

REV.	ECN NO.	REVISIONS	DRN.	CKD.	APP.	DATE
A		NEW RELEASE	YY	---	N.O.	5-17-93
B		ADDED NOTES 6-8	YY	---	N.O.	1-12-94
C		CHANGE NOTE 7 - CHANGE WAVE-LENGTH FROM PEAK TO DOMINANT LED SPEC CHANGE	YY	---	N.O.	3-7-94
D		ADDED HI. GREEN AND AlInGaP YELLOW AND CHANGE TO ANOTHER AlGaAs RED CHANGE NOTE 8	AV	N.O.	N.O.	3-8-00
E		ADDED P/N 591-2801-102, 591-2801-107, 591-2801-113 AND WHITE LED SPEC ALSO ADDED NOTE 10, 11	YIS	D.C.	N.O.	3-1-02
F		UPDATED LED SPEC FOR HI.EFF.RED, GREEN & YELLOW	YIS	JMC	Y.C.	2-21-03
G		ADDED 591-2601-102, -107, -113 ADDED BLUE LED SPEC TABLE.	YIS			

LED COLOR = HI.EFF.RED GREEN YELLOW						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	HI. EFF. RED	MIN	TYP	MAX	UNITS	TEST CONDITIONS
	YELLOW	7.1	12.6	18.0		
	HI. EFF. RED		2.0	2.5		
FORWARD VOLTAGE	GREEN	2.0	2.5	V	I _f = 10 mA	
	YELLOW	2.0	2.5			
	HI. EFF. RED	5				
REVERSE VOLTAGE	GREEN	5		V	I _r = 10 μA	
	YELLOW	5				
	HI. EFF. RED	635				
PEAK WAVELENGTH	GREEN	572		nm	I _f = 10 mA	
	YELLOW	586				
	HI. EFF. RED	622	628			
DOMINANT WAVELENGTH	GREEN	564	570	576	nm	I _f = 10 mA
	YELLOW	580	587	595		
	HI. EFF. RED					

LED COLOR = AlGaAs RED HI.EFF.GREEN AlInGaP YELLOW						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	AlGaAs RED	MIN	TYP	MAX	UNITS	TEST CONDITIONS
	AlInGaP YELLOW	7.1	12.6	18.0		
	AlGaAs RED		2.0	2.5		
FORWARD VOLTAGE	HI. INT. GREEN	2.0	2.5	V	I _f = 20 mA	
	AlGaAs RED	1.8	2.4			
	AlInGaP YELLOW	2.1	2.6			
REVERSE VOLTAGE	AlGaAs RED	5		V	I _r = 10 mA	
	HI. INT. GREEN	5				
	AlInGaP YELLOW	5				
DOMINANT WAVELENGTH	AlGaAs RED	638		nm		
	HI. INT. GREEN	569				
	AlInGaP YELLOW	595				

LED COLOR = HI.EFF.RED GREEN YELLOW						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
POWER DISSIPATION	HI. EFF. RED	MIN	TYP	MAX	UNITS	TEST CONDITIONS
	YELLOW					
CONTINUOUS FORWARD CURRENT	HI. EFF. RED					
	GREEN				30	mA
	YELLOW					
OPERATING TEMPERATURE	RED, GRN, YEL					
STORAGE TEMPERATURE	RED, GRN, YEL					

LED COLOR = AlGaAs RED HI.EFF.GREEN AlInGaP YELLOW						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
POWER DISSIPATION	RED, GRN, YEL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
	HI. INT. GREEN					
	AlInGaP YELLOW					
CONTINUOUS FORWARD CURRENT	AlGaAs RED				40	mA
	HI. INT. GREEN					
	AlInGaP YELLOW					
PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 0.1 ms PULSE WIDTH)	AlGaAs RED				200	mA
	HI. INT. GREEN					
	AlInGaP YELLOW					
OPERATING TEMPERATURE	RED, GRN, YEL				-55 TO 100	°C
STORAGE TEMPERATURE	RED, GRN, YEL					
INFRARED REFLOW SOLDERING	RED, GRN, YEL				260°C FOR 5 SEC	
VAPOR PHASE SOLDERING	RED, GRN, YEL					

LED COLOR = BLUE						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
FORWARD VOLTAGE		3.5	4.2	V	I _f = 10 mA	
REVERSE CURRENT		.01	10	μA	V _r = 5 V	

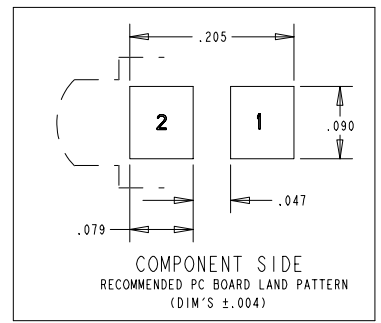
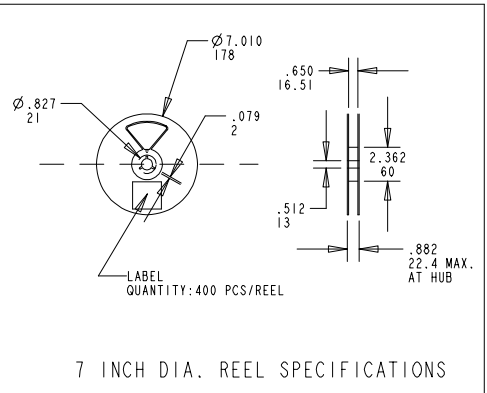
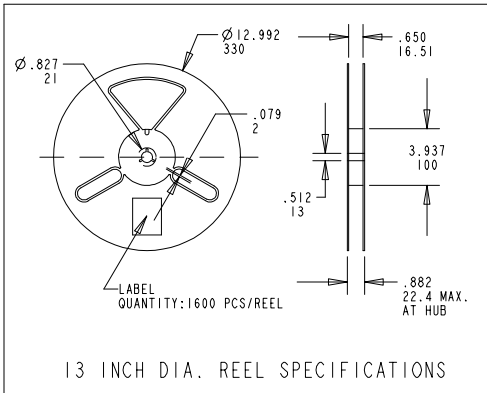
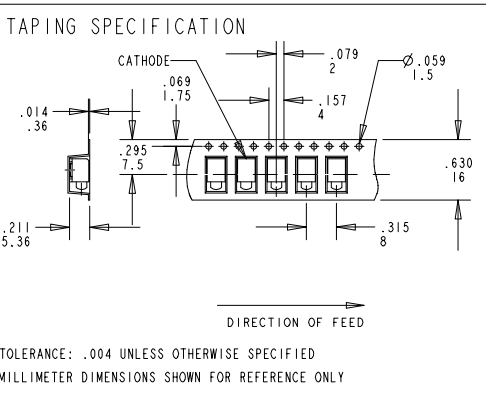
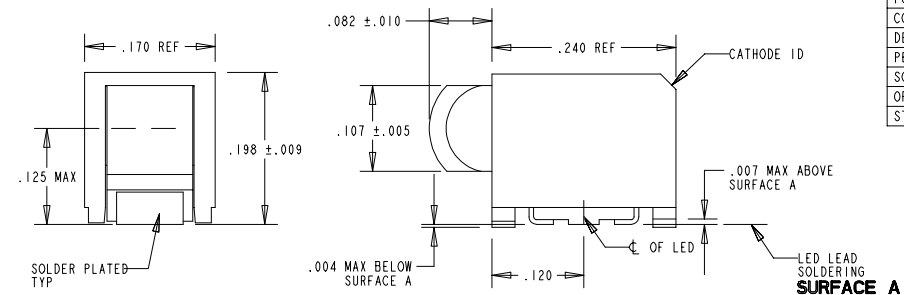
LED COLOR = WHITE						
OPERATING CHARACTERISTICS AT 25 °C AMBIENT						
LED CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS	
FORWARD VOLTAGE		3.5	4.2	V	I _f = 20 mA	
REVERSE CURRENT		.01	10	μA	V _r = 5 V	
COLOR COORDINATES	X	.29	.32	.365	I _f = 20 mA	
	Y	.22	.31	.42		

LED COLOR = BLUE						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
POWER DISSIPATION	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
CONTINUOUS FORWARD CURRENT				0.44	mA/°C	
OPERATING TEMPERATURE				20	mA	
STORAGE TEMPERATURE				-40 TO 100	°C	
SOLDER PROFILE:				-40 TO 100	°C	

LED COLOR = WHITE						
ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT						
POWER DISSIPATION	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
DERATE LINEARLY FROM 75 °C				20	mA	
PEAK REVERSE VOLTAGE				.6	mA/°C	
SOLDERING PROFILE:				5V		
OPERATING TEMPERATURE				-40 °C TO +100 °C		
STORAGE TEMPERATURE				-40 °C TO +100 °C		

NOTES :

- MILLIMETER DIMENSIONS SHOWN FOR REFERENCE ONLY
- PAD NUMBERS ARE FOR REFERENCE ONLY, DESIGNATION NON-EXISTENT ON PART
- STORAGE CONDITIONS FOR TAPED PRODUCT: RE-TAPING MAY BE NECESSARY FOR PRODUCTS STORED MORE THAN TWELVE MONTHS
- ORDER QUANTITY IS LED ASSEMBLIES, NOT REELS
- ...-102 SUFFIX MEANS PARTS ARE PACKED ON A 20 pc SAMPLE STRIP
...-107 SUFFIX MEANS PARTS ARE PACKED ON A 7 INCH REEL, 400 pcs/REEL
...-113 SUFFIX MEANS PARTS ARE PACKED ON A 13 INCH REEL, 1600 pcs/REEL
- LENS MOVEMENT IN RELATIONSHIP TO THE HOUSING IS:
.009" T.I.R. VERTICALLY
.007" T.I.R. HORIZONTALLY
- FRONT AND REAR TERMINALS OF THE ASSEMBLY TO BE WITHIN .005 COPLANARITY
- LED LEAD FRAME MATERIAL:
CORE MATERIAL = COPPER
1st PLATING = Ag-100%, THICKNESS ABOUT 90 MICRO-INCH
2nd PLATING = 90% Sn - 10% Pb, THICKNESS RANGE 200 TO 800 MICRO-INCH
- DIALIGHT PART NUMBERS =
591-2x01-102 591-2x01-107 591-2x01-113
- DRY PACK PACKAGING CONSIST OF A DESICCANT, HUMIDITY INDICATOR CARD IN A VACUUM SEALED MOISTURE BARRIER BAG, MOISTURE SENSITIVITY LABEL LEVEL 2 ON OUTSIDE OF BAG, AS PER JEDEC STD. 033.
- ATTENTION: OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.



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SCALE: DRAWING SCALE	DRAWING NUMBER	REV
ALL DIM'S IN: INCHES (MM)	C-15785	G
TOLERANCES: UNLESS OTHERWISE SPECIFIED	TITLE	
FRACTIONS: ±1/64	SURFACE MOUNT CBI - SQUARE LENS	
DECIMALS (.XX): ±.01	MATERIAL	
DECIMALS (.XXX): ±.005	Dialight	
DECIMALS (.XXXX): ±.0005	1501 ROUTE 34 SOUTH FARMINGDALE, NJ 07727	
ANGLES: ±1°	FSCM 83330	
FINISH:	SHEET	OF
	FAMILY TABLES:	