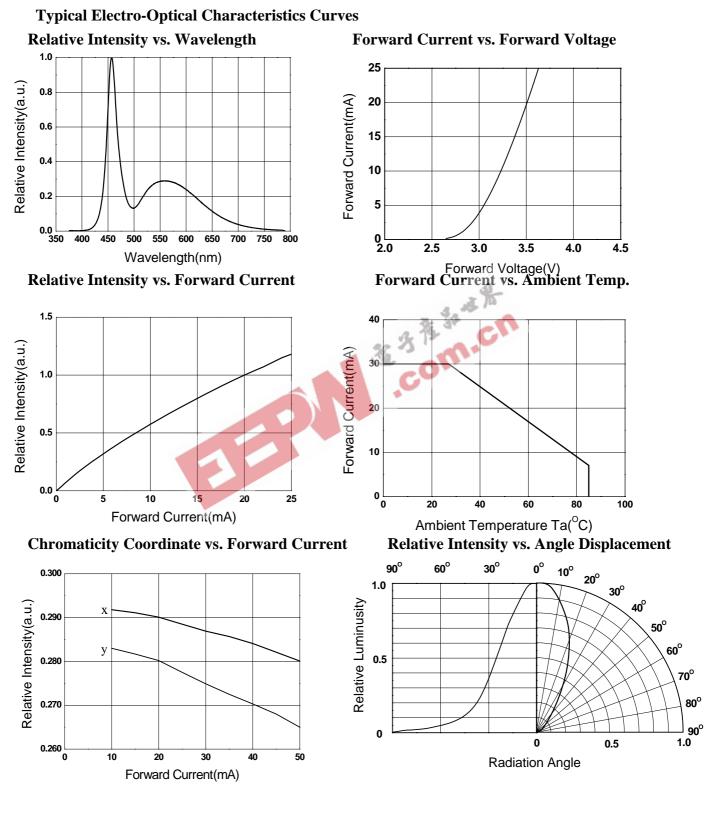
Color Ranks (IF=20mA , Ta=25°C)

Color Ran	ks		C	IE	
A 1	X	0.255	0.264	0.28	0.27
A1	Y	0.245	0.267	0.248	0.23
10	X	0.264	0.283	0.296	0.28
A0	Y	0.267	0.305	0.267	0.248
D2	X	0.283	0.304	0.307	0.287
B3	Y	0.305	0.33	0.315	0.295
D4	Х	0.304	0.33	0.33	0.307
B4	Y	0.33	0.36	0.339	0.315
DC	X	0.287	0.307	0.311	0.296
B5	Y	0.295	0.315	0.294	0.276
B6	Х	0.307	0.33	0.33	0.311
	Y	0.315	0.339	0.318	0.294
C 0	Х	0.33	0.361	0.355	0.33
CO	Y	0.36	0.385	0.35	0.318

*Measurement uncertainty of the color coordinates ± 0.01

Everlight Electronics Co., Ltd. Device Number: DLE-023-053 http\\:www.everlight.com Established date:07-07-2005 Rev 1 Page: 4 of 9 Established by: Amy Ma EVERLIGHT Technical Data Sheet 3 mm Round LED (T-1)

234/T2C3-1PSB



Everlight Electronics Co., Ltd. Device Number: DLE-023-053 http\\:www.everlight.com Established date:07-07-2005 Rev 1 Page: 5 of 9 Established by: Amy Ma

Technical Data Sheet 3 mm Round LED (T-1)

Label Form Specification



234/T2C3-1PSB

CPN: Customer's Production Number P/N : Production Number **QTY:** Packing Quantity CAT: IV&VF Rank HUE: Color Rank **REF:** Reference LOT No: Lot Number MADE IN TAIWAN: Production Place

Everlight Electronics Co., Ltd. Device Number: DLE-023-053

http\\:www.everlight.com Established date:07-07-2005

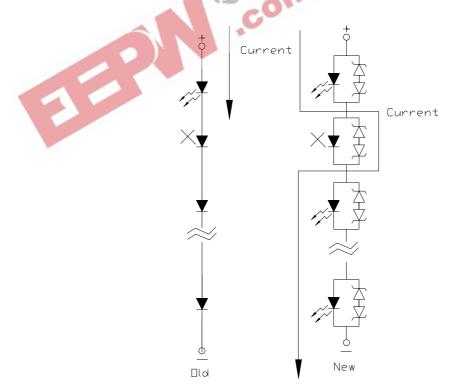
Page: 6 of 9 Rev 1 Established by: Amy Ma

Technical Data Sheet 3 mm Round LED (T-1)

234/T2C3-1PSB

Notes

- 1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
- 2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- 3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.
- 4. Below the zener reference voltage Vz, all the current flows through LED and as the voltage rises to Vz, the zener diode "breakdown." If the voltage tries to rise above Vz current flows through the zener branch to keep the voltage at exactly Vz.
- 5. When the LED is connected using serial circuit, if either piece of LED is no light up but current can't flow through causing others to light down. In new design, the LED is parallel with zener diode. if either piece of LED is no light up but current can flow through causing others to light up



Everlight Electronics Co., Ltd. Device Number: DLE-023-053 http\\:www.everlight.com Established date:07-07-2005 Rev 1 Page: 7 of 9 Established by: Amy Ma

234/T2C3-1PSB

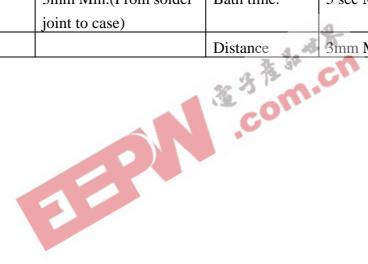
6. Soldering Condition

Careful attention should be paid during soldering. When soldering, leave more then 3mm from solder joint to case, and soldering beyond the base of the tie bar is recommended.

Avoiding applying any stress to the lead frame while the LEDs are at high temperature particularly when soldering.

Recommended soldering conditions:

Hand Soldering		DIP Soldering		
Temp. at tip of iron	400°C Max. (30W Max.)	Preheat temp.	100°C Max. (60 sec Max.)	
Soldering time	3 sec Max.	Bath temp.	265 Max.	
Distance	3mm Min.(From solder joint to case)	Bath time.	5 sec Max.	
		Distance 3	3mm Min.	



EVERLIGHT ELECTRONICS CO., LTD. Office: No 25, Lane 76, Sec 3, Chung Yang Rd, Tucheng, Taipei 236, Taiwan, R.O.C *Tel:* 886-2-2267-2000, 2267-9936 *Fax:* 886-2267-6244, 2267-6189, 2267-6306 *http:\\www.everlight.com*

Everlight Electronics Co., Ltd. Device Number: DLE-023-053 http\\:www.everlight.com Established date:07-07-2005 Rev 1 Page: 8 of 9 Established by: Amy Ma