

PART NUMBER	LED COLOR
591-2001-102	HI.EFF. RED
591-2001-107	
591-2001-113	
591-2101-102	AlGaAs RED
591-2101-107	
591-2101-113	
591-2201-102	HI.INTENSITY GREEN
591-2201-107	
591-2201-113	
591-2301-102	GREEN
591-2301-107	
591-2301-113	
591-2401-102	YELLOW
591-2401-107	
591-2401-113	
591-2601-102	BLUE
591-2601-107	
591-2601-113	
591-2701-102	AlInGaP YELLOW
591-2701-107	
591-2701-113	
591-2801-102	WHITE
591-2801-107	
591-2801-113	

LED COLOR = HI.EFF.RED GREEN YELLOW						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	HI.EFF.RED	MIN	TYP	MAX	UNITS	TEST CONDITIONS
LUMINOUS INTENSITY	HI.EFF.RED	5.6	9.8	14.0	mcd	I _f = 10 mA
	GREEN	7.1	10.6	14.0		
	YELLOW	7.1	12.6	18.0		
FORWARD VOLTAGE	HI.EFF.RED		2.0	2.5	V	I _f = 10 mA
	GREEN		2.0	2.5		
	YELLOW		2.0	2.5		
REVERSE VOLTAGE	HI.EFF.RED		5		V	I _r = 10 µA
	GREEN		5			
	YELLOW		5			
PEAK WAVELENGTH	HI.EFF.RED		635		nm	I _f = 10 mA
	GREEN		572			
	YELLOW		586			
DOMINANT WAVELENGTH	HI.EFF.RED	622	628	634	nm	I _f = 10 mA
	GREEN	564	570	576		
	YELLOW	580	587	595		

LED COLOR = HI.EFF.RED GREEN YELLOW						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
CHARACTERISTICS	HI.EFF.RED	MIN	TYP	MAX	UNITS	TEST CONDITIONS
POWER DISSIPATION	HI.EFF.RED				95	mW
	GREEN					
	YELLOW					
CONTINUOUS FORWARD CURRENT	HI.EFF.RED				30	mA
	GREEN					
	YELLOW					
OPERATING TEMPERATURE	RED,GRN,YEL			-40 TO 100		°C
STORAGE TEMPERATURE	RED,GRN,YEL			-40 TO 100		°C

LED COLOR = BLUE						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
LUMINOUS INTENSITY		6.0		mcd	I _f = 10 mA	
FORWARD VOLTAGE		3.5	4.2	V	I _f = 10 mA	
REVERSE CURRENT		.01	10	µA	V _r = 5 V	

LED COLOR = BLUE						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
CHARACTERISTICS	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
POWER DISSIPATION			100	mW		
DERATE LINEARLY FROM 55°C			0.44	mW/°C		
CONTINUOUS FORWARD CURRENT			20	mA		
OPERATING TEMPERATURE			-40 TO 100	°C		
STORAGE TEMPERATURE			-40 TO 100	°C		
SOLDER PROFILE: IR 235 °C PEAK FOR 15 SEC / 185 °C FOR 90 SEC. MAX.						

LED COLOR = AlGaAs RED HI.INT.GREEN AlInGaP YELLOW						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	AlGaAs RED	MIN	TYP	MAX	UNITS	TEST CONDITIONS
LUMINOUS INTENSITY	AlGaAs RED		23.9		mcd	I _f = 10 mA
	HI.INT. GREEN		9.1			
	AlInGaP YELLOW		33.6			
FORWARD VOLTAGE	AlGaAs RED		1.8	2.4	V	I _f = 20 mA
	HI.INT. GREEN		2.1	2.6		
	AlInGaP YELLOW		2.0	2.4		
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 = AlGaAs RED HI.INT.GREEN AlInGaP YELLOW						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
CHARACTERISTICS	RED,GRN,YEL	MIN	TYP	MAX	UNITS	TEST CONDITIONS
POWER DISSIPATION	RED,GRN,YEL			100	mW	
DERATE LINEARLY FROM 25°C	AlGaAs RED			0.8	mW/°C	
	HI.INT. GREEN			0.6		
	AlInGaP YELLOW			0.6		
CONTINUOUS FORWARD CURRENT	AlGaAs RED			40	mA	
	HI.INT. GREEN			30		
	AlInGaP YELLOW			50		
PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 0.1 ms PULSE WIDTH)	AlGaAs RED			200	mA	
	HI.INT. GREEN			120		
	AlInGaP YELLOW			160		
OPERATING TEMPERATURE	RED,GRN,YEL			-55 TO 100	°C	
STORAGE TEMPERATURE	RED,GRN,YEL			-55 TO 100	°C	
INFRARED REFLOW SOLDERING	RED,GRN,YEL			260°C FOR 5 SEC		
VAPOR PHASE SOLDERING	RED,GRN,YEL			215°C FOR 3 MIN		

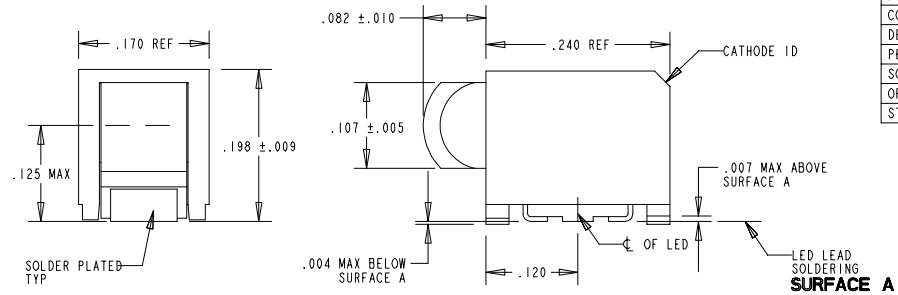
LED COLOR = WHITE						
OPERATING CHARACTERISTICS AT 25 °C AMBIENT						
LED CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS	
LUMINOUS INTENSITY		37.6		mcd	I _f = 10 mA	
FORWARD VOLTAGE		3.5	4.2	V	I _f = 20 mA	
REVERSE CURRENT		.01	10	µA	V _r = 5 V	
COLOR COORDINATES	X	.29	.32	.365	I _f = 20 mA	
	Y	.22	.31	.42		

LED COLOR = WHITE						
ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT						
CHARACTERISTICS	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS	
POWER DISSIPATION			85	mW		
CONTINUOUS FORWARD CURRENT			20	mA		
DERATE LINEARLY FROM 75 °C			.6	mW/°C		
PEAK REVERSE VOLTAGE			5V			
SOLDERING PROFILE: IR - 235 °C PEAK. - 15 SEC., 185 °C - 90 SEC MAX.						
OPERATING TEMPERATURE			-40 °C TO +100 °C			
STORAGE TEMPERATURE			-40 °C TO +100 °C			

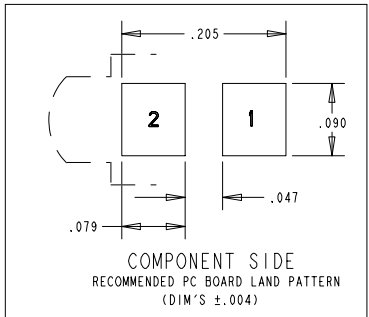
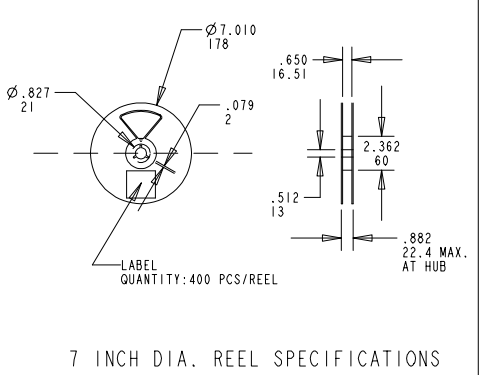
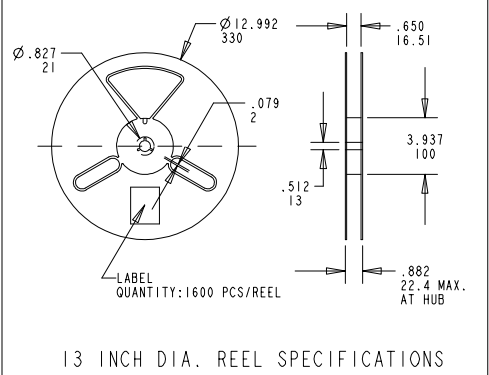
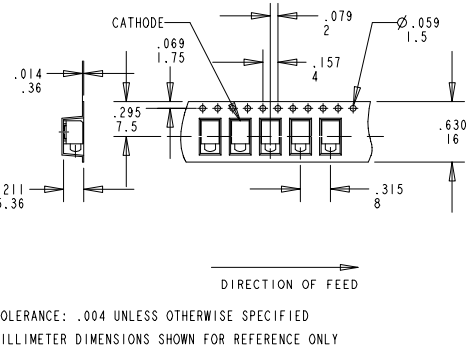
REV.	ECN NO.	REVISIONS	DRN.	KD.	APP.	DATE
A	---	NEW RELEASE	YY	---	N.O.	5-17-93
B	---	ADDED NOTES 6-8	YY	---	N.O.	1-12-94
C	---	CHANGE NOTE 7 - CHANGE WAVE-LENGTH FROM PEAK TO DOMINANT LED SPEC CHANGE	YY	---	N.O.	3-7-94
D	---	ADDED HI. GREEN AND AlInGaP YELLOW AND CHANGE TO ANOTHER AlGaAs RED CHANGE 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			

NOTES :

- 1- MILLIMETER DIMENSIONS SHOWN FOR REFERENCE ONLY
- 2- PAD NUMBERS ARE FOR REFERENCE ONLY , DESIGNATION NON-EXISTENT ON PART
- 3- STORAGE CONDITIONS FOR TAPED PRODUCT: RE-TAPING MAY BE NECESSARY FOR PRODUCTS STORED MORE THAN TWELVE MONTHS
- 4- ORDER QUANTITY IS LED ASSEMBLIES , NOT REELS
- 5- ...-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
- 6- LENS MOVEMENT IN RELATIONSHIP TO THE HOUSING IS :
.009" T.I.R. VERTICALLY
.007" T.I.R. HORIZONTALLY
- 7- FRONT AND REAR TERMINALS OF THE ASSEMBLY TO BE WITHIN .005 COPLANARITY
- 8- 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
- 9- DIALIGHT PART NUMBERS =
591-2x01-102 591-2x01-107 591-2x01-113
10. 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.
11. ATTENTION: OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.



TAPING SPECIFICATION



THIS DRAWING AND THE CONTENTS HEREIN ARE CONFIDENTIAL AND THE SOLE PROPERTY OF DIALIGHT. REPRODUCTION OF THIS DRAWING OR CONSTRUCTION OF ANY PARTS WITHIN THIS DRAWING ARE FORBIDDEN WITHOUT THE WRITTEN CONSENT OF DIALIGHT.		
SCALE: DRAWING SCALE ALL DIM'S IN: INCHES (MM)	DRAWING NUMBER C-15785	REV G
TOLERANCES: UNLESS OTHERWISE SPECIFIED FRACTIONS: ±1/64 DECIMALS (.XX): ±.01 DECIMALS (.XXX): ±.005 DECIMALS (.XXXX): ±.0005 ANGLES: ±1°	TITLE SURFACE MOUNT CBI - SQUARE LENS	MATERIAL
FINISH:	Dialight	1501 ROUTE 34 SOUTH FARMINGDALE, NJ 07727
FSCM 83330	SHEET OF	FAMILY TABLES: