

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 = AlGaAs RED HUNT GREEN AlInGaP YELLOW						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
LUMINOUS INTENSITY	AlGaAs RED		23.9			
	HI. INT. GREEN		9.1		mcd	I _f = 10 mA
	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			
	HI. INT. GREEN		569		nm	
	AlInGaP YELLOW		595			

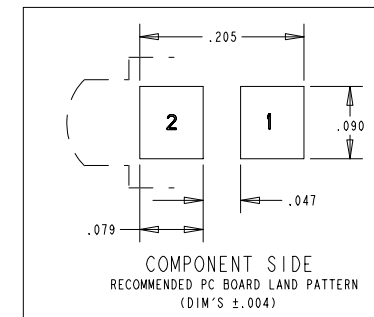
LED COLOR = AlGaAs RED HUNT GREEN AlInGaP YELLOW						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
POWER DISSIPATION	RED, GRN, YEL		100		UNITS	mW
DERATE LINEARLY FROM 25°C	AlGaAs RED		0.8			
	HI. INT. GREEN		0.6		mA/°C	
	AlInGaP YELLOW		0.6			
CONTINUOUS FORWARD CURRENT	AlGaAs RED		40		mA	
	HI. INT. 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		
	Y	.22	.31	.42		I _f = 20 mA

LED COLOR = WHITE						
ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT						
POWER DISSIPATION				85	mW	
CONTINUOUS FORWARD CURRENT				20	mA	
DERATE LINEARLY FROM 75 °C				.6	mA/°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		

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°	F5CM 83330	
FINISH:	SHEET	OF
	FAMILY TABLES:	

LED COLOR = HI.EFF. RED GREEN YELLOW						
OPERATING CHARACTERISTICS AT 25°C AMBIENT						
CHARACTERISTICS	MIN	TYP	MAX	UNITS	TEST CONDITIONS	
LUMINOUS INTENSITY	HI. EFF. RED	5.6	9.8	14.0		
	GREEN	7.1	10.6	14.0	mcd	I _f = 10 mA
	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			
	GREEN		572		nm	I _f = 10 mA
	YELLOW		586			
DOMINANT WAVELENGTH	HI. EFF. RED	622	628	634		
	GREEN	564	570	576		
	YELLOW	580	587	595		

LED COLOR = HI.EFF. RED GREEN YELLOW						
ABSOLUTE MAXIMUM RATING AT 25°C AMBIENT						
POWER DISSIPATION	HI. EFF. RED			95		mW
CONTINUOUS FORWARD CURRENT	GREEN			30		mA
	YELLOW					
	HI. EFF. RED					
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						
POWER DISSIPATION				100		mW
DERATE LINEARLY FROM 55°C				0.44		mA/°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.						

