

# Dialight

## 591 SERIES

Prism® CBI®

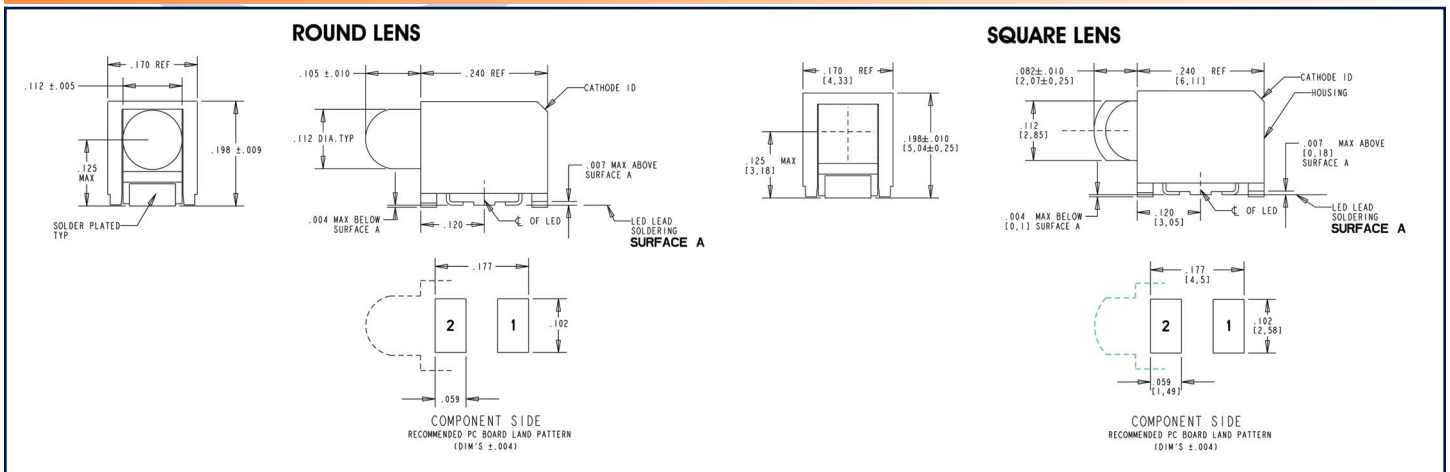
2mA Low Current Surface Mount LED  
ROUND OR SQUARE LENS



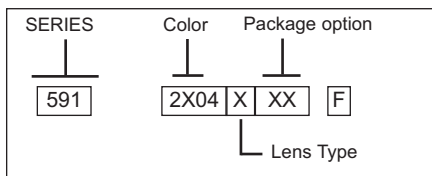
### FEATURES / BENEFITS

- ▲ RoHS Compliant
- ▲ Incorporates latest low current LED technology, specifically designed for surface mounting
- ▲ Compatible with automatic placement equipment
- ▲ Compatible with RoHS Compliant surface mount reflow soldering processes
- ▲ Black housing enhances contrast ratio
- ▲ Housing material meet UL-94V-0 flammability ratings
- ▲ Patented Prism design with 2mA low current LED
- ▲ Packaged in moisture barrier bags for dry packaging per IPC/JEDEC J-STD-033, moisture sensitivity level 2
- ▲ Helps to eliminate mixed technology pc board processing

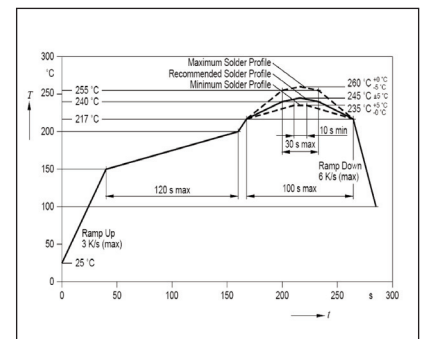
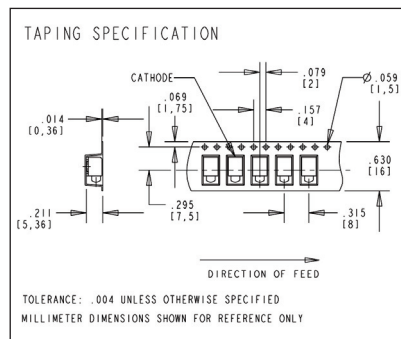
### SPECIFICATIONS



#### PART NUMBER CODE\*



COLOR	LENS TYPE	PACKAGING OPTIONS
0 = Red	0 = Round	02 = 20 piece strip
3 = Green		07 = 7" reel dia / 400pcs
4 = Yellow	1 = Square	13 = 13" reel dia / 1600pcs
5 = Orange		



Dialight Corporation

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MDEF591LV01\_A



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2mA Low Current Surface Mount LED  
ROUND OR SQUARE LENS

## ABSOLUTE MAXIMUM RATINGS (TA= 25°C)

PARAMETER	20	23	24	25
COLOR	Red	Green	Yellow	AllnGaP Orange
POWER DISSIPATION	50mW	50mW	50mW	50mW
FORWARD DC CURRENT	20mA	20mA	20mA	20mA
PEAK FORWARD CURRENT (t ≤ 10 μs, D=0.005)	100mA	100mA	100mA	100mA
OPERATING TEMPERATURE	-40°C To +100°C	-40°C To +100°C	-40°C To +100°C	-40°C To +100°C
STORAGE TEMPERATURE	-40°C To +100°C	-40°C To +100°C	-40°C To +100°C	-40°C To +100°C
SOLDERING TEMPERATURES IR REFLOW FOR LEAD FREE SOLDERING, RoHS	260°C (+0°C / -5°C) For 30 Seconds			

## OPERATING CHARACTERISTICS (TA= 25°C)

PARAMETER	PART NO.	COLOR	MIN	TYP	MAX	UNITS	TEST COND.
Forward Voltage V <sub>F</sub>	20	Red	1.7	1.8	2.2	V	I <sub>F</sub> =2mA
	23	Green	1.7	1.8	2.2		
	24	Yellow	1.7	1.8	2.2		
	25	AllnGaP Orange	1.7	1.8	2.2		
Reverse Voltage V <sub>R</sub>	20	Red		12		V	I <sub>R</sub> =10μA
	23	Green		12			
	24	Yellow		12			
	25	AllnGaP Orange		12			
Dominant Wavelength Dom	20	Red	624	630	636	nm	
	23	Green	566	570	575		
	24	Yellow	580	587	595		
	25	AllnGaP Orange	600	606	609		
Luminous Intensity I <sub>v</sub> Round (Square) Lens	20	Red	6 / -	11 / 40 (30 / 80)	16 / -	mcd	I <sub>F</sub> =2mA / I <sub>F</sub> =10mA
	23	Green	3 / -	5 / 22 (10 / 40)	8 / -		
	24	Yellow	8 / -	14 / 60 (40 / 140)	20 / -		
	25	AllnGaP Orange	9 / -	16 / 70 (55 / 150)	24 / -		
Viewing Angle (2θ 1/2) Round (Square) Lens	20	Red		50 (40)		deg.	
	23	Green		50 (40)			
	24	Yellow		50 (40)			
	25	AllnGaP Orange		50 (40)			

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