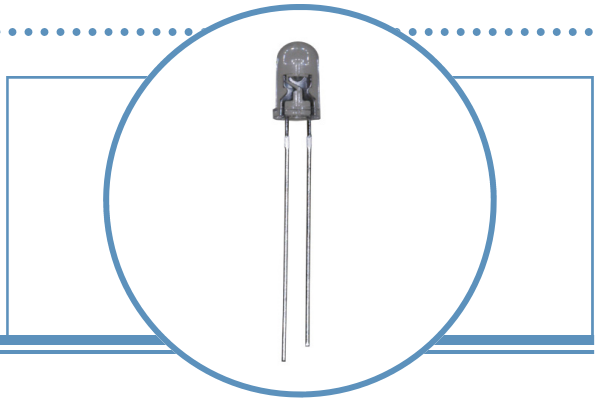
Round Through-Hole LED Lamp (5 mm)

TT electronics
OPTEK Technology

OVLFx3C7 Series

- High brightness with well-defined spatial radiation patterns
- UV-resistant epoxy lens
- Blue, green, red, yellow

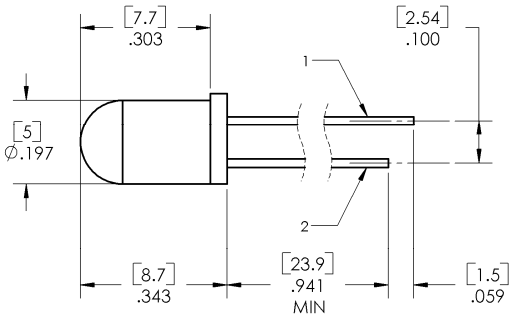


Each device in the **OVLFx3C7** series is a high-intensity LED mounted in a clear plastic T-1¾ package. The LED provides a well-defined and even emission pattern. Its UV-resistant epoxy lens makes this device an optimal solution for outdoor applications.

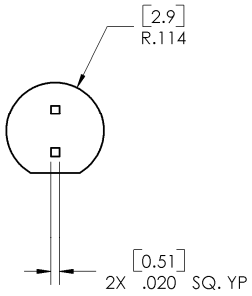
Applications

- Traffic and pedestrian signals
- Signage and architectural lighting
- Backlighting
- Automotive

Part Number	Material	Emitted Color	Intensity Typ. mcd	Lens Color
OVLFB3C7	InGaN	Blue	1350	Water Clear
OVLFG3C7	InGaN	Green	5200	Water Clear
OVLFR3C7	AlInGaP	Red	5000	Water Clear
OVLFY3C7	AlInGaP	Yellow	5700	Water Clear



1 ANODE 2 CATHODE



DIMENSIONS ARE IN: **[MILLIMETERS]** **INCHES**

RoHS Moisture

ATTENTION
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

DO NOT LOOK DIRECTLY AT LED WITH UNSHIELDED EYES OR DAMAGE TO RETINA MAY OCCUR.

OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

Absolute Maximum Ratings

T_A = 25° C unless otherwise noted

Storage Temperature Range		-40 ~ +100 °C
Operating Temperature Range		-40 ~ +85 °C
Reverse Voltage		5 V
Continuous Forward Current	Blue, Green	20 mA
	Red, Yellow	30 mA
Peak Forward Current (10% Duty Cycle, 1 kHz)	Blue, Green	50 mA
	Red, Yellow	100 mA
Power Dissipation	Blue, Green	100 mW
	Red, Yellow	78 mW
Current Linearity vs Ambient Temperature	Blue, Green	-0.2 mA/° C
	Red, Yellow	-0.5 mA/° C
LED Junction Temperature		125° C
Lead Soldering Temperature (3 mm from the base of the epoxy bulb)[1]		260° C

Note:
1. Solder time less than 5 seconds at temperature extreme.

Electrical Characteristics

T_A = 25° C unless otherwise noted

SYMBOL	PARAMETER	COLOR	MIN	TYP	MAX	UNITS	CONDITIONS
I_V	Luminous Intensity	Blue	810	1350	----	mcd	I_F = 20 mA
		Green	3115	5200	----		
		Red	2820	5000	----		
		Yellow	3115	5700	----		
V_F	Forward Voltage	Blue	----	3.4	4.0	V	I_F = 20 mA
		Green	2.6	3.4	4.0		
		Red	----	2.2	2.6		
		Yellow	----	2.2	2.6		
I_R	Reverse Current	Blue	----	----	50	µA	V_R = 5 V
		Green	----	----	50		
		Red	----	----	10		
		Yellow	----	----	10		
λ_P	Peak Wavelength	Blue	----	466	----	nm	I_F = 20 mA
		Green	----	521	----		
		Red	----	633	----		
		Yellow	----	593	----		
λ_D	Dominant Wavelength	Blue	----	470	----	nm	I_F = 20 mA
		Green	----	525	----		
		Red	619	623	630		
		Yellow	----	589	----		
Δλ	Spectra Half Width	Blue	----	25	----	nm	I_F = 20 mA
		Green	----	25	----		
		Red	----	25	----		
		Yellow	----	25	----		
2Θ½H-H	50% Power Angle		----	30	----	deg	I_F = 20 mA

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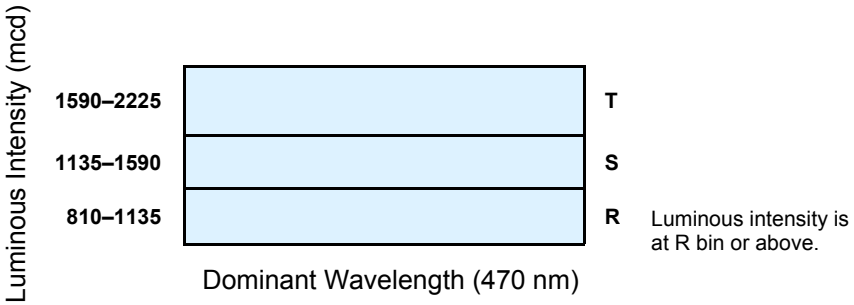
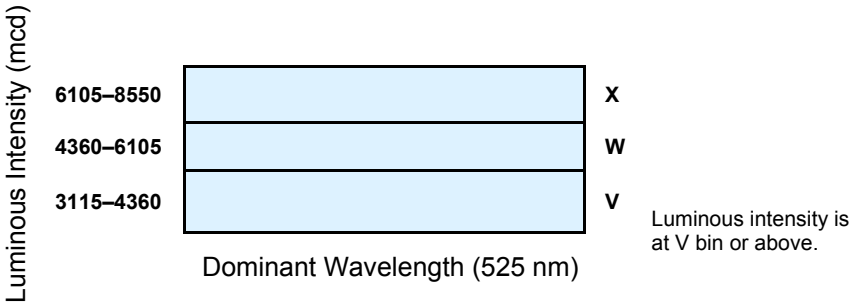
Standard Bins (I_F = 20 mA)

Lamps are sorted to luminous intensity (I_V) and dominant wavelength (λ_D) bins shown.
Orders may be filled with any or all bins contained as below.

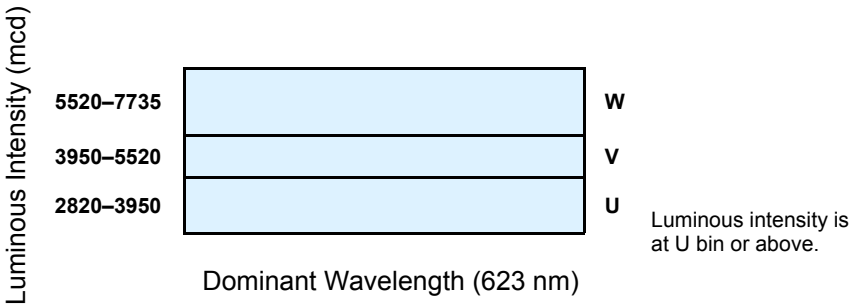
OVLFB3C7 (BLUE)



OVLFG3C7 (GREEN)

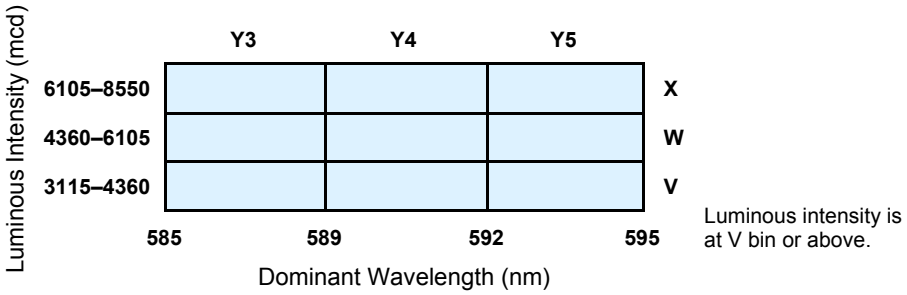


OVLFR3C7 (RED)



Notes:
1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.
3. Pb content <1000 PPM.

OVLFY3C7 (YELLOW)

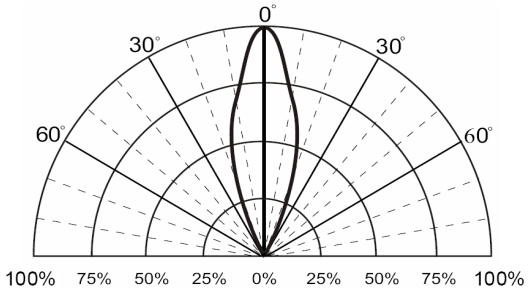


Luminous intensity is at V bin or above.

Important Notes:

1. All ranks will be included per delivery, rank ratio will be based on the chip distribution.
2. To designate luminous intensity ranks, please contact OPTEK.
3. Pb content <1000 PPM.

Beam Pattern



Beam Pattern

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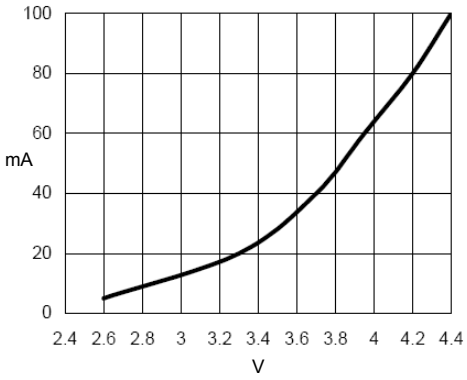
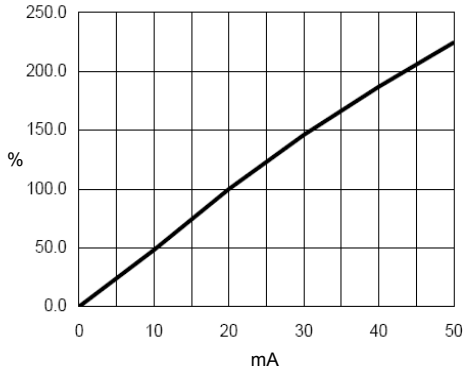
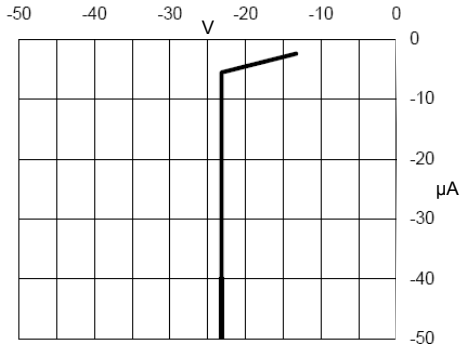
Typical Electro-Optical Characteristics Curves (BLUE)



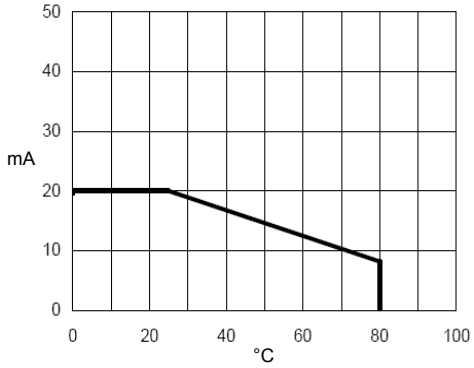
Forward Current vs Forward Voltage



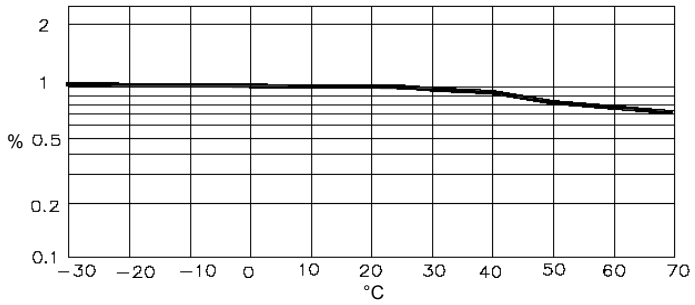
Relative Luminous Intensity vs Forward Current



Reverse Current vs Reverse Voltage

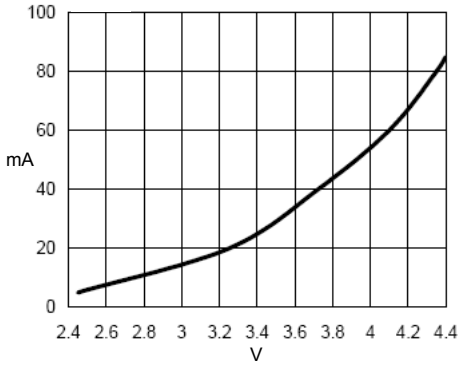


Forward Current vs Ambient Temperature

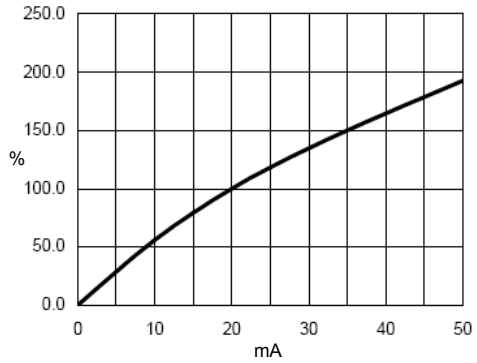


Relative Luminous Intensity vs Ambient Temperature

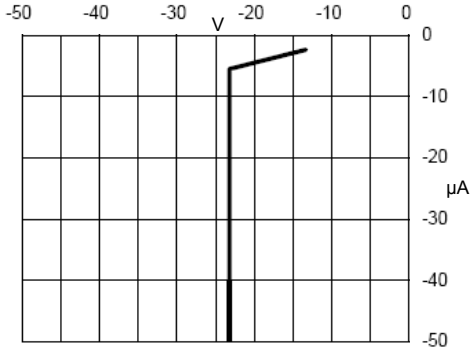
Typical Electro-Optical Characteristics Curves (GREEN)



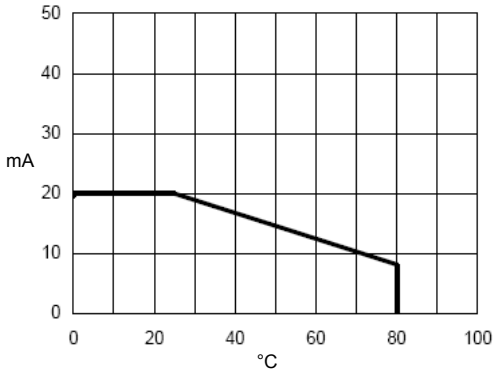
Forward Current vs Forward Voltage



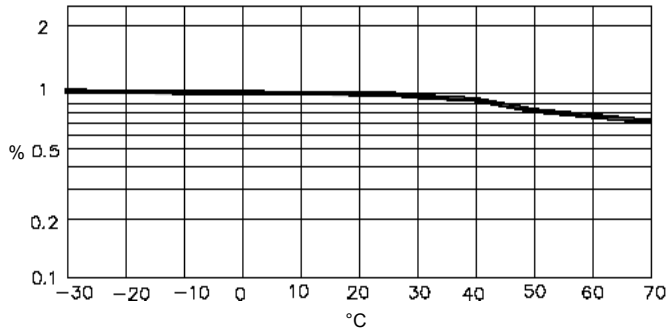
Relative Luminous Intensity vs Forward Current



Reverse Current vs Reverse Voltage



Forward Current vs Ambient Temperature



Relative Luminous Intensity vs Ambient Temperature

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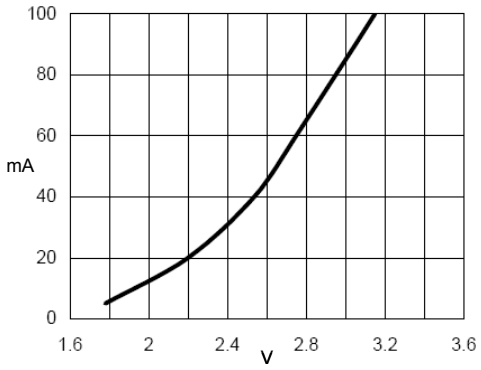
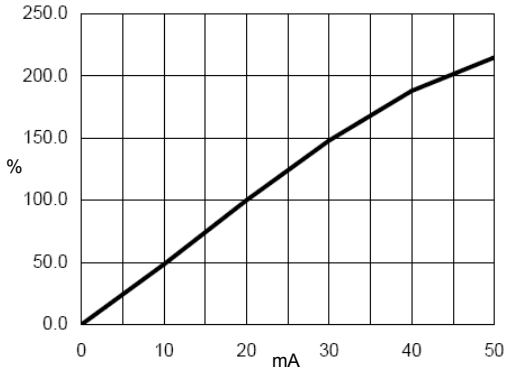
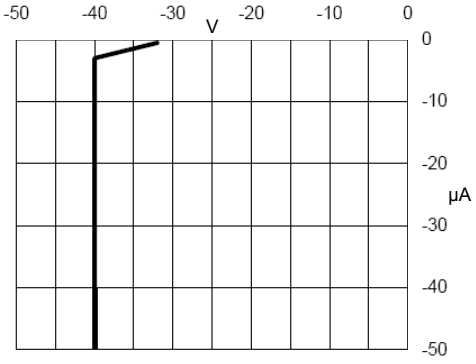
Typical Electro-Optical Characteristics Curves (RED)



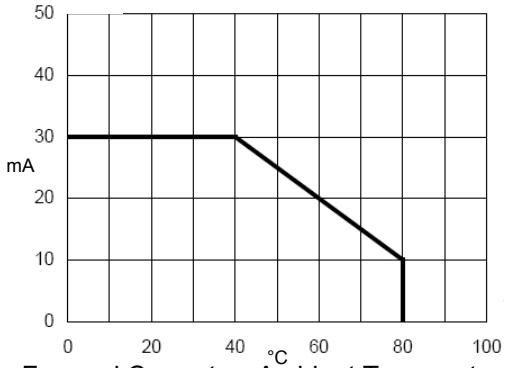
Forward Current vs Forward Voltage



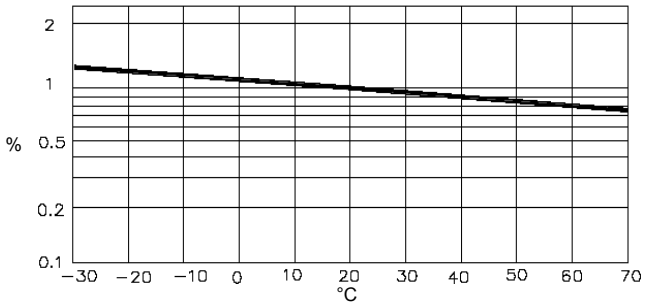
Relative Luminous Intensity vs Forward Current



Reverse Current vs Reverse Voltage

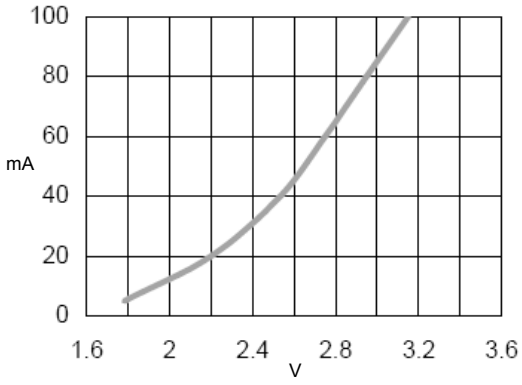


Forward Current vs Ambient Temperature

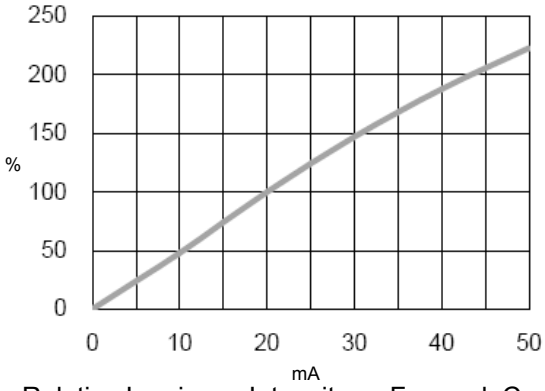


Relative Luminous Intensity vs Ambient Temperature

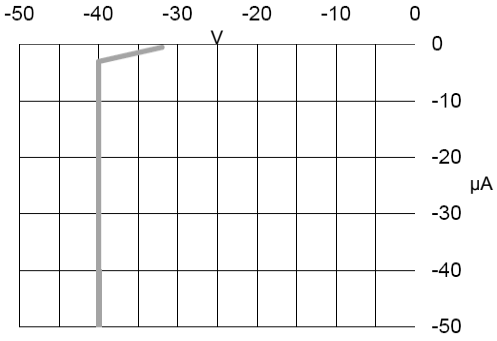
Typical Electro-Optical Characteristics Curves (YELLOW)



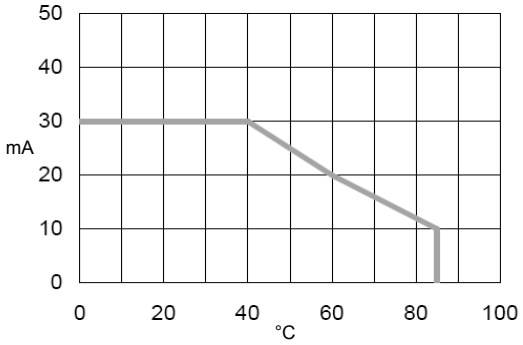
Forward Current vs Forward Voltage



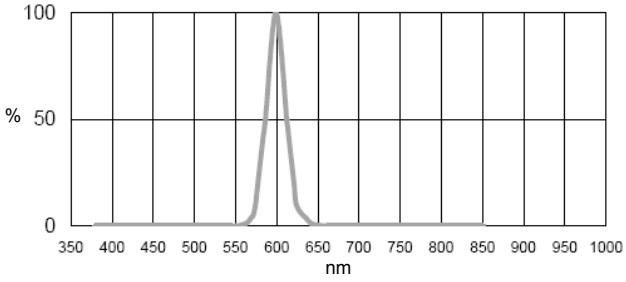
Relative Luminous Intensity vs Forward Current



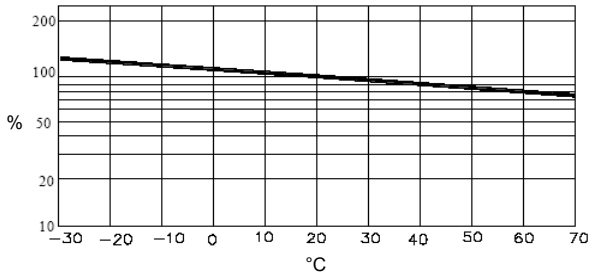
Reverse Current vs Reverse Voltage



Forward Current vs Ambient Temperature



Relative Luminous Intensity vs Wavelength



Relative Luminous Intensity vs Ambient Temperature

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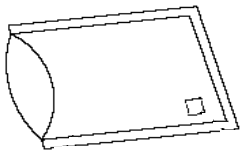
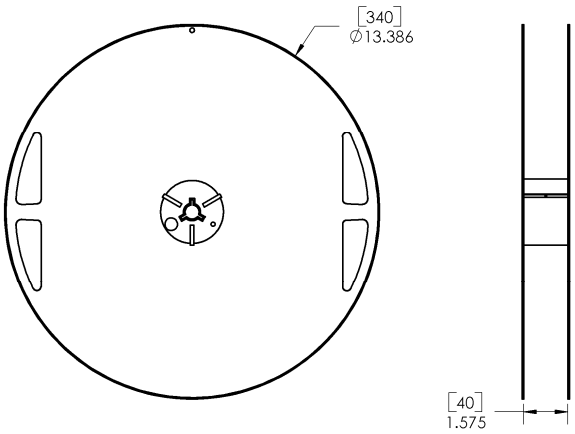
Packing Information: Available in bulk or reel

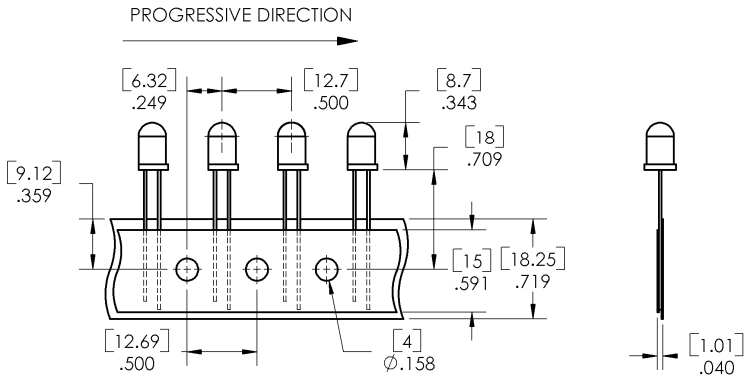


Bulk: 500 pcs/bag



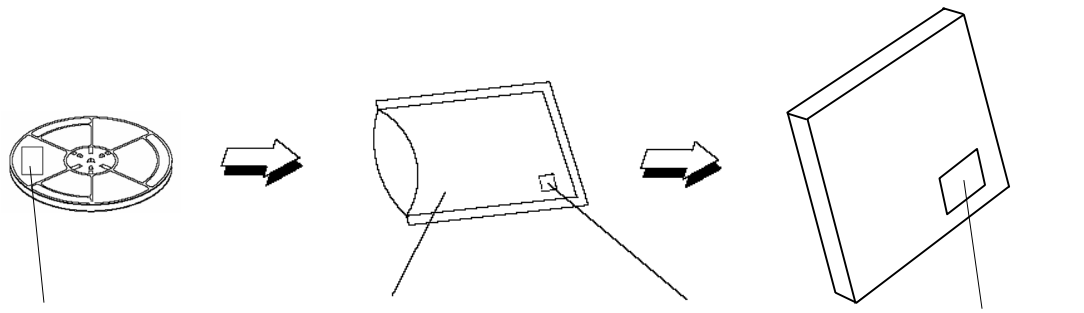
13-inch reel: 1000 pcs/reel

Carrier Tape Dimensions: Loaded quantity 1000 pieces per reel



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

Moisture Resistant Packaging



Label — Aluminum Moisture-proof Bag — Desiccant — Bar Code Label

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