

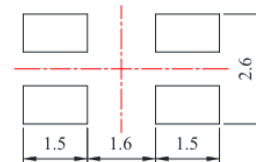
Features

- 3528 package (3.5 x 2.8 x 1.8mm) top-mount SMD LED
- High brightness output
- InGaN chip technology
- Compact package size
- High reliability performance
- Clear lens configuration

Description

The IN-P32MTFG is a popular PLCC4 3528 package with versatile design capabilities. It is a PLCC type molding style LED which can be used in various applications.

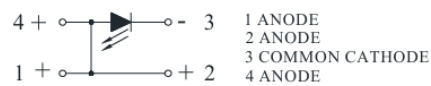
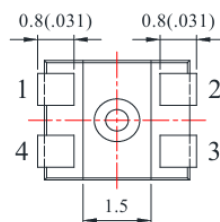
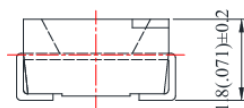
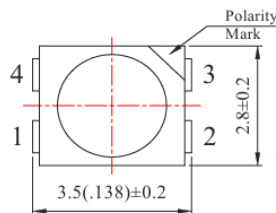
Recommended Solder Pattern



Applications

- Consumer electronics
- Wearables
- Automobile aftermarket
- Industrial equipment

Package Dimensions in mm



Polarity

Notes.

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

Absolute Maximum Rating $T_A = 25^{\circ}\text{C}$ (Note)

Product	Emission Color	P_d (mW)	I_F (mA)	I_{FP}^* (mA)	V_R (V)	T_{OP} ($^{\circ}\text{C}$)	T_{ST} ($^{\circ}\text{C}$)
IN-P32MTFG	Green	216	60	100	5	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$	$-40^{\circ}\text{C} \sim +100^{\circ}\text{C}$

Note

1. Condition for I_{FP} is pulse of 1/10 duty and 0.1msec width

ESD Precaution

ATTENTION: Electrostatic Discharge (ESD) protection



The symbol above denotes that ESD precaution is needed. ESD protection for GaP and AlGaAs based chips is necessary even though they are relatively safe in the presence of low static-electric discharge. Parts built with AlInGaP, GaN, or/and InGaN based chips are STATIC SENSITIVE devices. ESD precaution must be taken during design and assembly. If manual work or processing is needed, please ensure the device is adequately protected from ESD during the process.

Please be advised that normal static precautions should be taken in the handling and assembly of this device to prevent damage or degradation which may be induced by electrostatic discharge (ESD).

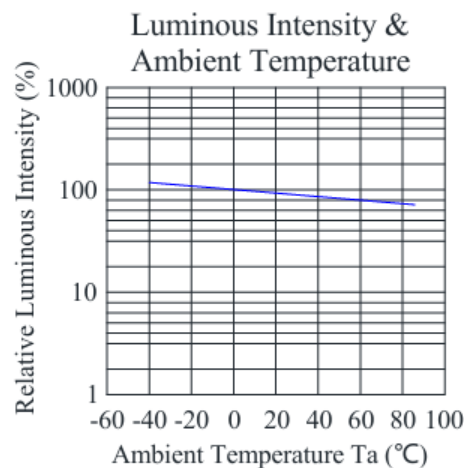
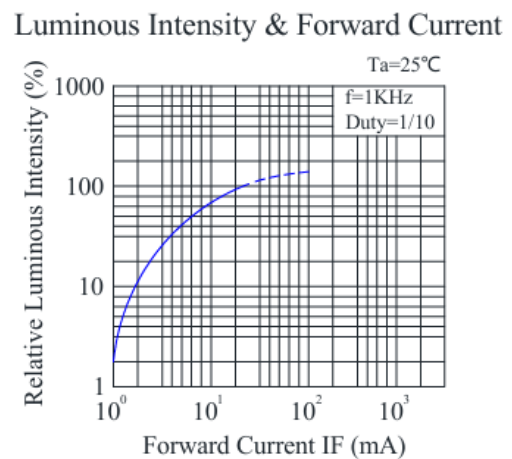
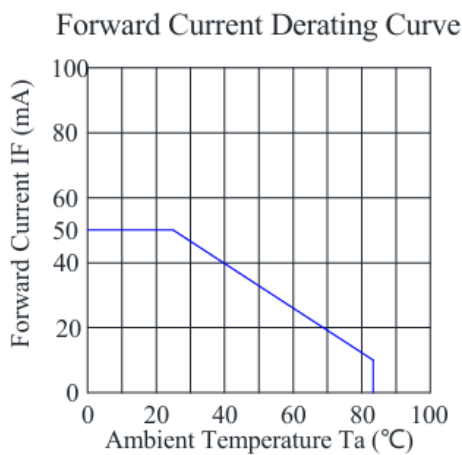
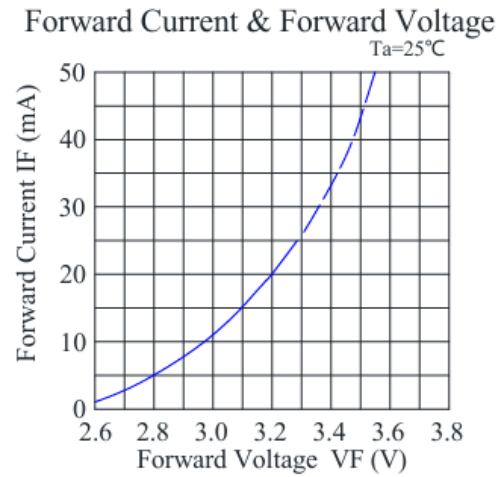
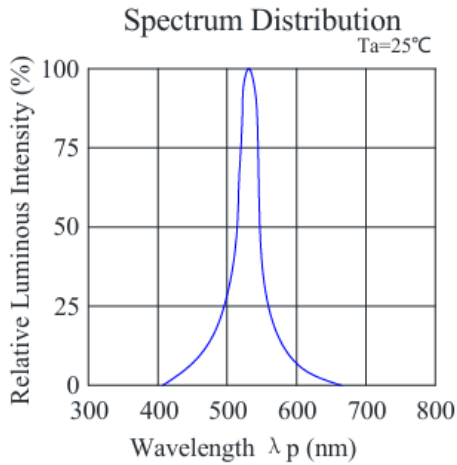
Electrical Characteristics $T_A = 25^{\circ}\text{C}$ (Note)

Product	Emission Color	I_F (mA)	V_F (V)	λ (nm)			Viewing Angle ($^{\circ}$)	IV (mcd)
			typ.	λ_D	λ_P	$\Delta\lambda$	$2\theta_{1/2}$	typ.
IN-P32MTFG	Green	50	3.2	525	520	35	120	5000

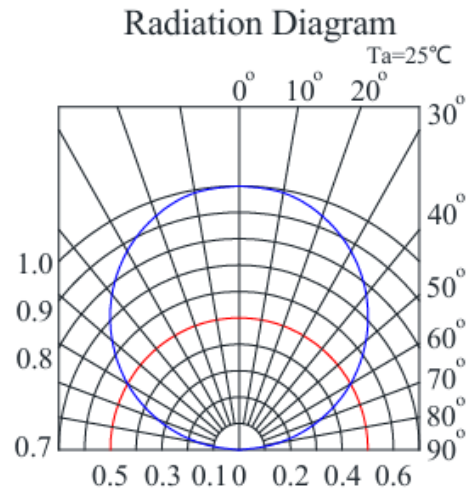
Note

1. Performance guaranteed only under conditions listed in above tables.

Typical Characteristic Curves



Typical Characteristic Curves – Radiation Pattern



Ordering Information

Orderable Part Number	Emission Color	Technology	Test Current I_F (mA)	IV (mcd) (Typ.)	Forward Voltage V_F (V) (Typ.)
IN-P32MTFG	Green	InGaN	50	5000	3.2

Label Specifications

		Date: yyyy/mm/dd
CUSTOMER P/N: 		
INOLUX P/N:	QTY:	PCS
LOT NO: 		
QC		
IV BIN:	COLOR BIN:	VF:

Inolux P/N:

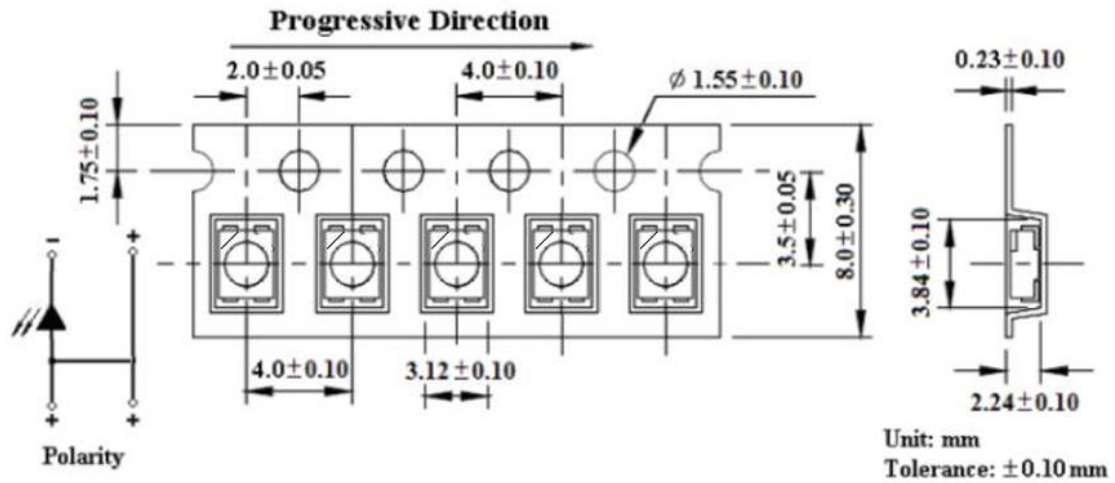
I	N	-	P	3	2	M	T	F		G	-	-	-	-	-
Inolux SMD			Material	Package		Variation	Orientation	Current	Lens	Color	Customized Stamp-off				
			PLCC - P	32M = 3.5 x 2.8 x 1.8mm PLCC4			T = Top Mount	F = 50mA	U = Diffused	G= 525nm	-				

Lot No.:

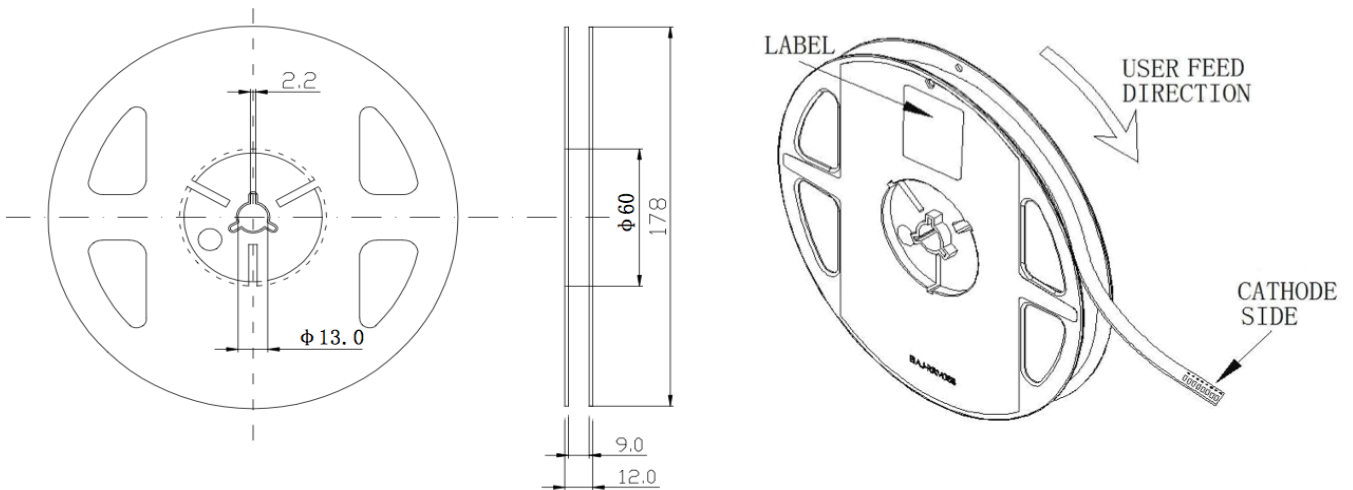
Z	2	0	1	7	01	24	001
Internal Tracker	Year (2017, 2018,)				Month	Date	Serial

Packaging Information: 2000pcs Per Reel

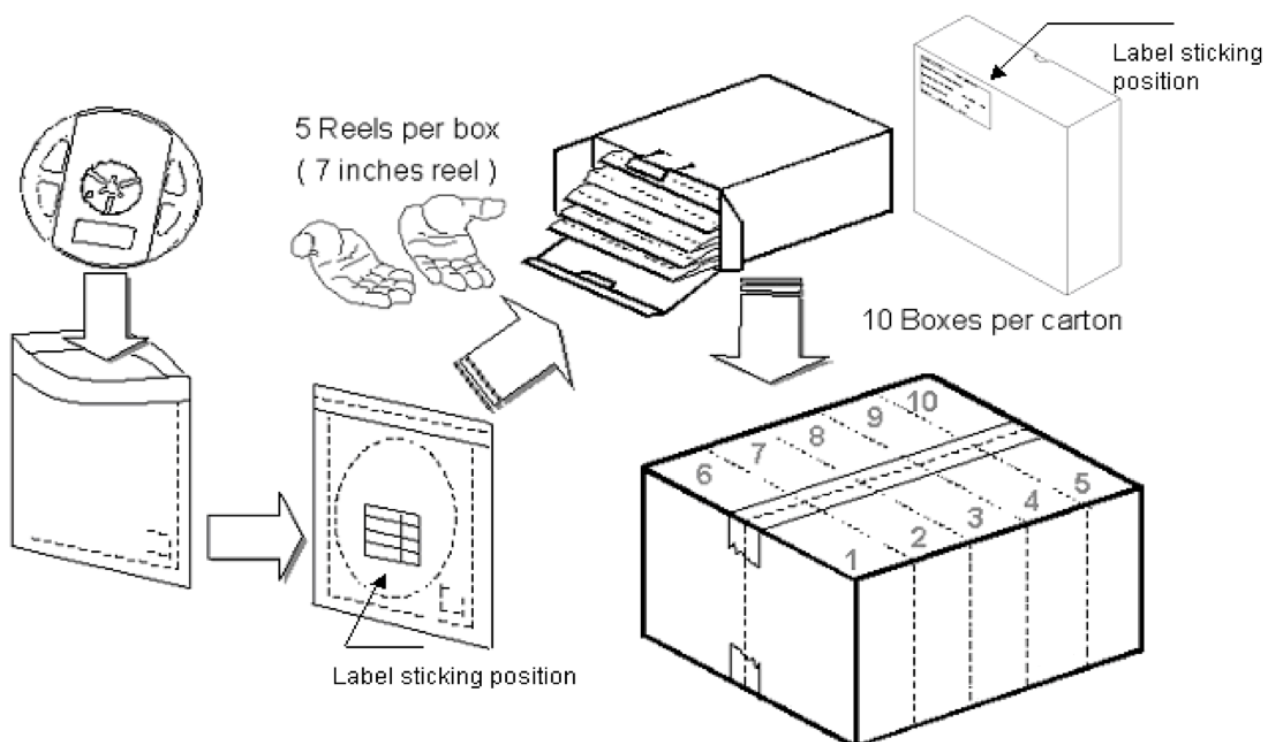
Tape Dimension



Reel Dimension



Packing Dimension



5 boxes per carton are available depending on shipment quantity.

	Specification	Material	Quantity
Carrier tape	Per EIA 481-1A specs	Conductive black tape	2000pcs per reel
Reel	Per EIA 481-1A specs	Conductive black	
Label	Standard	Paper	
Packing bag	220x240mm	Aluminum laminated bag/ no-zipper	One reel per bag
Carton	Standard	Paper	Non-specified

Others:

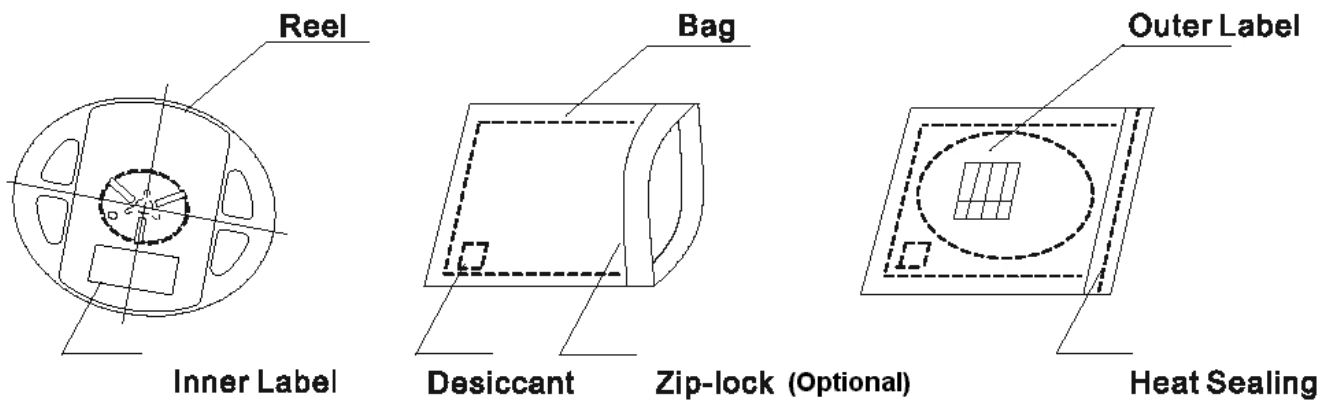
Each immediate box consists of 5 reels. The 5 reels may not necessarily have the same lot number or the same bin combinations of I_v , λ_D and V_f . Each reel has a label identifying its specification; the immediate box consists of a product label as well.

Dry Pack

All SMD optical devices are **MOISTURE SENSITIVE**. Avoid exposure to moisture at all times during transportation or storage. Every reel is packaged in a moisture protected anti-static bag. Each bag is properly sealed prior to shipment.

Upon request, a humidity indicator will be included in the moisture protected anti-static bag prior to shipment.

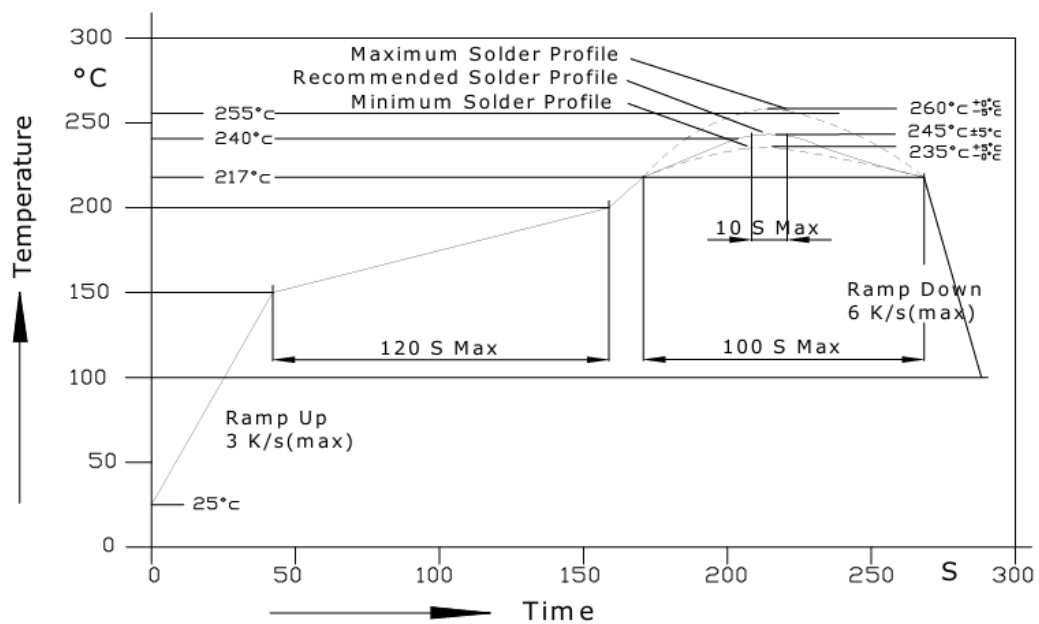
The packaging sequence is as follows:



Reflow Soldering

- Reflow soldering should not be done more than two times.
- When soldering, do not put stress on the LEDs during heating.
- After soldering, do not warp the circuit board.
- Because different board designs use different number and types of devices, solder pastes, reflow ovens, and circuit boards, no single temperature profile works for all possible combinations.
- Recommended soldering conditions:

. Pb-free solder temperature profile



Reflow soldering		Soldering iron	
Pre-heat	150~200°C	Temperature	300°C Max.
Pre-heat time	120 sec. Max.	Soldering time	3 sec. Max.
Peak temperature	260°C Max.		(one time only)
Soldering time	10 sec. Max.(Max. two times)		

Precautions

- Avoid exposure to moisture at all times during transportation or storage.
- Anti-Static precaution must be taken when handling GaN, InGaN, and AlInGaP products.
- It is suggested to connect the unit with a current limiting resistor of the proper size. Avoid applying a reverse voltage.
- Avoid operation beyond the limits as specified by the absolute maximum ratings.
- Avoid direct contact with the surface through which the LED emits light.
- If possible, assemble the unit in a clean room or dust-free environment.

Reworking

- Rework should be completed within 5 seconds under 260 °C.
- The iron tip must not come in contact with the copper foil.
- Twin-head type is preferred.

Cleaning

Following are cleaning procedures after soldering:

- An alcohol-based solvent such as isopropyl alcohol (IPA) is recommended.
- Temperature x Time should be 50°C x 30sec. or <30°C x 3min
- Ultra sonic cleaning: < 15W/ bath; bath volume ≤ 1liter
- Curing: 100 °C max, <3min

Cautions of Pick and Place

- Avoid stress on the resin at elevated temperature.
- Avoid rubbing or scraping the resin by any object.
- Electro-static may cause damage to the component. Please ensure that the equipment is properly grounded. Use of an ionizer fan is recommended.

Revision History

Changes since last revision	Page	Version No.	Revision Date
Initial Release		1.0	05-07-2025
Updated		1.1	09-29-2026

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2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.