

Part Number: **5922020002F**

General Description

Series	592
Configuration	3 mm Lens
Description	Red/Red 3mm Bi-Level Prism CBI Surface Mount LED
Package Options	Sample Strip
Sizes	3mm
Lamp Type	Single Color
Compliance	UL 94V-0

Absolute Maximum Ratings (Ta = 25°)

Forward Current mA	30mA
Forward Current Pulsed	120mA
Solder Temperature	235 peak, above 185 for 90 sec, 215 for 3 min
Operating Temperature	-55 +100
Storage Temperature	-55 +100

Operating Characteristics

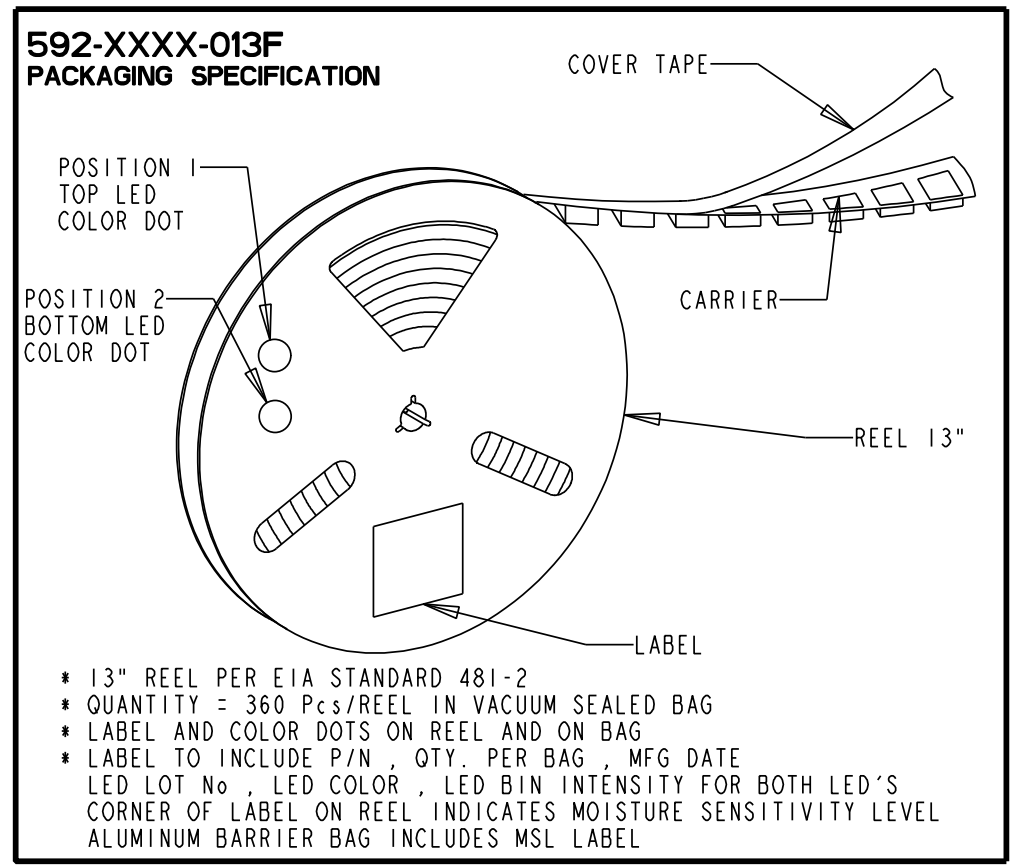
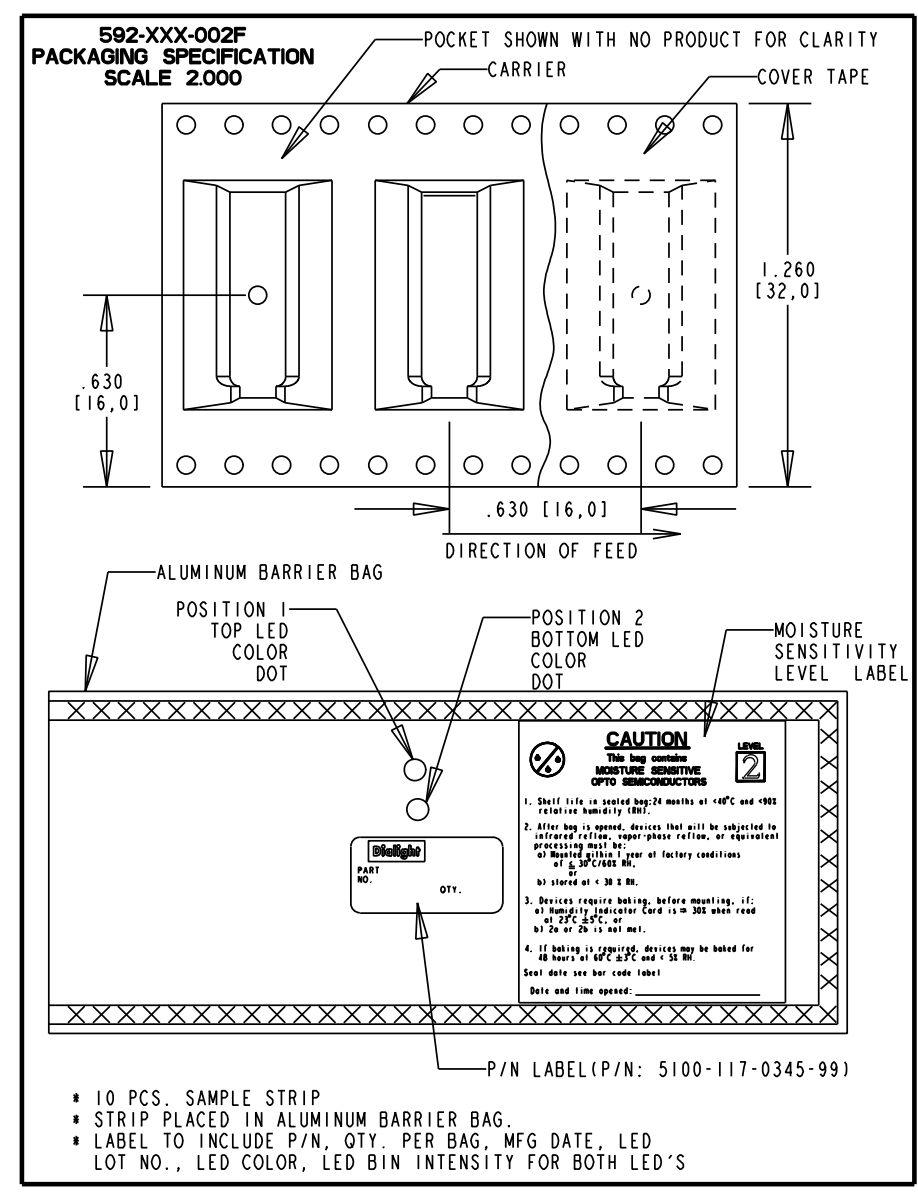
Color	Single Color (R & R)
LED Type	Standard Efficiency
LED Position	1,2
Luminous Intensity Typical	5
Dominant Wavelength Typical	628nm
Power Dissipation Max	100mWmW



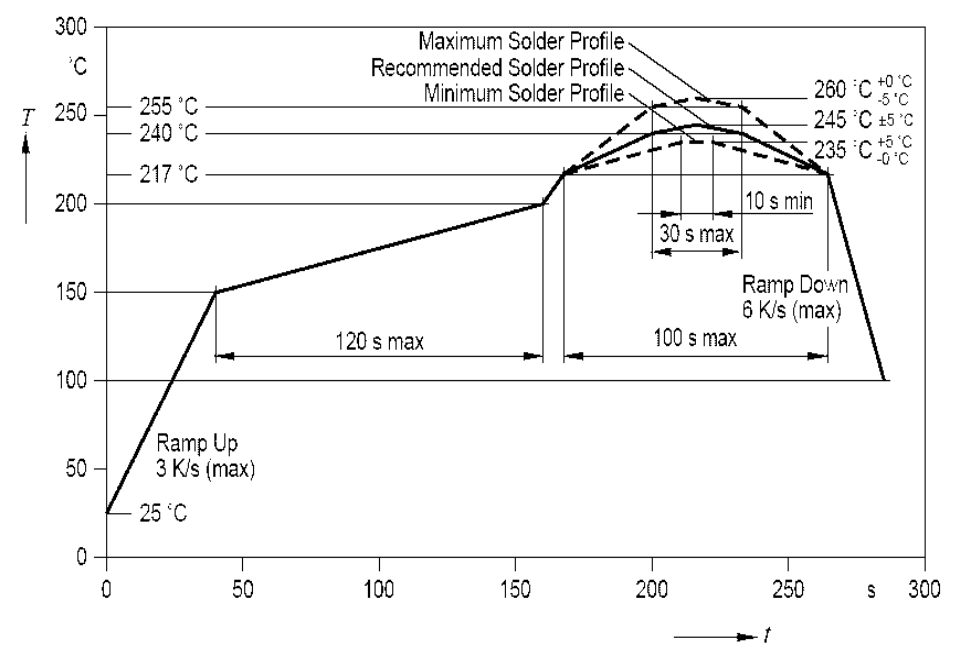
This is a
RoHS Compliant Product
[To learn more click here](#)

PART NUMBER	POSITION 1	POSITION 2	MOISTURE LEVEL
592-2020-002F	RED (HI.EFF)	RED (HI.EFF)	2
592-2020-013F	RED (HI.EFF)	RED (HI.EFF)	2
592-2023-002F	RED (HI.EFF)	GREEN	2
592-2023-013F	RED (HI.EFF)	GREEN	2
592-2121-002F	RED (AlGaAs)	RED (AlGaAs)	2
592-2121-013F	RED (AlGaAs)	RED (AlGaAs)	2
592-2124-002F	RED (AlGaAs)	YELLOW	2
592-2124-013F	RED (AlGaAs)	YELLOW	2
592-2222-002F	GREEN (HI.INT)	GREEN (HI.INT)	2
592-2222-013F	GREEN (HI.INT)	GREEN (HI.INT)	2
592-2320-002F	GREEN	RED (HI.EFF)	2
592-2320-013F	GREEN	RED (HI.EFF)	2
592-2323-002F	GREEN	GREEN	2
592-2323-013F	GREEN	GREEN	2
592-2324-002F	GREEN	YELLOW	2
592-2324-013F	GREEN	YELLOW	2
*592-2326-002F	GREEN	BLUE (InGaN)	2
*592-2326-013F	GREEN	BLUE (InGaN)	2
592-2420-002F	YELLOW	RED (HI.EFF)	2
592-2420-013F	YELLOW	RED (HI.EFF)	2
592-2422-002F	YELLOW	GREEN (HI.INT)	2
592-2422-013F	YELLOW	GREEN (HI.INT)	2
592-2423-002F	YELLOW	GREEN	2
592-2423-013F	YELLOW	GREEN	2
592-2424-002F	YELLOW	YELLOW	2
592-2424-013F	YELLOW	YELLOW	2
592-2525-002F	ORANGE	ORANGE	2
592-2525-013F	ORANGE	ORANGE	2
*592-2626-002F	BLUE (InGaN)	BLUE (InGaN)	2
*592-2626-013F	BLUE (InGaN)	BLUE (InGaN)	2
592-2627-002F	BLUE	YELLOW	2
592-2627-013F	BLUE	YELLOW	2
592-2628-002F	BLUE	WHITE	2
592-2628-013F	BLUE	WHITE	2
592-2631-002F	BLUE	YELLOW / GREEN	2
592-2631-013F	BLUE	YELLOW / GREEN	2
592-2627-002F	BLUE	YELLOW	2
592-2627-013F	BLUE	YELLOW	2
592-2727-002F	YELLOW (AlInGaP)	YELLOW (AlInGaP)	2
592-2727-013F	YELLOW (AlInGaP)	YELLOW (AlInGaP)	2
*592-2828-002F	WHITE	WHITE	2
*592-2828-013F	WHITE	WHITE	2
592-3030-002F	RED / GREEN	RED / GREEN	2
592-3030-013F	RED / GREEN	RED / GREEN	2
*592-3126-002F	YELLOW / GREEN	BLUE (InGaN)	2
*592-3126-013F	YELLOW / GREEN	BLUE (InGaN)	2
592-3131-002F	YELLOW / GREEN	YELLOW / GREEN	2
592-3131-013F	YELLOW / GREEN	YELLOW / GREEN	2
592-3232-002F	RED / YELLOW	RED / YELLOW	2
592-3232-013F	RED / YELLOW	RED / YELLOW	2
592-3535-002F	RED/GREEN/BLUE	RED/GREEN/BLUE	2
592-3535-013F	RED/GREEN/BLUE	RED/GREEN/BLUE	2
592-3031-002F	RED/GREEN	YELLOW/GREEN	2
592-3031-013F	RED/GREEN	YELLOW/GREEN	2

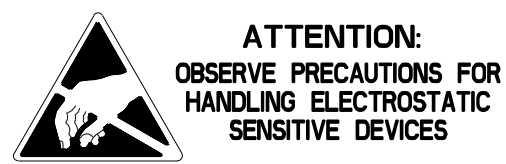
* ESD SENSITIVE - SEE CAUTION NOTE



REV.	ECN NO.	REVISIONS	DRN.	CKD.	APP.	DATE
A		NEW RELEASE	TWC	NO	MES	2-22-05
B		ADDED P-N 592-2627-002F & 592-2627-013F & ESD LOGO	SM			

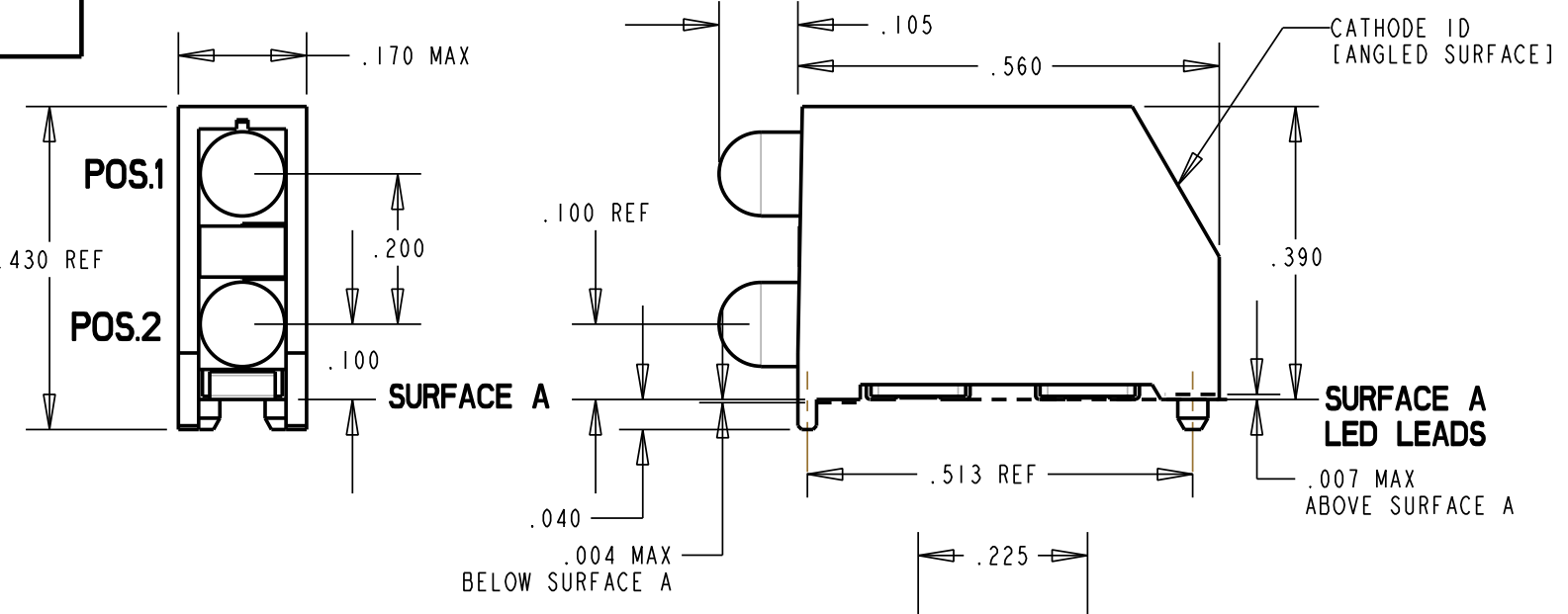


REFLOW PROFILE FOR RoHS COMPLIANT PART

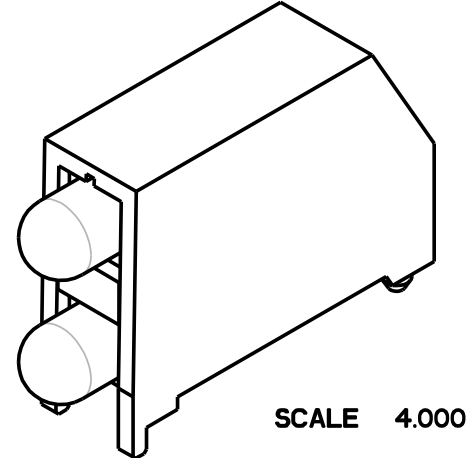
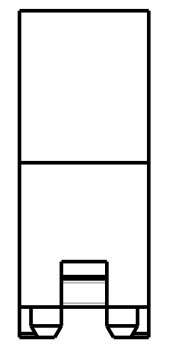


ATTENTION:
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

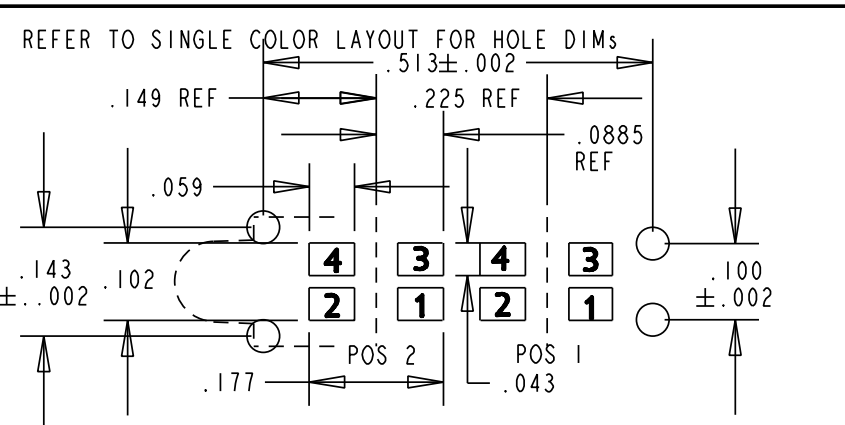
- NOTES:
- STORAGE OF TAPED PARTS SHALL NOT EXCEED TWELVE (12) MONTHS AFTER WHICH RE-PACKAGING IS REQUIRED
 - FRONT AND REAR TERMINALS (OF EACH LED) OF THE ASSEMBLY TO BE WITHIN .005 COPLANARITY
 - MOISTURE SENSITIVITY LEVEL A LABEL WILL BE PLACED ON THE BAG - CHECK CHART FOR PROPER LEVEL
 - *** CAUTION *** FOR PRODUCTS THAT ARE ESD SENSITIVE OBSERVE PRECAUTIONS IN HANDLING ELECTROSTATIC SENSITIVE DEVICES. FOR EYE SAFETY DO NOT STARE DIRECTLY INTO THE LIGHT BEAM OF THESE LED DEVICES AT CLOSE RANGE
 - DIALIGHT PART NUMBERS = 592-XXX-002F [STRIP] 592-XXXX-013F [13" REEL]



++ SINGLE COLOR LED SHOWN ++

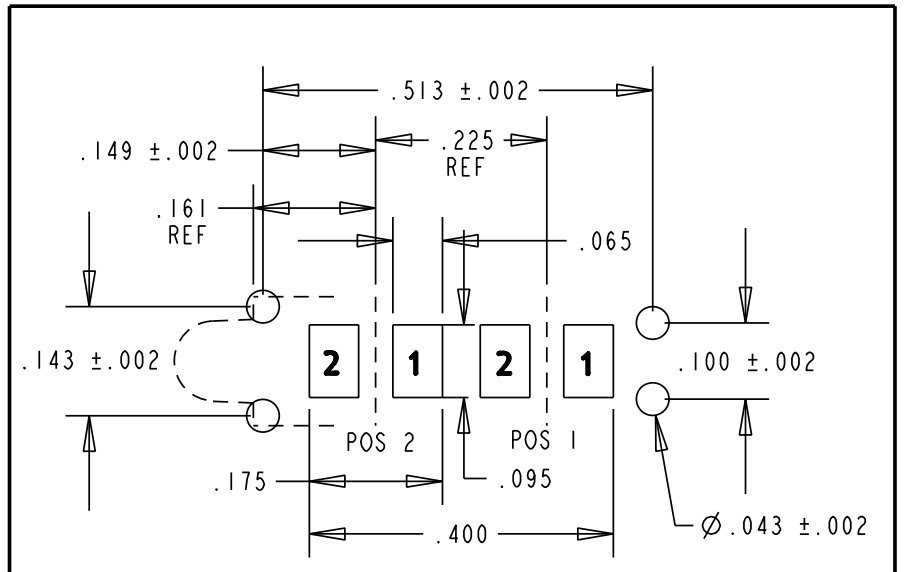


SCALE 4.000



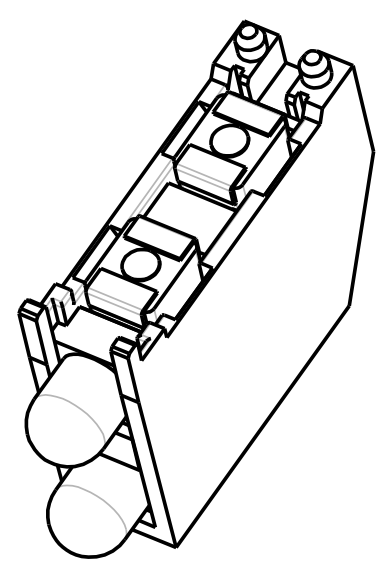
LED COLOR	PIN 1	PIN 2	PIN 3	PIN 4
RED / YELLOW	RED CATHODE	RED ANODE	YELLOW ANODE	YELLOW CATHODE
GREEN / YELLOW	YELLOW CATHODE	YELLOW ANODE	GREEN ANODE	GREEN CATHODE
RED / GREEN	RED CATHODE	RED ANODE	GREEN ANODE	GREEN CATHODE
R/G/B TRI-COLOR	RED CATHODE	COMMON ANODE	GREEN CATHODE	BLUE CATHODE

RECOMMENDED PAD LAYOUT - MULTI-COLOR

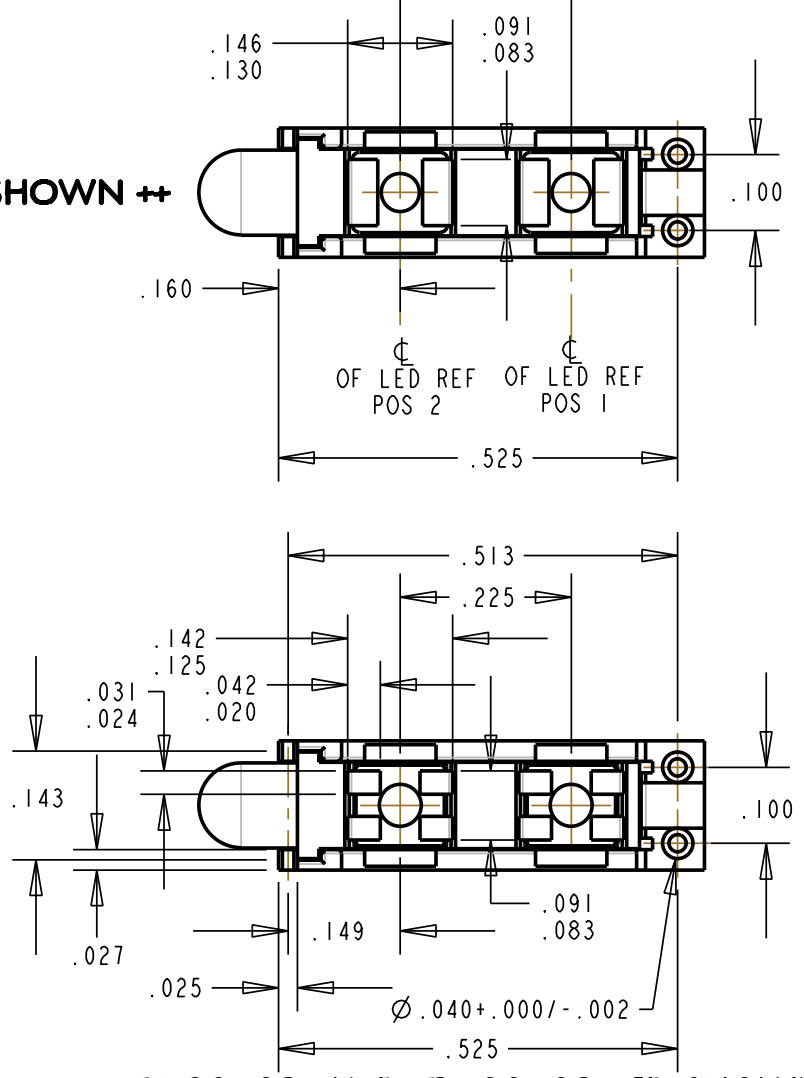


LED COLOR	PIN 1	PIN 2
SINGLE COLOR	CATHODE	ANODE

RECOMMENDED PAD LAYOUT - SINGLE COLOR



SCALE 4.000



++ BI-COLOR AND TRI-COLOR LED SHOWN ++ WITH TERMINAL DIMENSIONS

RoHS Compliant 592 Bi-level Surface Mount Prism

Part Numbers with the "F" suffix ending are RoHS Compliant. Example: 592-2020-002F, 592-3535-013F. The bag and reel are marked with "RoHS Compliant" label or equivalent markings. Parts can be reflow soldered to the Reflow Profile shown using typical lead-free soldering process with max 260°C peak temp.

SCALE: 4.000	DRAWING NUMBER	REV
ALL DIM'S IN: INCHES (MM)	C-17285	A
TOLERANCES: UNLESS OTHERWISE SPECIFIED	TITLE	BI-LEVEL PRISM
FRACTIONS: ±1/64		RoHS COMPLIANT
DECIMALS (.XX): ±.02	MATERIAL	
DECIMALS (.XXX): ±.015		
DECIMALS (.XXXX): ±.0005		
ANGLES: ±3°		
FINISH:	Dialight	
FSCM 83330	SHEET 1 OF 1	FAMILY TABLES:



592 SERIES

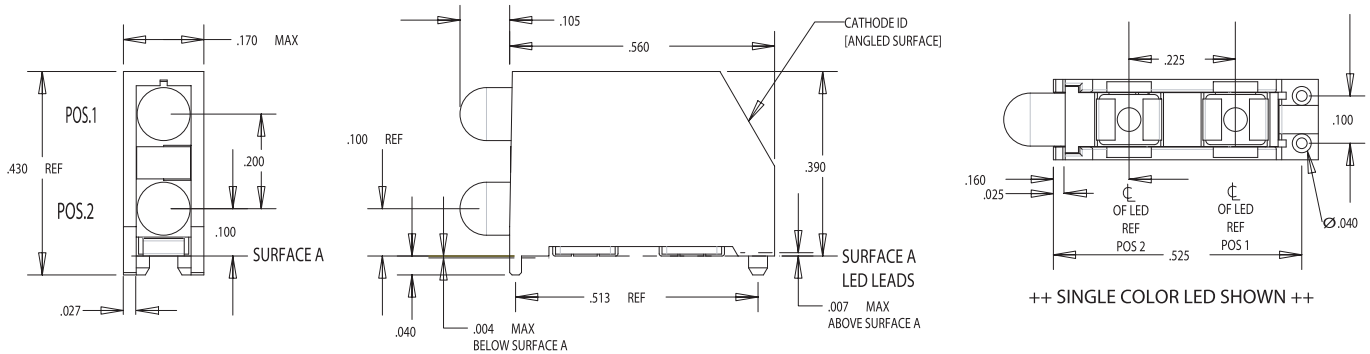
3mm Bi-level Prism® CBI® Surface Mount LED SINGLE COLOR



FEATURES / BENEFITS

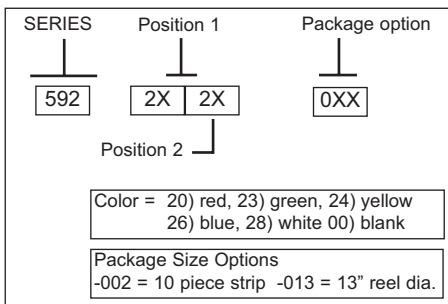
- ▲ Available as a Lead (Pb) Free product - RoHS Compliant.
- ▲ Incorporates latest LED technology, specifically designed for surface mounting.
- ▲ Compatible with automatic placement equipment.
- ▲ Compatible with surface mount reflow soldering processes.
- ▲ Black housing enhances contrast ratio.
- ▲ Housing material meet UL-94V-0 flammability ratings.
- ▲ Patented Bi-level design provides increased indication without increased space.
- ▲ Illumination areas compatible with industry standard 3mm through-hole Bi-level Circuit Board Indicators.
- ▲ Packaged in moisture barrier bags for dry packaging per IPC/JEDEC J-STD-033.
- ▲ Helps to eliminate mixed technology pc board processing.

SPECIFICATIONS

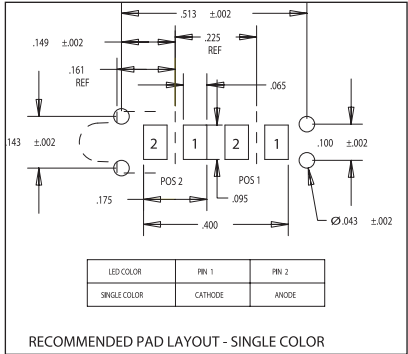


++ SINGLE COLOR LED SHOWN ++

PART NUMBER CODE*



PART NUMBER*	COLOR COMBO
592-2020-0XX	RED/RED
592-2323-0XX	GREEN/GREEN
592-2424-0XX	YELLOW/YELLOW
592-2423-0XX	YELLOW/GREEN
592-2324-0XX	GREEN/YELLOW
592-2626-0XX	BLUE/BLUE
592-2828-0XX	WHITE/WHITE



* Part Number with "F" suffix ending is a Lead (Pb) Free Product - RoHS Compliant.





3mm Bi-level Prism® CBI®
Surface Mount LED, Single Color

ABSOLUTE MAXIMUM RATINGS (TA= 25°C)

Parameter	20	23	24	26	28
COLOR	Red	Green	Yellow	Blue	White
POWER DISSIPATION (derate linearly from 25°C mA/°C)	100mW 0.4	100mW 0.4	60mW 0.25	100mW 0.44	85mW 0.6
FORWARD DC CURRENT	30mA	30mA	20mA	20mA	20mA
PEAK FORWARD CURRENT (10 µsec)	120mA	120mA	80mA	N/A	N/A
OPERATING TEMPERATURE	-55°C to +100°C			-40°C to +100°C	
STORAGE TEMPERATURE	-55°C to +100°C			-40°C to +100°C	
SOLDERING TEMPERATURES CONVECTION IR VAPOR PHASE	235°C Peak, above 185°C for 90 sec., 215°C for 3 Min.				

OPERATING CHARACTERISTICS (TA= 25°C)

Parameters	Part No.	Color	Min	Typ	Max	Units	Test Cond.
FORWARD VOLTAGE VF	20	red		2.0	2.6	V	IF=10mA
	23	green		2.0	2.6		
	24	yellow		2.0	2.6		
	26	blue		3.5	4.2		IF=20mA
	28	white		3.5	4.2		
REVERSE VOLTAGE VR	20	red	5			V	IR=10µA
	23	green	5				
	24	yellow	5				
	26	blue	N/A				
	28	white	N/A				
DOMINANT WAVELENGTH Dom	20	red		628		nm	IF=20mA
	23	green		570			
	24	yellow		590			
	26	blue		428			
	28	white		X .29 .32 .365 Y .22 .31 .42			
LUMINOUS INTENSITY Iv	20	red		5		mcd	IF=10mA
	23	green		4			
	24	yellow		5			
	26	blue		6			
	28	white		19			
VIEWING ANGLE (2θ 1/2)	20	red		40		deg.	
	23	green		40			
	24	yellow		40			
	26	blue		40			
	28	white		40			

DIALIGHT RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME IN ORDER TO SUPPLY THE BEST PRODUCT POSSIBLE.



A4703



ISO 9001

Dialight Corporation