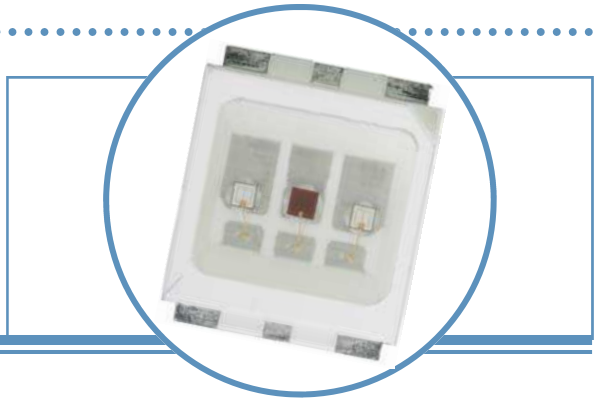
Full-color Power SMD 6mm (130° Viewing Angle)

TT electronics
OPTEK Technology

OVSPRGBCR4

- Surface mount RGB designed for high current drive
- Low thermal resistance—20K/W
- Ultra low profile of 1.5mm
- High flux output

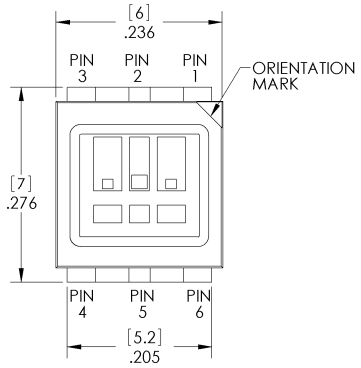


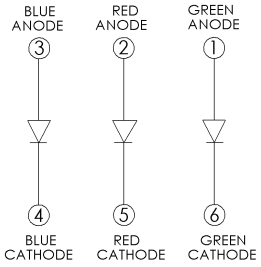
The **OVSPRGBCR4** is an energy-efficient packaged LED source that offers high luminance, and a long operating lifespan. This full-color power device offers a 130° viewing angle and an ultra-low profile (1.5mm) making it highly suitable for conventional lighting and specialized applications. Optional optics are offered to suit application. Please contact OPTEK for more information.

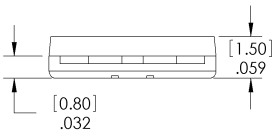
Applications

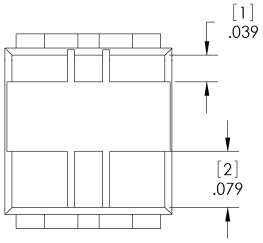
- Automotive exterior and interior lighting
- Architectural indoor and outdoor lighting
- General lighting
- LED backlighting

Part Number	Viewing Angle	Emitted Color	Typical Intensity (mcd)	Lens Color
OVSPRGBCR4	130°	Red	9000	Water Clear
		Green	14000	Water Clear
		Blue	3550	Water Clear









RoHS Moisture 2a

ATTENTION
OBSERVE PRECAUTIONS FOR ELECTROSTATIC SENSITIVE DEVICES

Dimensions are in inches [MM]

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.

OPTEK Technology Inc. — 1645 Wallace Drive, Carrollton, Texas 75006
Phone: (972) 323-2200 or (800) 341-4747 FAX: (972) 323-2396 visibleLED@optekinc.com www.optekinc.com

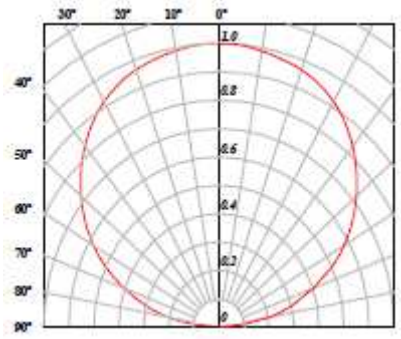
Absolute Maximum Ratings T_A = 25°C

Storage Temperature Range	-40 ~ +100° C
Operating Temperature Range	-40 ~ +100° C
Reverse Voltage	5 V
DC forward current (per chip)	250 mA
Peak Pulse Current (per chip) (T_P ≤ 10 msec, D ≤ 10%)	500 mA
Electrostatic Discharge (ESD Threshold [HBM])	Class 2
Moisture Sensitivity Level (IPC/JEDEC J-STD-020C)	2a / 672 Hrs
LED Junction Temperature	125° C

Optical and Electrical Characteristics (I_F = 250 mA, T_A = 25° C)

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS
V_F	Forward Voltage	Red	2.0	2.3	2.8	V
		Green	3.0	3.4	3.8	V
		Blue	3.0	3.4	3.8	V
I_V	Luminous Intensity	Red	7,150	9,000	11,250	mcd
		Green	9,000	14,000	18,000	mcd
		Blue	2240	3550	5,600	mcd
λ_D	Dominant Wavelength	Red	619	625	625	nm
		Green	520	525	535	nm
		Blue	460	465	475	nm
2 Θ½	Beam Angle		----	130	----	deg

Beam Angle



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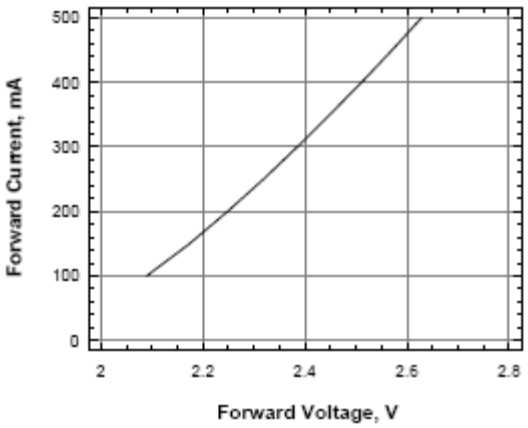
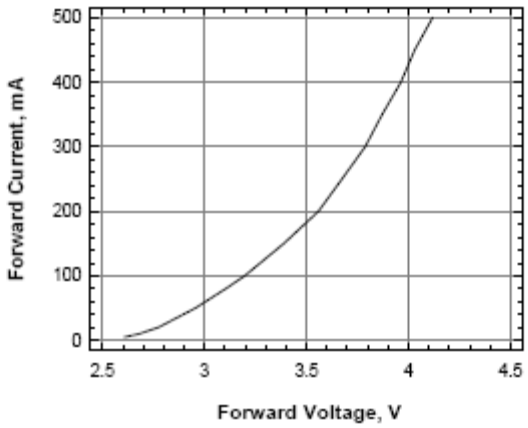
Typical Electro-Optical Characteristics Curves

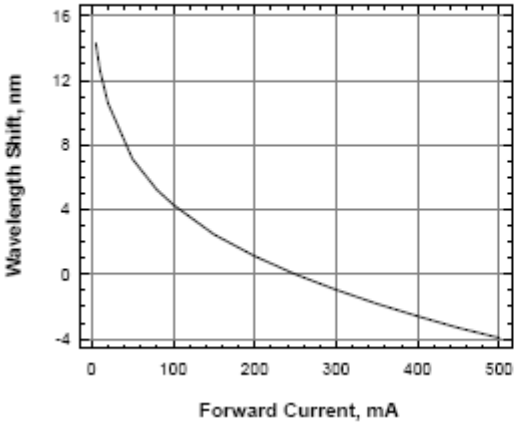
Forward Current Vs Forward Voltage (Red)



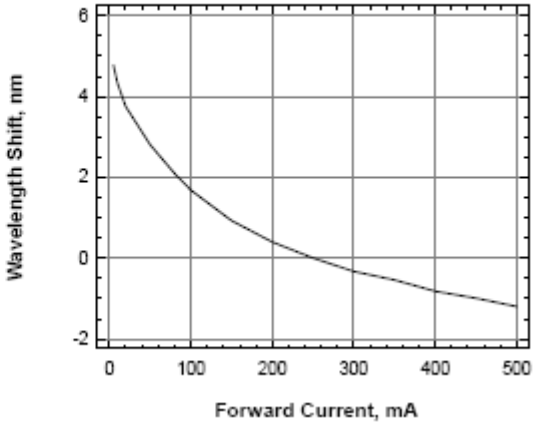
Forward Current Vs Forward Voltage (Blue and True Green)



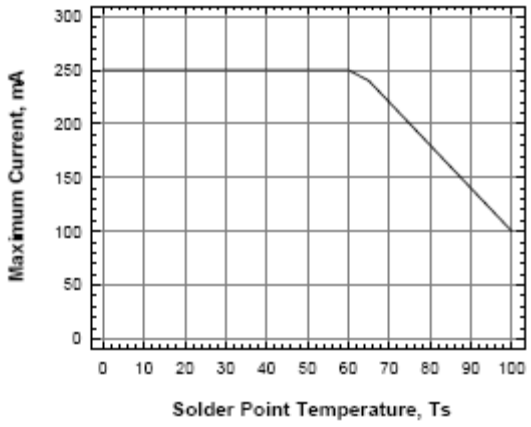
Wavelength Shift Vs Forward Current (True Green)



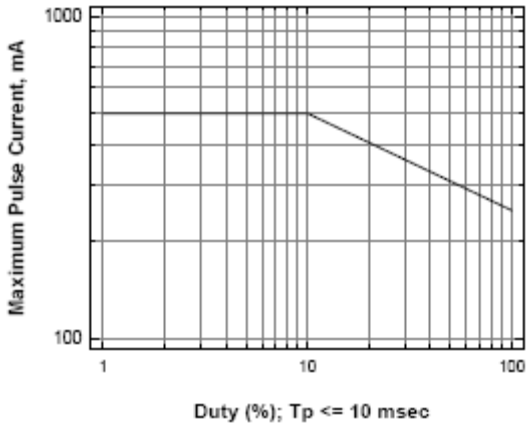
Wavelength Shift Vs Forward Current (Blue)



Maximum Current Vs Solder Point Temperature

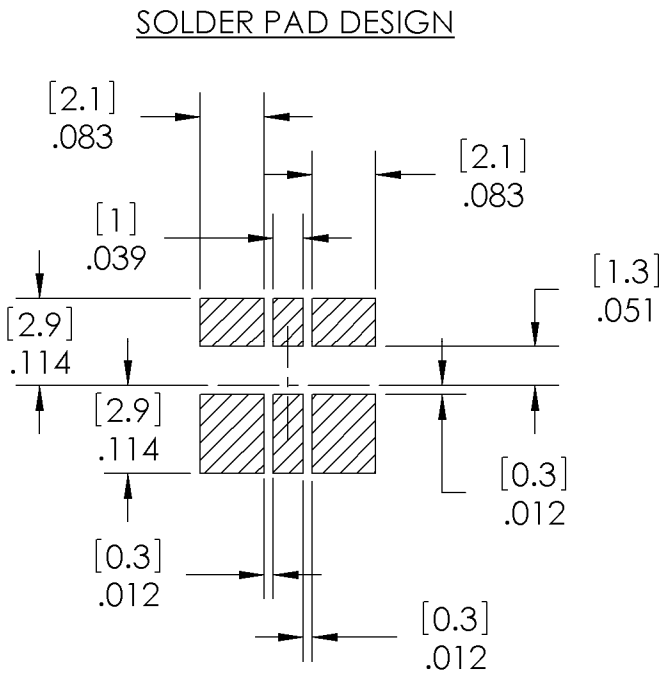


Maximum Pulse Current Vs Duty Cycle

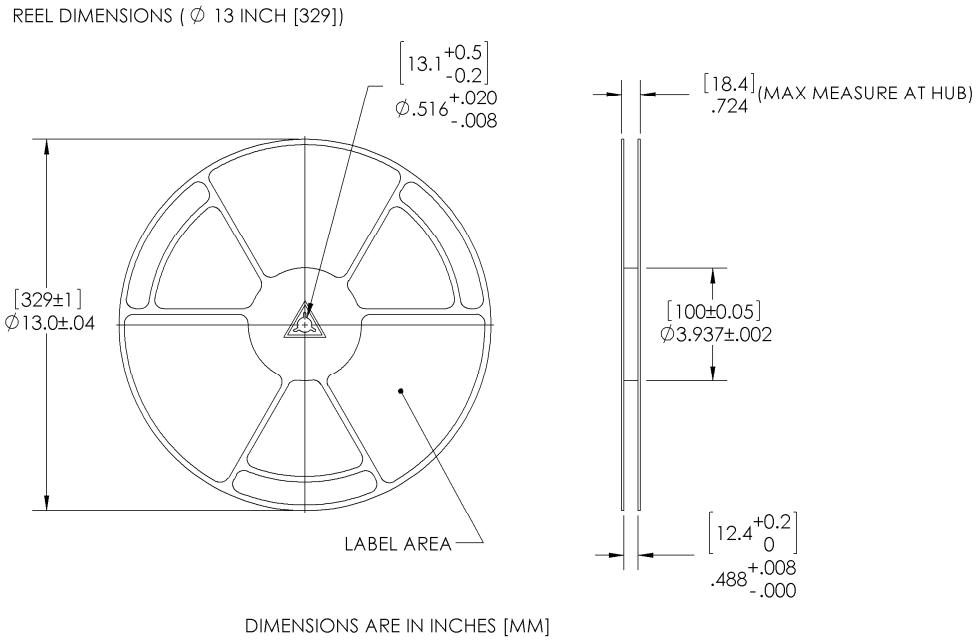


Solder Pad Design

Note: Metal core circuit board (MCPCB) is highly recommended for applications.



Reel Dimensions: 13-inch reel



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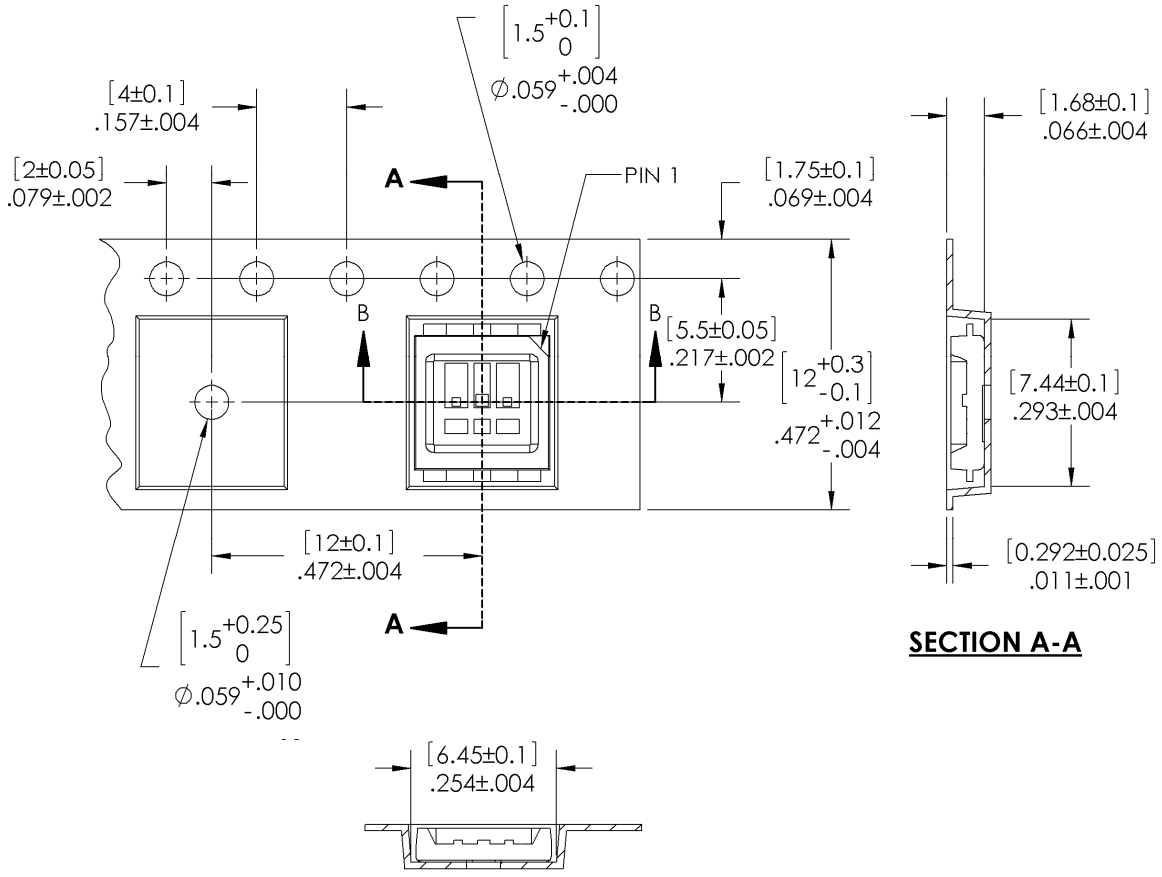
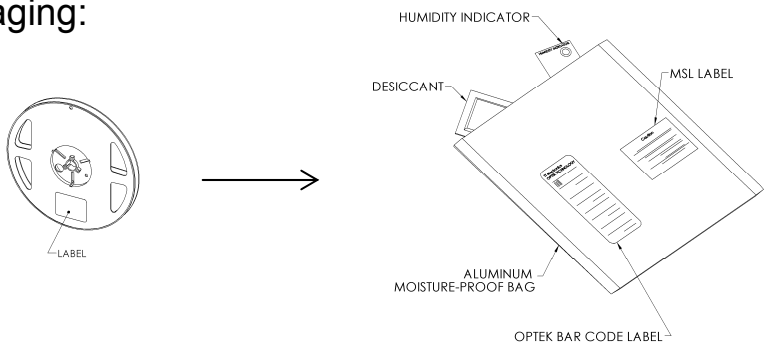
Carrier Tape Dimensions: Loaded quantity 1000 pieces per reel



DIMENSIONS ARE IN INCHES [MM]
TOLERANCES ARE ± .004 [.10] UNLESS OTHERWISE SPECIFIED

Moisture Resistant Packaging:



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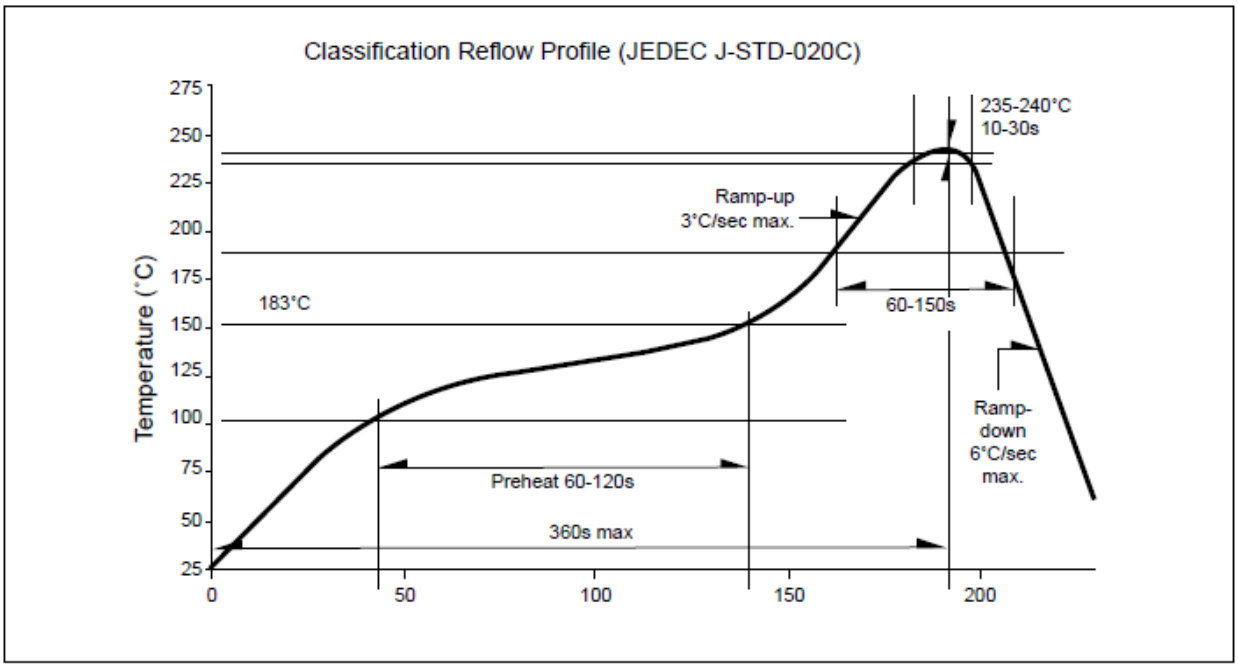
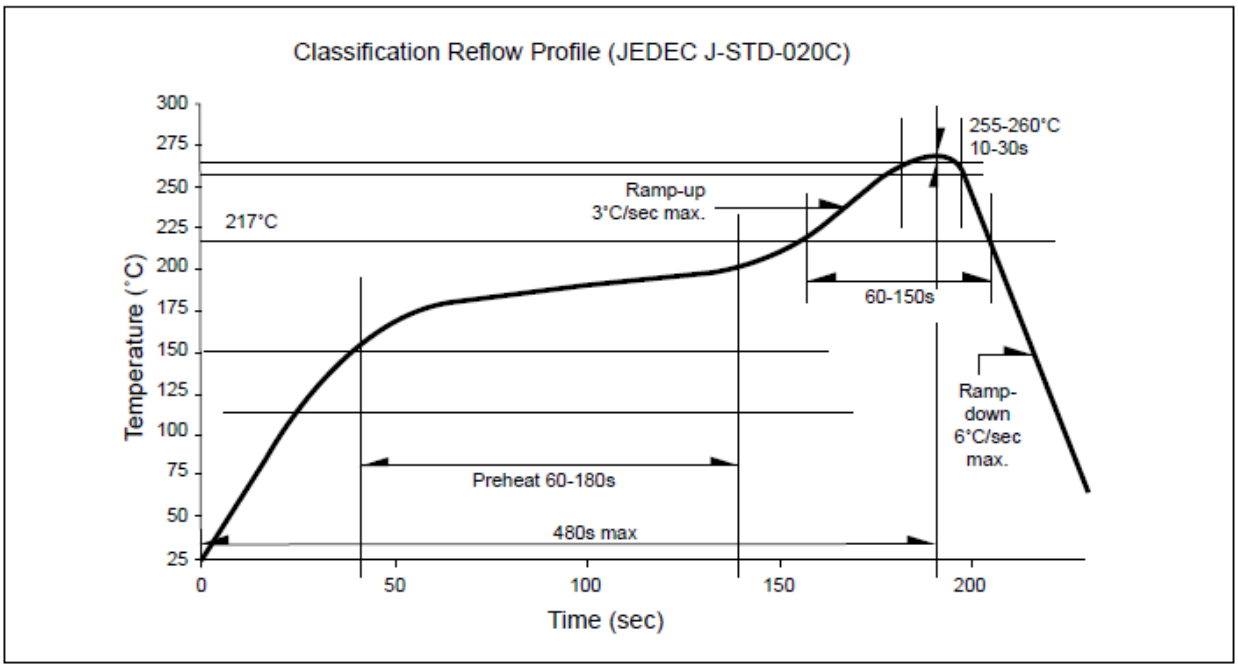
Recommended Sn-Pb IR-Reflow Soldering Profile



Recommended Pb-free Soldering Profile



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