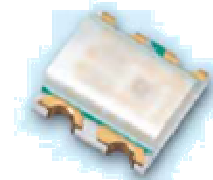


Full Color .35mm Height Chip LED



OVSTKGBBCR9

- Surface mount device packaged in 8 mm tape on 7" diameter reel
- Compatible with automatic placement equipment
- Compatible with infrared and vapor phase reflow solder process
- Low profile, full-color device
- Pb-free
- Dimensions: 1.6 x 1.6 x 0.35 mm

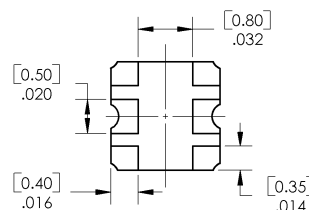
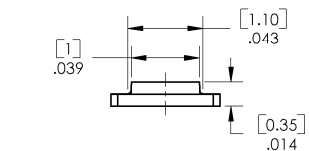
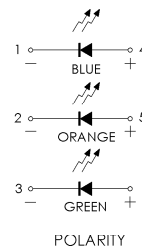
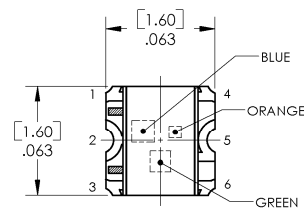


The **OVSTKGBBCR9** is a full-color .35 mm height chip LED that is much smaller than lead frame-type components and enables smaller board size, higher packing density, reduced storage space, and smaller equipment to be obtained. This low-profile, multi-color plus white device is ideal for miniature applications.

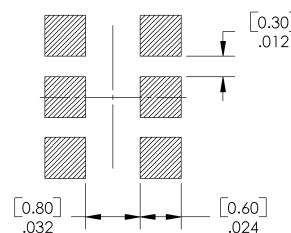
Applications

- Automotive (backlighting in dashboard and switch)
- Telecommunications (indicator and backlighting in telephone and fax)
- Flat backlight (LCDs, membrane switches and symbols)
- Personal/portable appliances (mobile phones, pagers, audio/video payers and GPS)

Part Number	Chip			Lens Color
	Type	Material	Emitted Color	
OVSTKGBBCR9	K	AlInGaN	Yellow-Orange 605 nm	Water Clear
	G	InGaN	Green 525nm	
	B	InGaN	Blue 470nm	



FOR REFLOW SOLDERING PURPOSES



DIMENSIONS ARE IN INCHES AND [MILLIMETERS].



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.

Full Color .35mm Height Chip LED

OVSTKGBBCR9



Absolute Maximum Ratings

T_A = 25° C unless otherwise noted

Reverse Voltage	5 V
Forward Current	K:25 mA G:25 mA B:25 mA
Operating Temperature	-40 ~ +85° C
Storage Temperature	-40 ~ +90° C
Soldering Temperature	260° C (for 5 seconds)
Electrostatic Discharge	K:2000 V G:150 V B:150 V
Power Dissipation	K:60 mW G:110 mW B:110 mW
Peak Forward Current (Duty 1/10 @ 1KHz)	K:60 mA G:100 mA B:100 mA

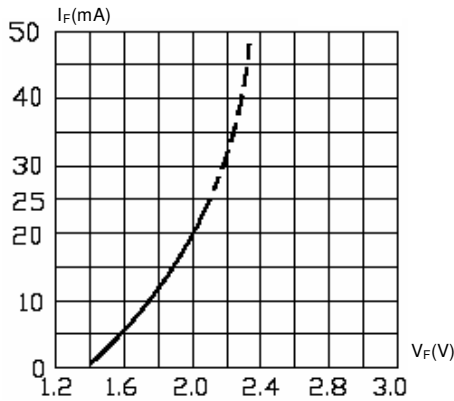
Electrical Characteristics

T_A = 25° C unless otherwise noted

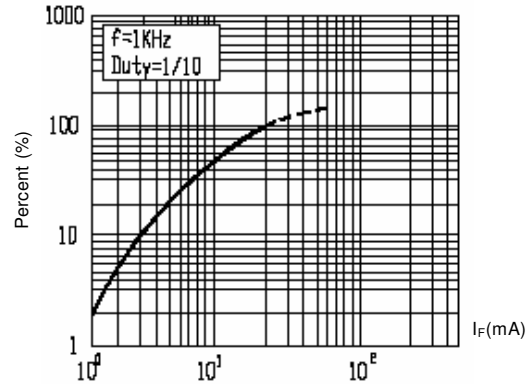
SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	CONDITIONS
I _v	Luminous Intensity	K	72	100	----	mcd	I _F = 20 mA
		G	112	180	----		
		B	28.5	50	----		
2θ _{1/2}	Viewing Angle		----	120	----	deg	I _F = 20 mA
λ _p	Peak Wavelength	K	----	611	----	nm	I _F = 20 mA
		G	----	518	----		
		B	----	468	----		
λ _d	Dominant Wavelength	K	----	605	----	nm	I _F = 20 mA
		G	----	525	----		
		B	----	470	----		
Δλ	Spectral Bandwidth	K	----	17	----	nm	I _F = 20 mA
		G	----	35	----		
		B	----	35	----		
V _F	Forward Voltage	K	----	2.0	2.4	V	I _F = 20 mA
		G	----	3.3	3.9		
		B	----	3.3	3.9		
I _R	Reverse Current	K	----	----	10	μA	V _R = 5 V
		G	----	----	50		
		B	----	----	50		

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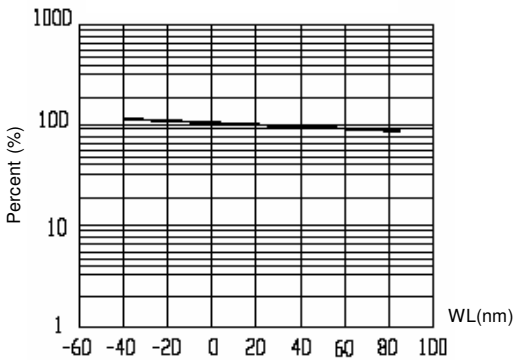
Typical Electro-Optical Characteristics Curves – K (Yellow-Orange)



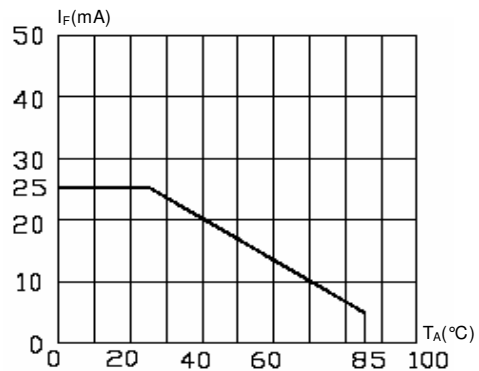
Forward Current vs Forward Voltage



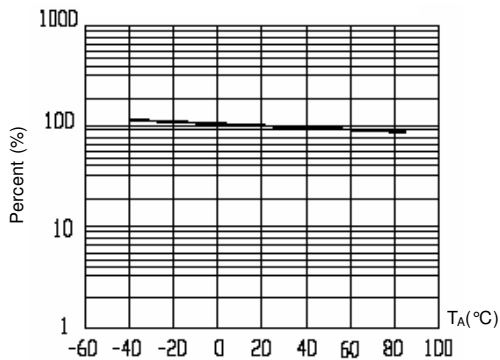
Relative Luminous Intensity vs Forward Current



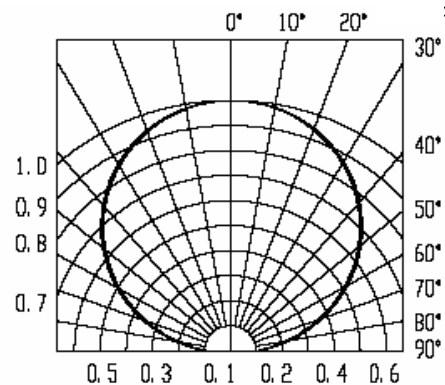
Relative Luminous Intensity vs Wavelength



Forward Current vs Ambient Temperature



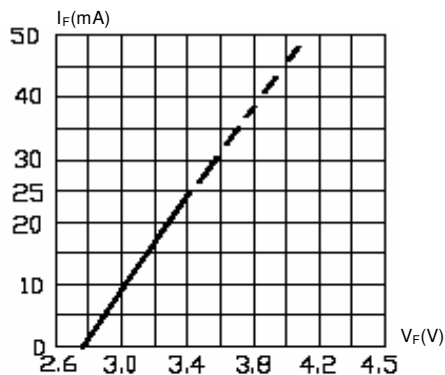
Relative Luminous Intensity vs Ambient Temperature



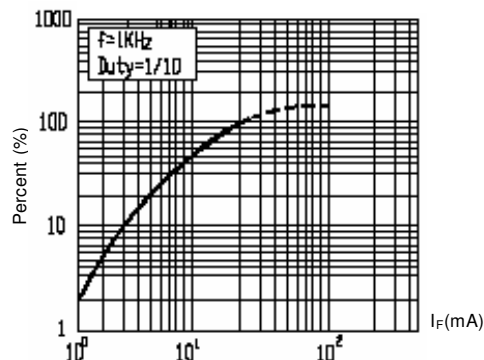
Radiation

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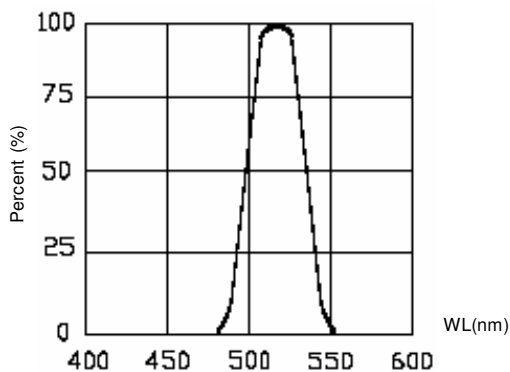
Typical Electro-Optical Characteristics Curves – G (Green)



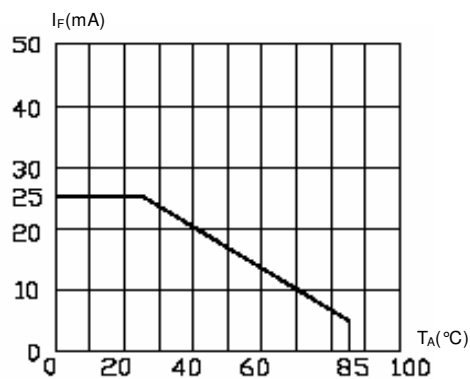
Forward Current vs Forward Voltage



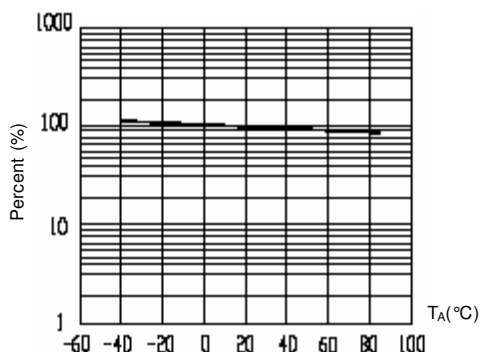
Relative Luminous Intensity vs Forward Current



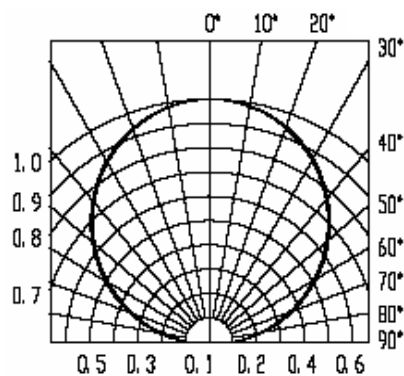
Relative Luminous Intensity vs Wavelength



Forward Current vs Ambient Temperature



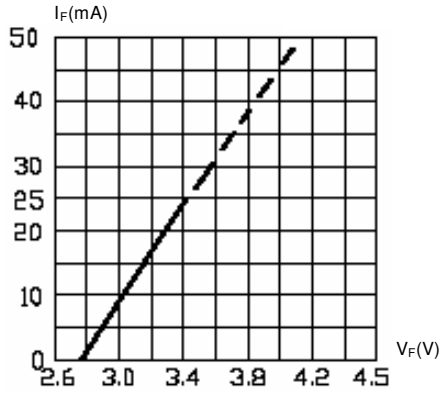
Relative Luminous Intensity vs Ambient Temperature



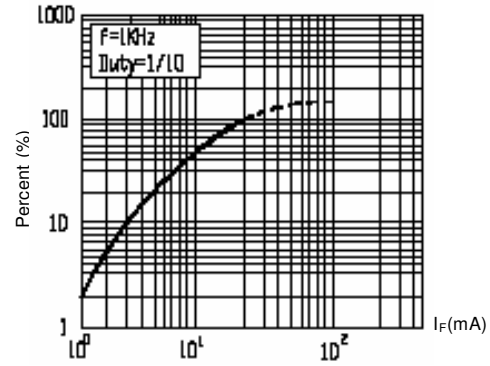
Radiation

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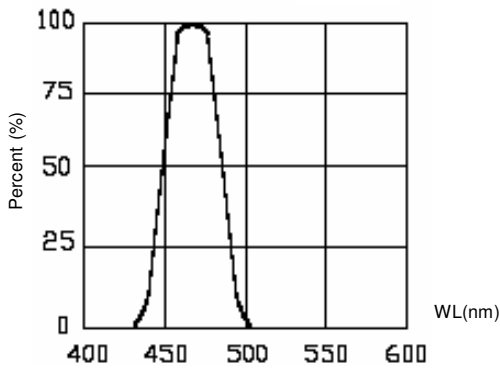
Typical Electro-Optical Characteristics Curves – B (Blue)



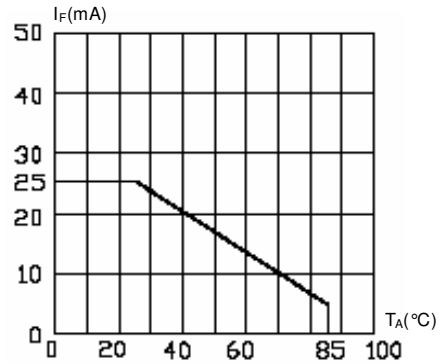
Forward Current vs Forward Voltage



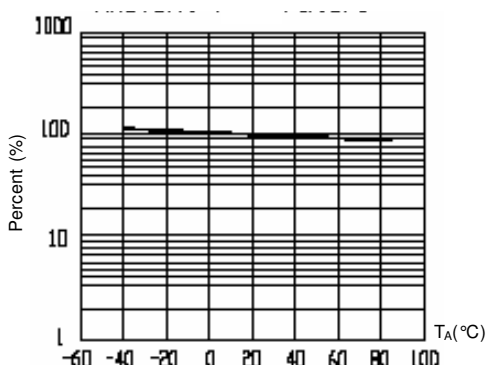
Relative Luminous Intensity vs Forward Current



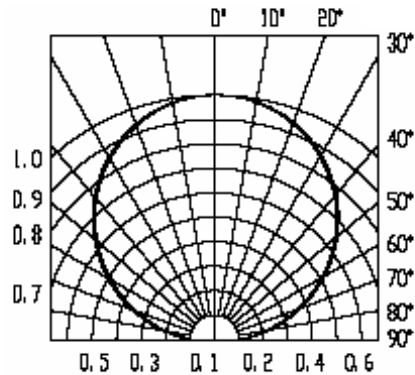
Relative Luminous Intensity vs Wavelength



Forward Current vs Ambient Temperature



Relative Luminous Intensity vs Ambient Temperature

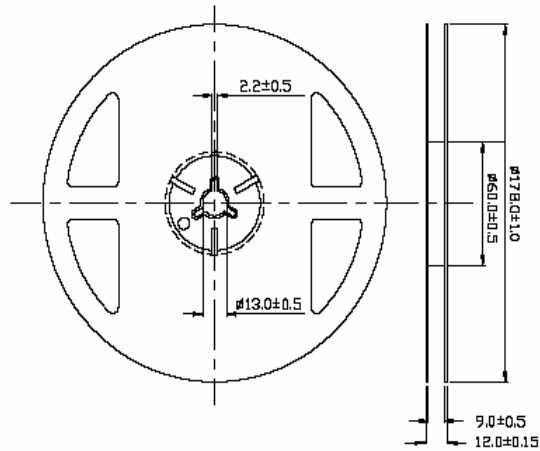


Radiation

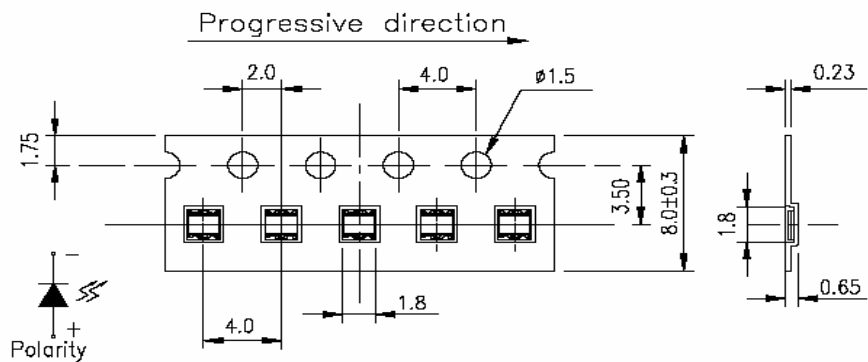
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Full Color .35mm Height Chip LED OVSTKGBBCR9

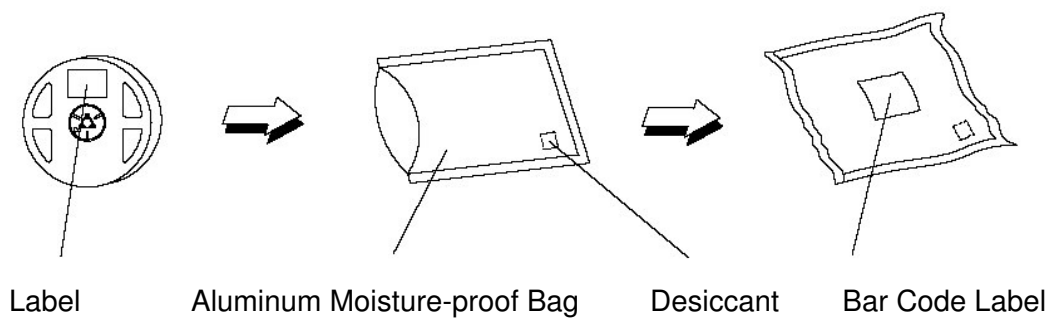
Reel Dimensions: 7-inch reel



Carrier Tape Dimensions: Loaded quantity 2000 pieces per reel



Moisture Resistant Packaging



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