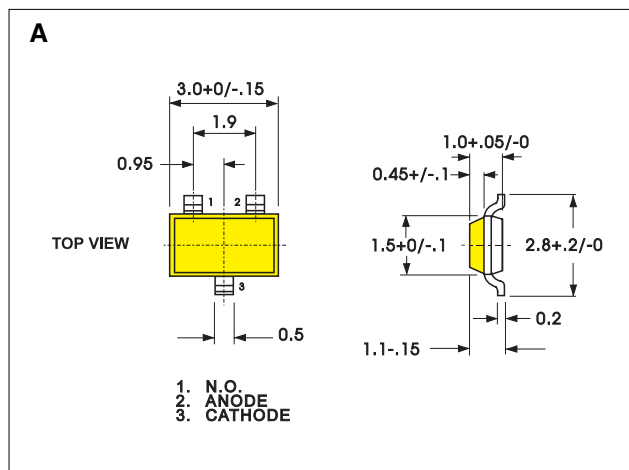


SMT Bright White LEDs

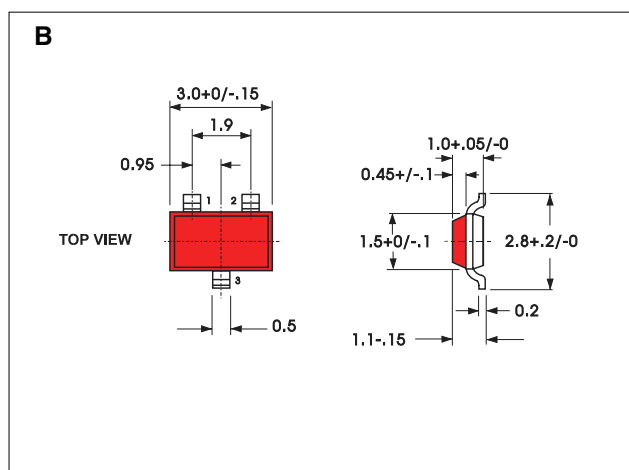
Line No.	Part No.	Size	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Reverse Current (V _R =5.0V)	Chromaticity Coordinates		Drawing
				Minimum	Typical		Typical	Maximum		X Typ.	Y Typ.	
○WHITE	3 E1008	SMT	Clear	90mcd	150mcd	120°	3.5V	4.0V	10µA	0.31	0.32	C



Surface Mount LEDs, SOT-23 Package

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Typical		Typical	Maximum		
● RED	1	E40	Clear	1.0mcd	3.5mcd	140°	2.1V	2.8V	635nm	A
● YELLOW	2	E41	Clear	1.0mcd	3.0mcd	140°	2.1V	2.8V	585nm	A
● GREEN	3	E42	Clear	1.0mcd	3.0mcd	140°	2.1V	2.8V	565nm	A

Tape & Reel packaging is standard, 3,000 LEDs per reel
Recommended soldering pad, see page 84, number 1



Surface Mount, Bi-Color LEDs, SOT-23 Package

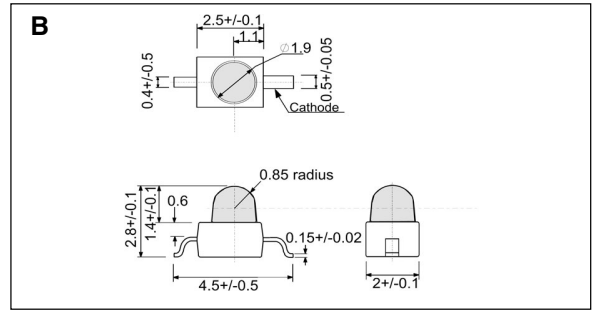
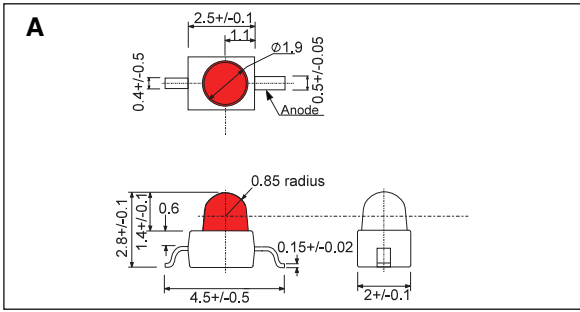
	Line No.	Part No.	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Terminals	Drawing
			Minimum	Typical		Typical	Maximum			
● RED & GREEN	4	E43	1mcd	3mcd	140°	2.1V	2.8V	635nm	1.Red Cathode 2.Green Cathode 3.Anode	B
● RED & YELLOW	5	E44	1mcd	3mcd	140°	2.1V	2.8V	635nm	1.Red Cathode 2.Yellow Cathode 3.Anode	B
● GREEN & YELLOW	6	E45	1mcd	3mcd	140°	2.1V	2.8V	565nm	1.Yellow Cathode 2.Green Cathode 3.Anode	B

Tape & Reel packaging is standard, 3,000 LEDs per reel.
Recommended soldering pad, see page 84, number 1

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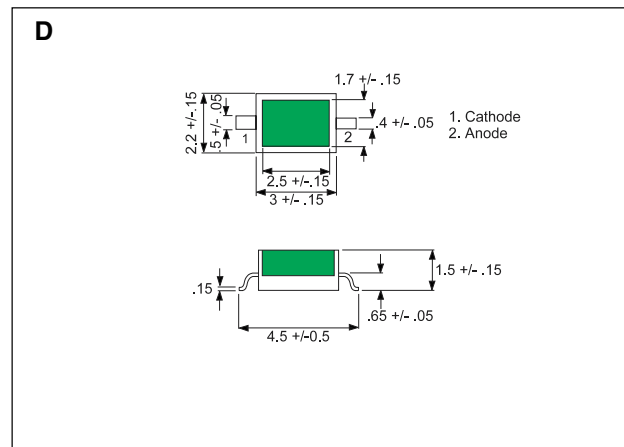
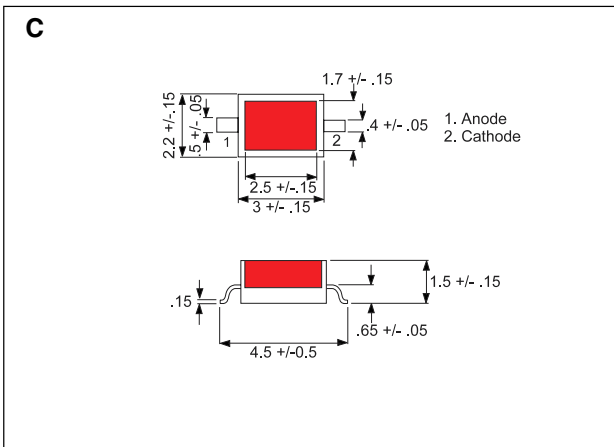
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Surface Mount, Gull Wing LEDs

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	1	E90	Clear	200.0mcd	1000.0mcd	30°	1.85V	2.50V	660nm	A
● HIGH EFFICIENCY RED	2	E91	Clear	20.0mcd	100.0mcd	30°	2.00V	2.50V	625nm	B
● YELLOW	3	E92	Clear	20.0mcd	70.0mcd	30°	2.10V	2.50V	590nm	B
● ULTRA BRIGHT YELLOW	4	E95	Clear	700.0mcd	1300.0mcd	30°	2.00V	2.50V	595nm	B
● GREEN	5	E93	Clear	20.0mcd	70.0mcd	30°	2.20V	2.50V	565nm	B
● PURE GREEN	6	E94	Clear	10.0mcd	40.0mcd	30°	2.25V	2.60V	555nm	B

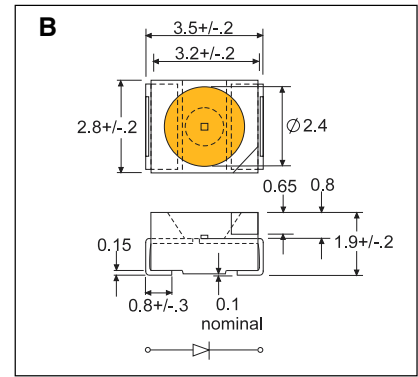
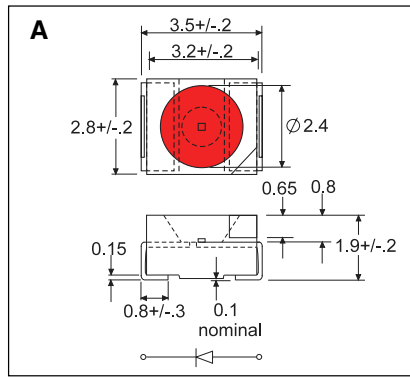
Tape & Reel packaging is standard, 1,000 LEDs per reel. Recommended soldering pad, see page 84, number 2.



Surface Mount LEDs (Rectangular Lens)

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	7	E80	Translucent Red	70mcd	100mcd	90°	1.85V	2.50V	660nm	C
● HIGH EFFICIENCY RED	8	E81	Translucent Red	12.5mcd	20.0mcd	90°	2.00V	2.50V	625nm	D
● YELLOW	9	E82	Translucent Yellow	5.0mcd	20.0mcd	90°	2.10V	2.50V	590nm	D
● GREEN	10	E83	Translucent Green	8.0mcd	20.0mcd	90°	2.20V	2.50V	565nm	D

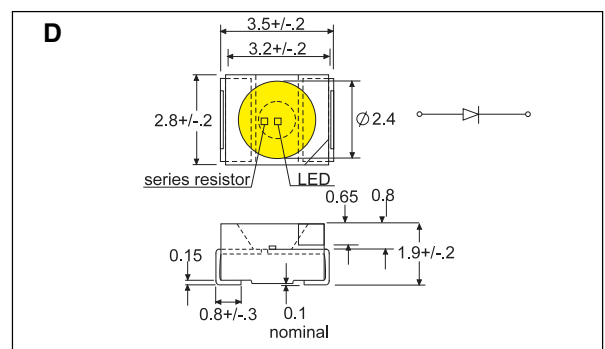
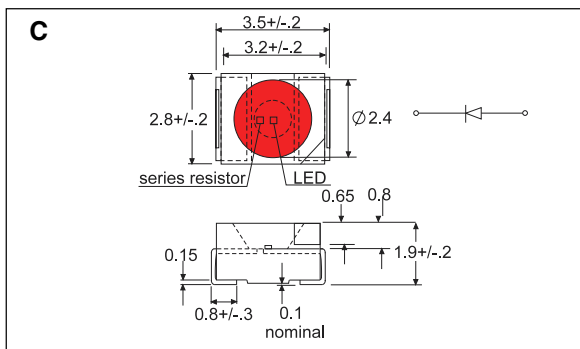
Tape & Reel packaging is standard, 1500 LEDs per reel. Recommended soldering pad, page 84, number 3.



Surface Mount LEDs (Round Lens)

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	1	E70	Translucent Red	80.0mcd	120.0mcd	120°	1.85V	2.50V	660nm	A
● HIGH EFFICIENCY RED	2	E71	Translucent Red	12.5mcd	30.0mcd	120°	2.00V	2.50V	625nm	B
● YELLOW	3	E72	Translucent Yellow	8.0mcd	20.0mcd	120°	2.10V	2.50V	590nm	B
● GREEN	4	E73	Translucent Green	12.5mcd	30.0mcd	120°	2.20V	2.50V	565nm	B
● PURE GREEN	5	E74	Clear	2.0mcd	8.0mcd	120°	2.25V	2.60V	555nm	B
● BLUE	6	E75	Translucent Blue	2.0mcd	5.0mcd	110°	4.5V	5.5V	430nm	B
● ULTRA BRIGHT YELLOW	7	E77	Translucent Yellow	40.0mcd	100mcd	120°	2.0V	2.4V	595nm	B
● ORANGE	8	E78	Translucent Orange	12.5mcd	40.0mcd	120°	2.0V	2.6V	610nm	B
● ULTRA BRIGHT ORANGE	9	E79	Translucent Orange	200mcd	400mcd	120°	1.95V	2.5V	620nm	B

Tape & Reel packaging is standard, 1500 LEDs per reel. Recommended Soldering Pad Page 84, number 4.



Surface Mount LEDs with Resistor - 5V

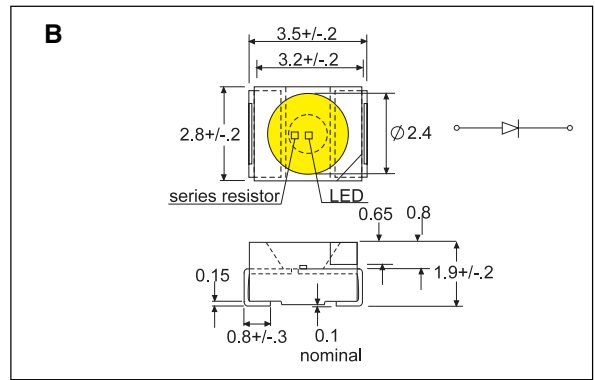
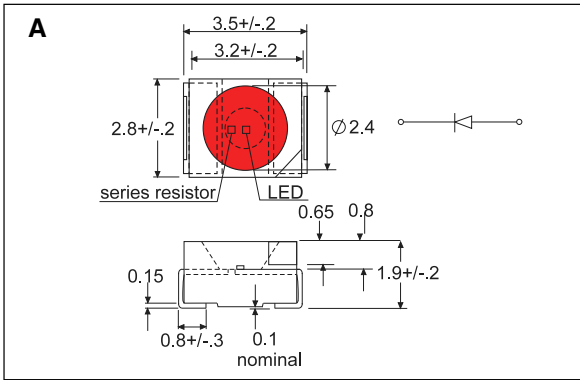
	Line No.	Part No.	Lens	Voltage Range		Luminous Intensity at 5VDC		Viewing Angle 2θ½	Current Range at 5VDC		Peak Wave Length at 5VDC	Drawing
				Minimum	Maximum	Minimum	Maximum		Minimum	Maximum		
● RED	10	E70-5V	Translucent	4.0VDC	6.0VDC	20.0mcd	80.0mcd	120°	8mA	16mA	660nm	C
● RED	11	E71-5V	Translucent	4.0VDC	6.0VDC	5.0mcd	20.0mcd	120°	8mA	16mA	625nm	D
● YELLOW	12	E72-5V	Translucent	4.0VDC	6.0VDC	3.2mcd	8.0mcd	120°	8mA	16mA	590nm	D
● GREEN	13	E73-5V	Translucent	4.0VDC	6.0VDC	5.0mcd	12.5mcd	120°	8mA	16mA	565nm	D

Tape & Reel packaging is standard, 1500 LEDs per reel. Recommended soldering pad, page 84, number 4.

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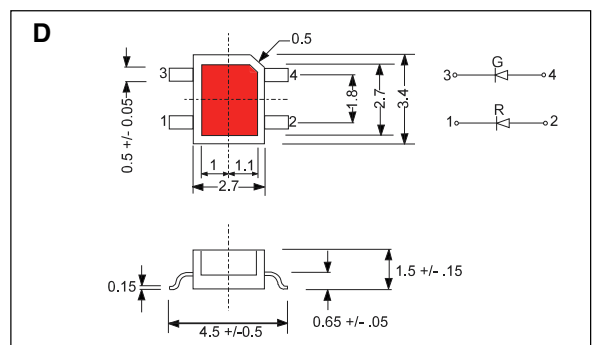
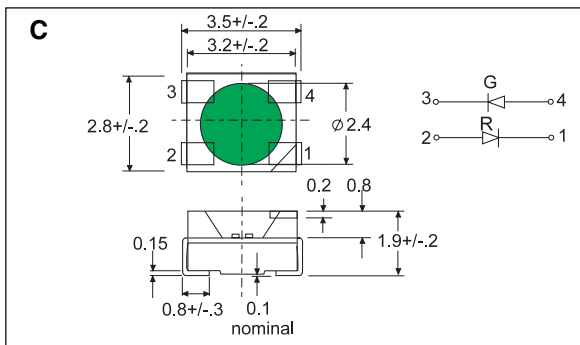
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Surface Mount LEDs with Resistor - 12V

Line No.	Part No.	Lens	Voltage Range		Luminous Intensity at 12VDC		Viewing Angle 2θ½	Current Range at 12VDC		Peak Wave Length at 12VDC	Drawing	
			Minimum	Maximum	Minimum	Maximum		Minimum	Maximum			
● RED	1	E70-12V	Translucent	9.5VDC	13.0VDC	20.0mcd	80.0mcd	120°	8mA	16mA	660nm	A
● RED	2	E71-12V	Translucent	9.5VDC	13.0VDC	5.0mcd	20.0mcd	120°	8mA	16mA	625nm	B
● YELLOW	3	E72-12V	Translucent	9.5VDC	13.0VDC	3.2mcd	8.0mcd	120°	8mA	16mA	590nm	B
● GREEN	4	E73-12V	Translucent	9.5VDC	13.0VDC	5.0mcd	12.5mcd	120°	8mA	16mA	565nm	B

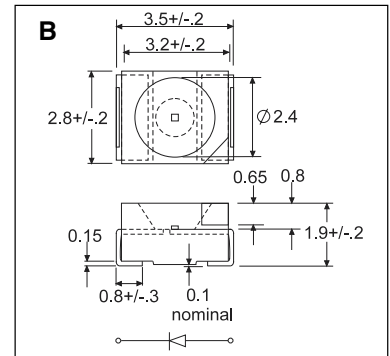
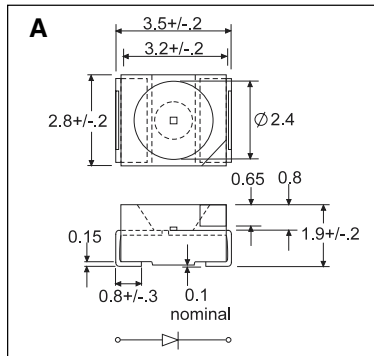
Tape & Reel packaging is standard, 1500 LEDs per reel.
Recommended soldering pad, page 84, number 4.



Surface Mount, Bi-Color LEDs

Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Leads	Drawing	
			Minimum	Maximum		Typical	Maximum				
● RED & ● GREEN	5	E76	Clear	12.5mcd	32.0mcd	120°	2.0V	2.5V	625nm	1.Red Cathode 2.Red Anode 3.Green Cathode 4.Green Anode	C
				12.5mcd	32.0mcd	120°	2.2V	2.5V	565nm		
● RED & ● GREEN	6	E86	White Diffused	8.0mcd	50.0mcd	90°	2.0V	2.5V	625nm	1.Red Cathode 2.Red Anode 3.Green Cathode 4.Green Anode	D
				8.0mcd	50.0mcd	90°	2.2V	2.5V	565nm		

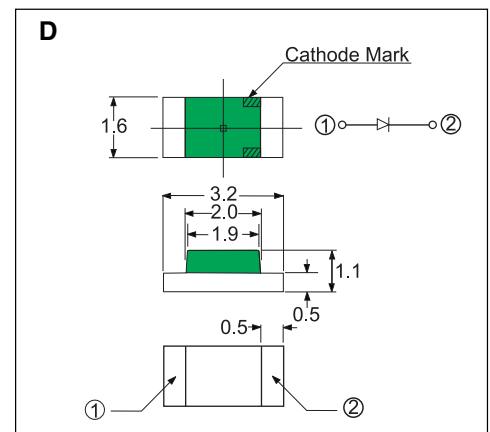
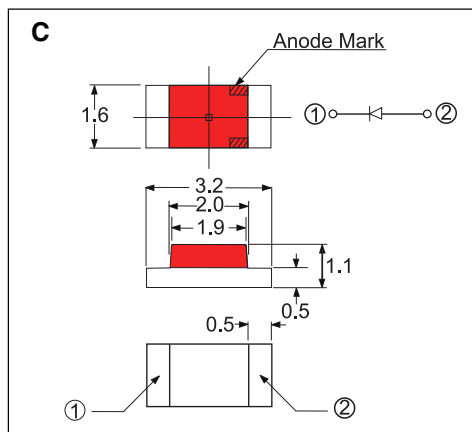
Tape & Reel packaging is standard, 1500 LEDs (E76), 1000 LEDs (E86), per reel.
Recommended soldering pad: E76 - page 84, number 5; E86 - page 84, number 6.



Surface Mount Infrared LEDs: 880nm, 940nm

Line No.	Part No.	Lens	Radiant Power at 20mA		Viewing Angle 20°	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing	
			Minimum	Maximum		Typical	Maximum			
INFRARED	1	E25A	Clear	1.25mW/sr	5.0mW/sr	120°	1.2V	1.5V	940nm	A
INFRARED	2	E26A	Translucent Blue	1mW/sr	5.0mW/sr	120°	1.4V	1.7V	880nm	B

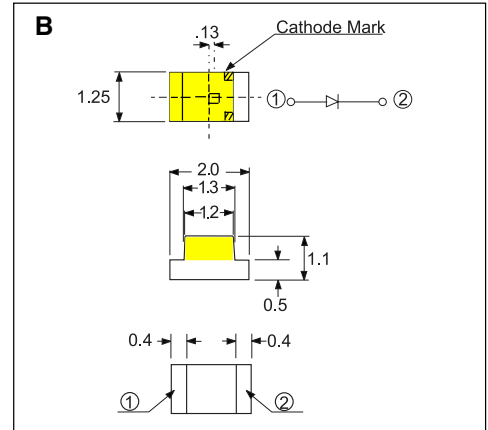
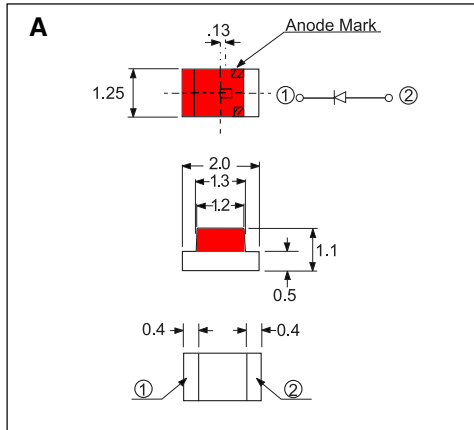
Tape & Reel packaging is standard, 1,500 LEDs per reel.
Recommended soldering pad, see page 84, number 4.



Low Profile Surface Mount LEDs (standard package 1206)

Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 20°	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing	
			Minimum	Maximum		Typical	Maximum			
● ULTRA BRIGHT RED	3	E510	Translucent Red	40.0mcd	70.0mcd	120°	1.85V	2.50V	660nm	C
● HIGH EFFICIENCY RED	4	E511	Translucent Red	5.0mcd	12.0mcd	120°	2.00V	2.50V	625nm	D
● YELLOW	5	E512	Translucent Yellow	3.2mcd	8.0mcd	120°	2.10V	2.50V	590nm	D
● GREEN	6	E513	Translucent Green	3.2mcd	8.0mcd	120°	2.20V	2.50V	565nm	D

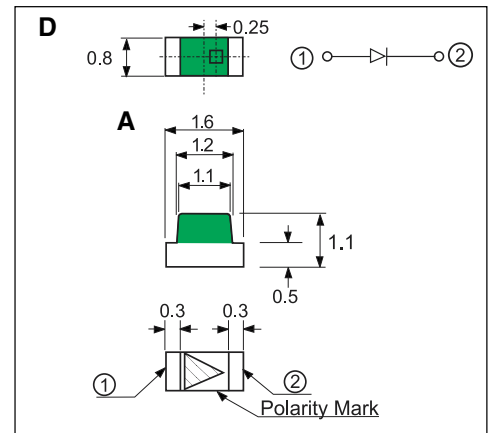
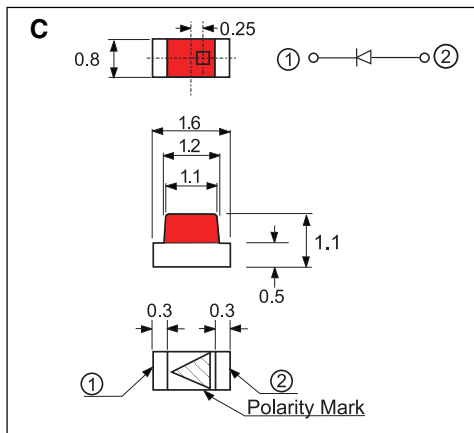
Tape & Reel packaging is standard, 2000 LEDs per reel.
Recommended Soldering Pad Page 84, number 7 .



Low Profile Surface Mount LEDs (standard package 0805)

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	1	E520	Translucent Red	40.0mcd	70.0mcd	120°	1.85V	2.50V	660nm	A
● HIGH EFFICIENCY RED	2	E521	Translucent Red	5.0mcd	12.0mcd	120°	2.00V	2.50V	625nm	B
● YELLOW	3	E522	Translucent Yellow	3.2mcd	8.0mcd	120°	2.10V	2.50V	590nm	B
● GREEN	4	E523	Translucent Green	3.2mcd	8.0mcd	120°	2.20V	2.50V	565nm	B

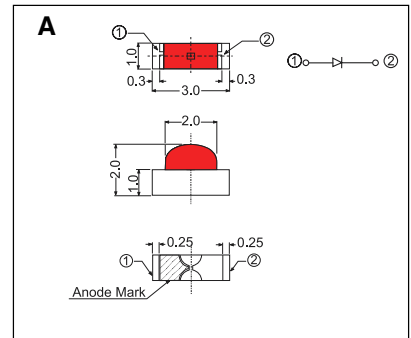
Tape & Reel packaging is standard, 2000 LEDs per reel.
Recommended Soldering Pad Page 84, number 8.



Low Profile Surface Mount LEDs (standard package 0603)

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	5	E530	Translucent Red	40.0mcd	70.0mcd	120°	1.85V	2.50V	660nm	C
● HIGH EFFICIENCY RED	6	E531	Translucent Red	5.0mcd	12.0mcd	120°	2.00V	2.50V	625nm	D
● YELLOW	7	E532	Translucent Yellow	3.2mcd	8.0mcd	120°	2.10V	2.50V	590nm	D
● GREEN	8	E533	Translucent Green	3.2mcd	8.0mcd	120°	2.20V	2.50V	565nm	D

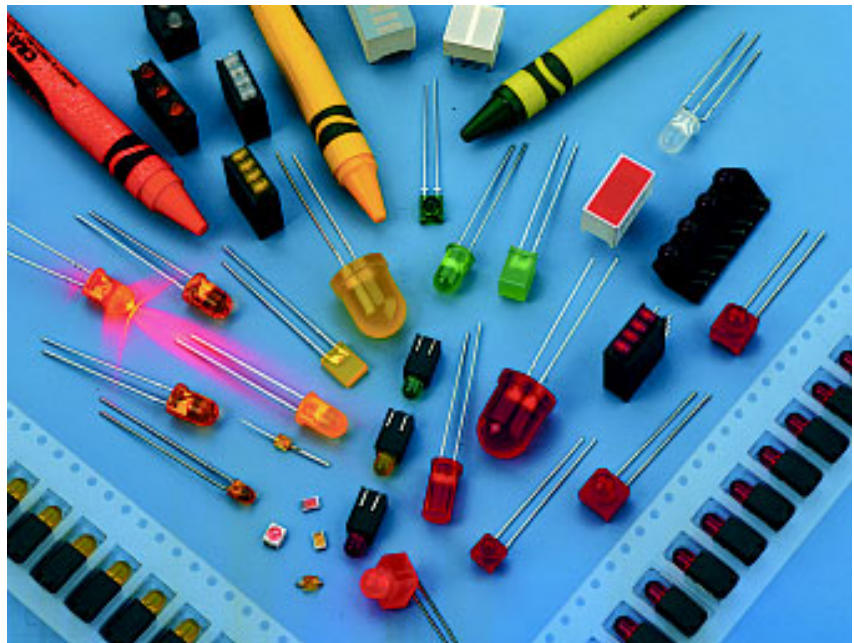
Tape & Reel packaging is standard, 2000 LEDs per reel.
Recommended Soldering Pad Page 84, number 9.



Right Angle/Side Lighting Surface Mount LEDs

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	1	E540	Translucent Red	40.0mcd	70.0mcd	120°	1.85V	2.50V	660nm	A
● HIGH EFFICIENCY RED	2	E541	Translucent Red	5.0mcd	12.0mcd	120°	2.00V	2.50V	625nm	A
● YELLOW	3	E542	Translucent Yellow	3.2mcd	8.0mcd	120°	2.10V	2.50V	590nm	A
● GREEN	4	E543	Translucent Green	3.2mcd	12.5mcd	120°	2.20V	2.50V	565nm	A

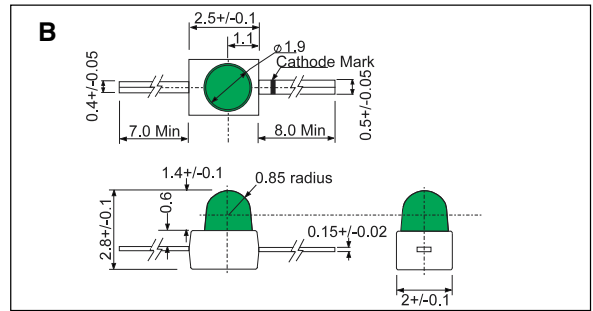
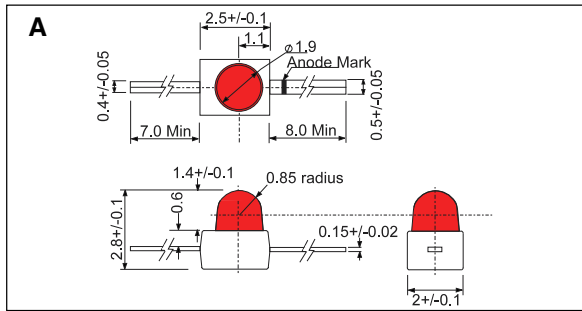
Tape & Reel packaging is standard, 2000 LEDs per reel.
 Recommended Soldering Pad Page 84, number 10.



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Axial Lead LEDs

	Line No.	Part No.	Lens	Luminous Intensity at 20mA		Viewing Angle 2θ½	Forward Voltage at 20mA		Peak Wave Length at 20mA	Drawing
				Minimum	Maximum		Typical	Maximum		
● ULTRA BRIGHT RED	1	E36A	Translucent Red	200.0mcd	1000.0mcd	30°	1.85V	2.50V	660nm	A
● HIGH EFFICIENCY RED	2	E39A	Translucent Red	20.0mcd	100.0mcd	30°	2.00V	2.50V	625nm	B
● YELLOW	3	E37A	Translucent Yellow	20.0mcd	70.0mcd	30°	2.10V	2.50V	590nm	B
● ULTRA BRIGHT YELLOW	4	E37B	Translucent Yellow	700.0mcd	1300mcd	30°	2.00V	2.50V	595nm	B
● GREEN	5	E38A	Translucent Green	20.0mcd	70.0mcd	30°	2.20V	2.50V	565nm	B