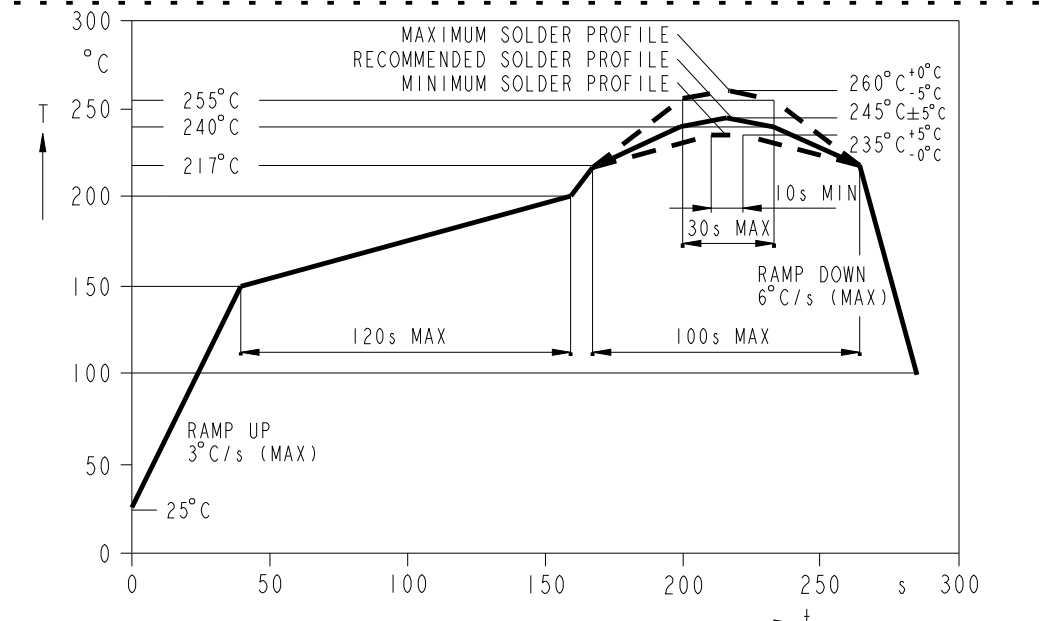
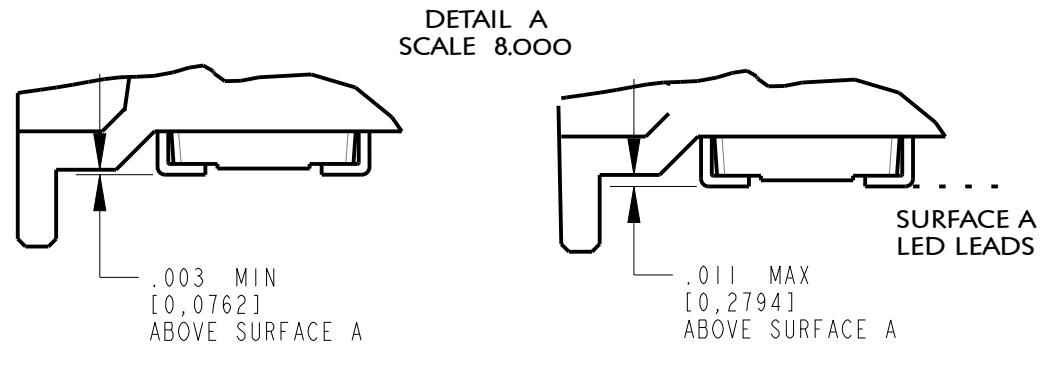
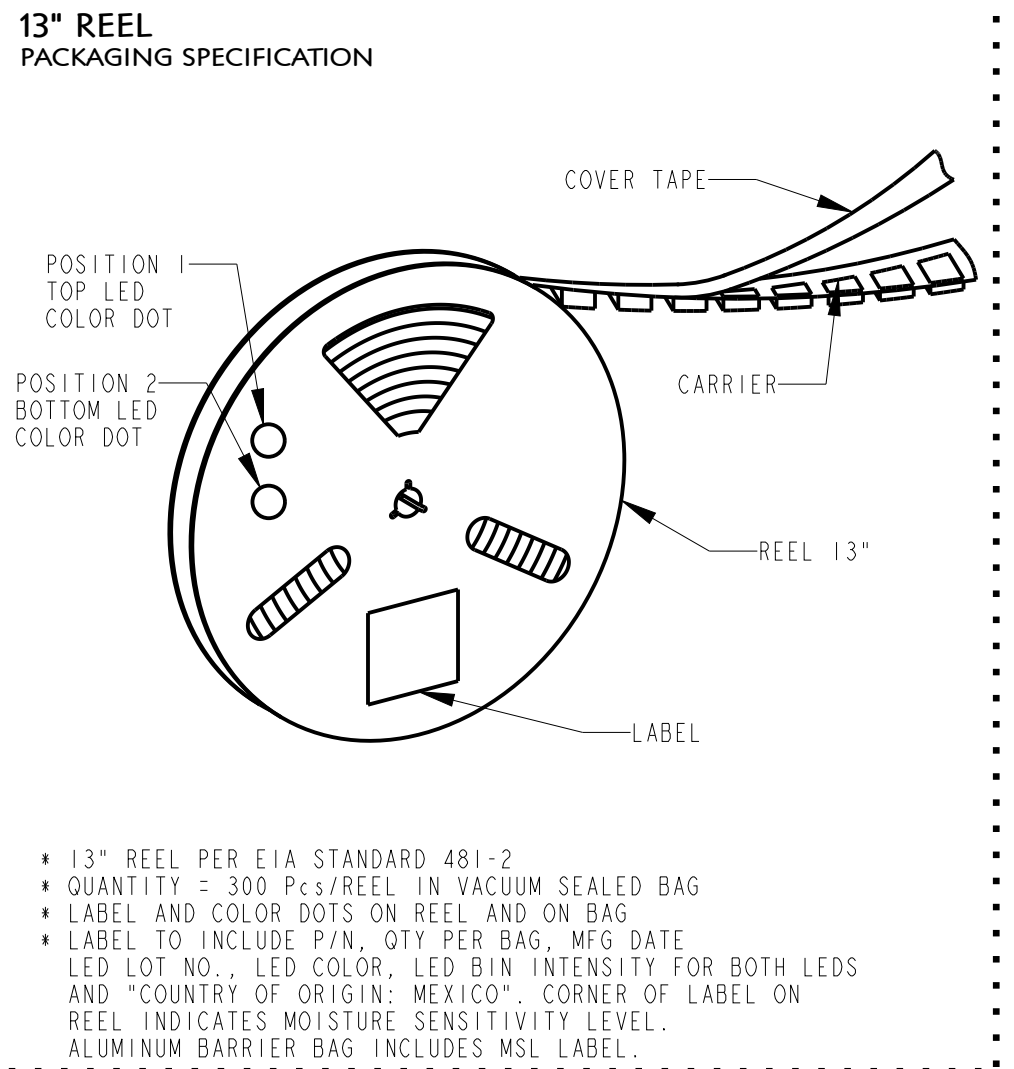
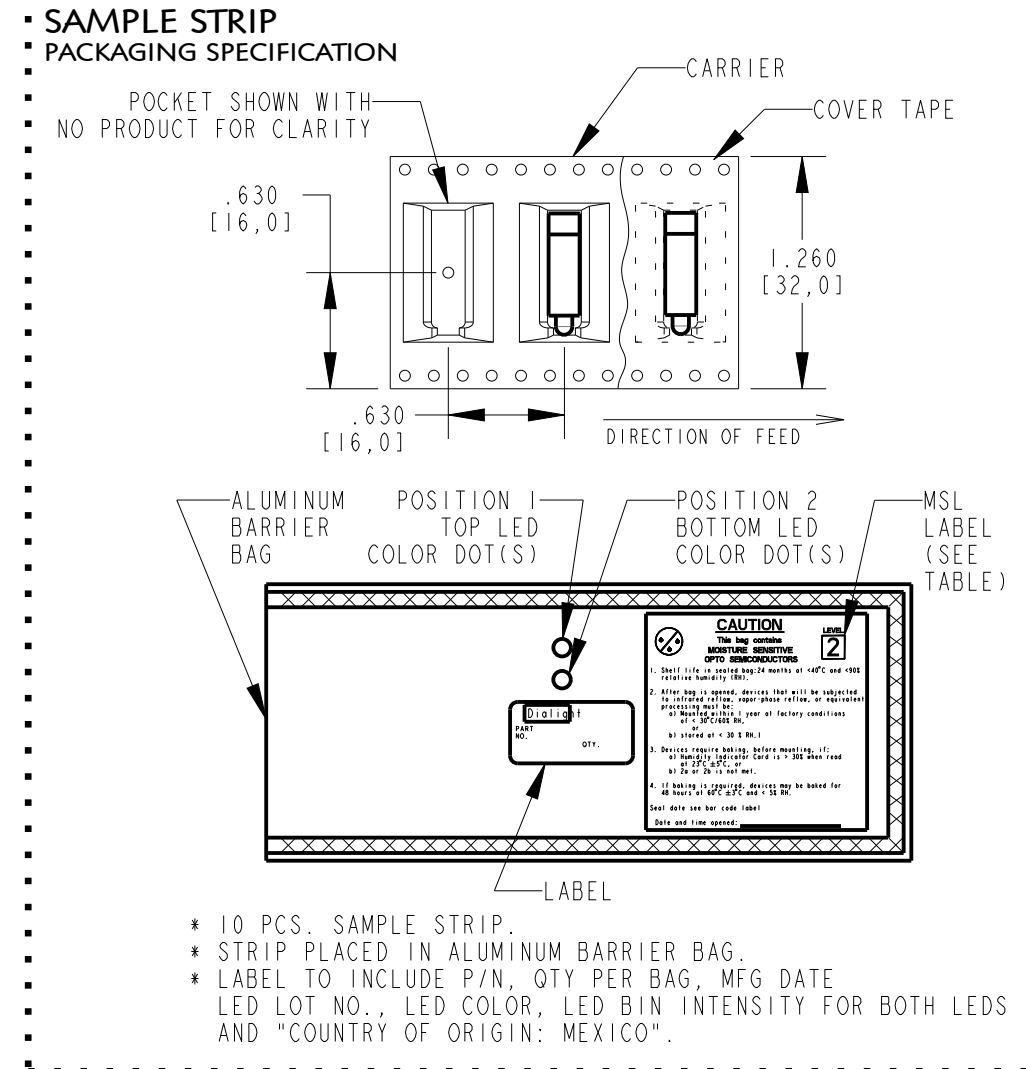
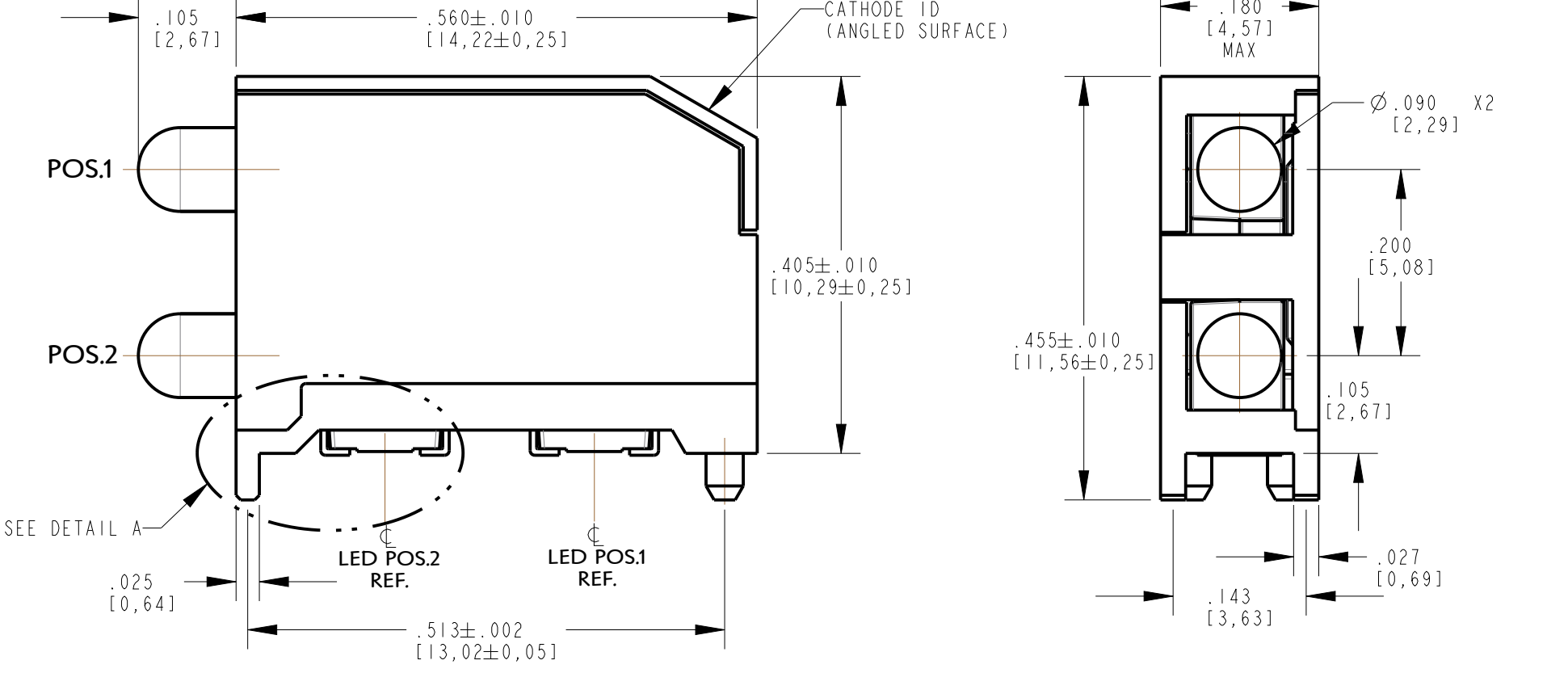
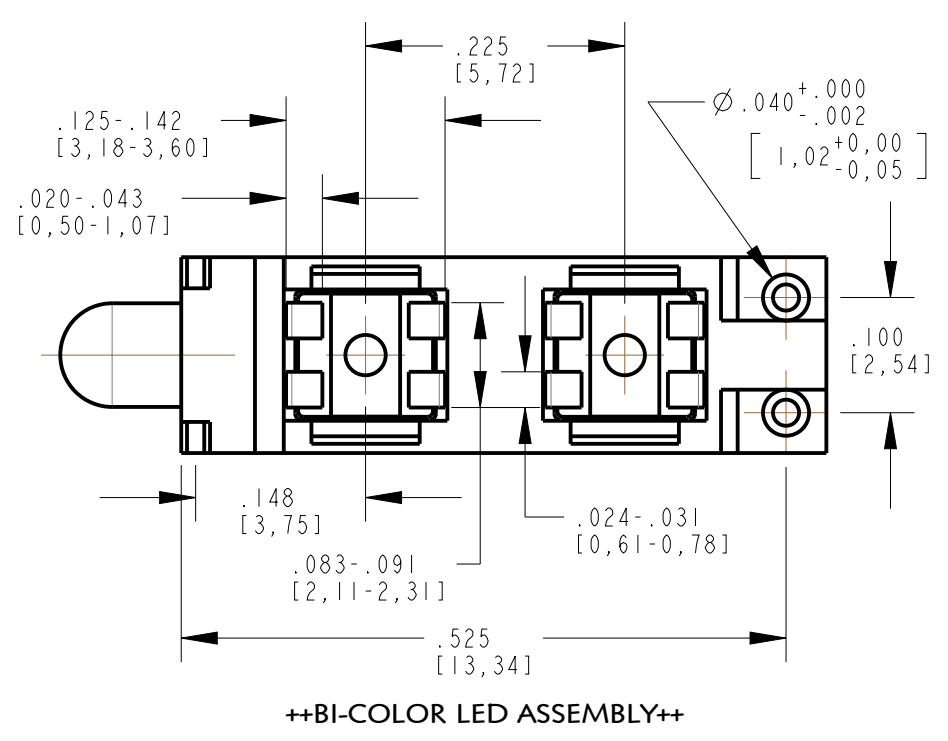
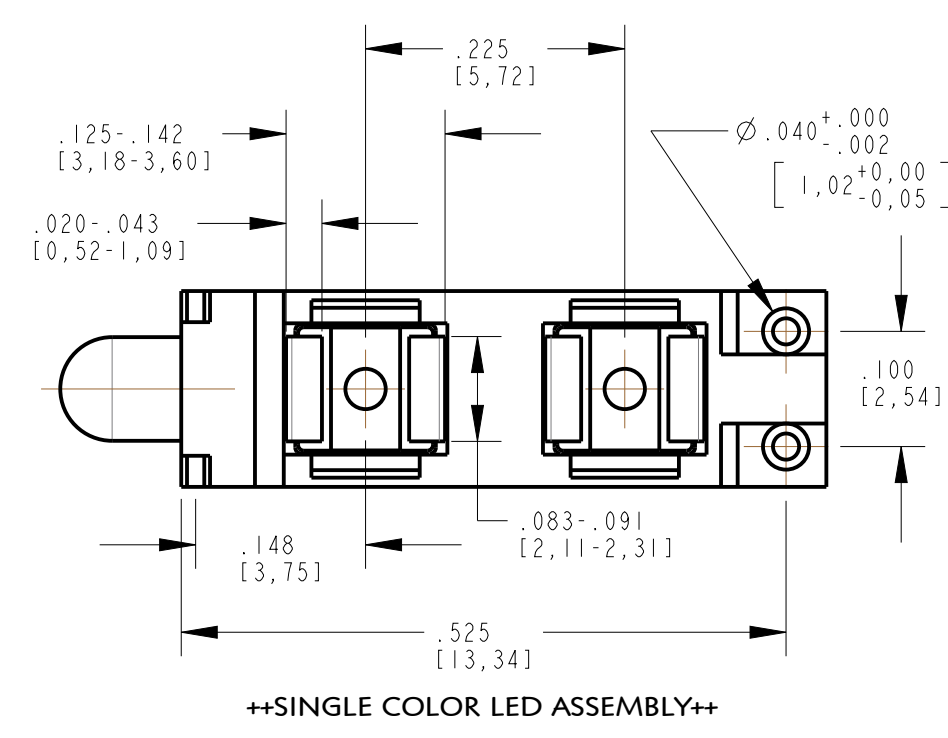


DIALIGHT PART NUMBER	PACKAGING	POSITION 1	POSITION 2	MSL
592-2020-302NF	SAMPLE STRIP	RED	RED	2
592-2020-313NF	3" REEL	[HI, EFF]	[HI, EFF]	2
592-2023-302NF	SAMPLE STRIP	RED	GREEN	2
592-2023-313NF	3" REEL	[HI, EFF]	GREEN	2
592-2121-302NF	SAMPLE STRIP	RED	RED	3
592-2121-313NF	13" REEL	640nm	640nm	3
592-2122-302NF	SAMPLE STRIP	RED	GREEN	3
592-2122-313NF	13" REEL	640nm	GREEN	3
592-2124-302NF	SAMPLE STRIP	RED	YELLOW	3
592-2124-313NF	13" REEL	640nm	YELLOW	3
592-2126-302NF	SAMPLE STRIP	RED	BLUE	3
592-2126-313NF	13" REEL	640nm	[InGa]N	3
592-2135-302NF	SAMPLE STRIP	RED	RED/GRN/BLUE	3
592-2135-313NF	13" REEL	640nm	RED/GRN/BLUE	3
592-2221-302NF	SAMPLE STRIP	GREEN	RED	2
592-2221-313NF	13" REEL	640nm	RED	2
592-2320-302NF	SAMPLE STRIP	GREEN	RED	2
592-2320-313NF	13" REEL	GREEN	[HI, EFF]	2
592-2323-302NF	SAMPLE STRIP	GREEN	GREEN	2
592-2323-313NF	13" REEL	GREEN	GREEN	2
592-2324-302NF	SAMPLE STRIP	GREEN	YELLOW	2
592-2324-313NF	13" REEL	GREEN	YELLOW	2
592-2326-302NF	SAMPLE STRIP	GREEN	BLUE	2
592-2326-313NF	13" REEL	GREEN	[InGa]N	2
592-2420-302NF	SAMPLE STRIP	YELLOW	RED	2
592-2420-313NF	13" REEL	YELLOW	RED	2
592-2422-302NF	SAMPLE STRIP	YELLOW	GREEN	2
592-2422-313NF	13" REEL	YELLOW	[HI, INT]	2
592-2423-302NF	SAMPLE STRIP	YELLOW	GREEN	2
592-2423-313NF	13" REEL	YELLOW	GREEN	2
592-2424-302NF	SAMPLE STRIP	YELLOW	YELLOW	2
592-2424-313NF	13" REEL	YELLOW	YELLOW	2
592-2429-302NF	SAMPLE STRIP	YELLOW	GREEN	2
592-2429-313NF	13" REEL	YELLOW	[InGa]N	2
592-2525-302NF	SAMPLE STRIP	ORANGE	ORANGE	2
592-2525-313NF	13" REEL	ORANGE	ORANGE	2
592-3024-302NF	SAMPLE STRIP	RED/GREEN	YELLOW	2
592-3024-313NF	13" REEL	RED/GREEN	YELLOW	2
592-3123-302NF	SAMPLE STRIP	YELLOW/GREEN	GREEN	2
592-3123-313NF	13" REEL	YELLOW/GREEN	GREEN	2
592-3520-302NF	SAMPLE STRIP	RED/GRN/BLUE	RED	2
592-3520-313NF	13" REEL	RED/GRN/BLUE	RED	2



OPERATING CHARACTERISTICS AT 25°C AMBIENT - SINGLE COLOR LEDs												
COLOR	LUMINOUS INTENSITY (mcd)	TEST CURRENT (mA)	DOMINANT WAVELENGTH (nm)			PEAK WAVELENGTH (nm)		FORWARD VOLTAGE (V) @ 20mA		REVERSE CURRENT (µA)		UNITS
#	DESCRIPTION	TYP	MIN	TYP	MAX	TYP	TYP	MAX	MAX	MAX	MAX	
20	RED [HI, EFF]	12	10	627	633	639	635	2.0	2.3	10 @ V <sub>r</sub> =12 V	1000	mA
21	RED [AlGaAs]	29	10	640	—	660	1.85	2.5	10 @ V <sub>r</sub> =12 V	155	mA	
22	GREEN [HI, INT]	18	10	564	570	576	572	2.0	2.5	10 @ V <sub>r</sub> =12 V	1000	mA
23	GREEN	18	10	566	570	575	572	2.0	2.4	10 @ V <sub>r</sub> =12 V	1000	mA
24	YELLOW	50	10	580	587	595	586	2.0	2.4	10 @ V <sub>r</sub> =5 V	200	mA
25	ORANGE	81	10	600	606	609	610	2.0	2.4	10 @ V <sub>r</sub> =5 V	200	mA
26	BLUE [InGa]N	6	10	462	465	468	428	3.5	4.1	10 @ V <sub>r</sub> =12 V	200	mA
27	YELLOW [AlInGa]P	60	20	X = 285; Y = 259; Z = 33; W = 401	—	—	3.1	3.7	10 @ V <sub>r</sub> =5 V	260	mA	
28	WHITE	34	10	—	—	—	—	—	—	—	—	—
29	GREEN [InGa]N	56	20	—	—	—	523	3.7	4.3	10 @ V <sub>r</sub> =12 V	200	mA

ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT SINGLE COLOR LEDs												UNITS
	RED [HI, EFF]	RED [AlGaAs]	GREEN	GREEN [HI, INT]	YELLOW [AlInGa]P	ORANGE	WHITE	BLUE [InGa]N	GREEN [InGa]N			
PEAK FORWARD CURRENT (1/200 DUTY CYCLE, 10µs PULSE WIDTH)	1000	155	1000	1000	200	200	1000	200	200	200	mA	
CONTINUOUS FORWARD CURRENT	30	30	30	30	30	30	20	20	30	30	mA	
LINEAR DERATING (FROM 85°C)	1.0 (FROM 85°C)	.42 (FROM 25°C)	1.0 (FROM 85°C)	1.0 (FROM 85°C)	1.0 (FROM 85°C)	1.0 (FROM 85°C)	0.60 (FROM 75°C)	0.44 (FROM 55°C)	0.42 (FROM 40°C)	0.42 (FROM 40°C)	mA/°C	
REVERSE VOLTAGE	12	12	12	12	12	12	5	5	5	5	V	
LEAD REFLOW SOLDERING TEMP (FOR 5 SEC.)	260 °C											
OPERATING TEMPERATURE	-40 TO +100	-40 TO +85	-40 TO +100	-40 TO +100	-40 TO +100	-40 TO +100	-55 TO +100	-55 TO +100	-55 TO +100	-55 TO +100	°C	
STORAGE TEMPERATURE	-40 TO +100	-40 TO +85	-40 TO +100	-40 TO +100	-40 TO +100	-40 TO +100	-40 TO +100	-40 TO +100	-40 TO +100	-40 TO +100	°C	



#30 & #31 OPERATING CHARACTERISTICS AT 25°C AMBIENT											
LED COLOR	LUMINOUS INTENSITY (mcd) @ I <sub>f</sub> = 10 mA	FORWARD VOLTAGE (V) @ I <sub>f</sub> = 2 mA	REVERSE CURRENT (µA) @ V <sub>r</sub> = 12V	DOMINANT WAVELENGTH (nm)			PEAK WAVELENGTH (nm)		FORWARD VOLTAGE (V)		
	MIN	TYP	MAX	MIN	TYP	MAX	TYP	TYP	MAX	TYP	MAX
RED/GRN	11	—	—	1.8	2.2	0.01	10	624	630	636	643
GREEN	5	—	—	—	—	—	10	566	570	575	572
YELLOW	14	—	—	1.8	2.2	0.01	10	580	587	595	591
GREEN	5	—	—	—	—	—	10	566	570	575	572

ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT RED/GRN & YLW/GRN BI-COLOR LED				RED/GRN	YLW/GRN	UNITS
CONTINUOUS FORWARD CURRENT	15					mA
REVERSE VOLTAGE	12					V
SURGE CURRENT	100					mA
PEAK SOLDERING TEMPERATURE	245					°C
OPERATING TEMPERATURE	-40 TO +100					°C
STORAGE TEMPERATURE	-40 TO +100					°C

#32 OPERATING CHARACTERISTICS AT 25°C AMBIENT - RED/YELLOW BI-COLOR LED											
COLOR	LUMINOUS INTENSITY (mcd)	TEST CURRENT (mA)	DOMINANT WAVELENGTH (nm)			PEAK WAVELENGTH (nm)		FORWARD VOLTAGE (V)			
	TYP		MIN	TYP	MAX	TYP	TYP	MAX	MAX	MAX	
RED	21	20	627	633	639	645	2.0	2.3	—	—	—
YELLOW	34	20	580	587	595	591	2.0	2.4	—	—	—

ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT - RED/YELLOW BI-COLOR LED				RED	YELLOW	UNITS
POWER DISSIPATION	80	80	80	80	mW	
PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 10µs PULSE WIDTH)	1000	200	1000	200	mA	
CONTINUOUS FORWARD CURRENT	30	20	30	20	mA	
LINEAR DERATING FROM 75°C	0.60	0.60	0.60	0.60	mA/°C	
LEAD REFLOW SOLDERING TEMPERATURE (FOR 5 SEC.)	260 °C					
OPERATING TEMPERATURE	-40 TO +100 °C					
STORAGE TEMPERATURE	-40 TO +100 °C					

#34 OPERATING CHARACTERISTICS AT 25°C AMBIENT - RED/BLUE BI-COLOR LED											
COLOR	LUMINOUS INTENSITY (mcd)	TEST CURRENT (mA)	DOMINANT WAVELENGTH (nm)			PEAK WAVELENGTH (nm)		FORWARD VOLTAGE (V)			
	TYP		MIN	TYP	MAX	TYP	TYP	MAX	MAX	MAX	
RED	21	10	620	625	630	645	1.9	2.2	—	—	—
BLUE	24	10	465	467	470	—	3.0	3.2	—	—	—

ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT - RED/BLUE BI-COLOR LED				RED	BLUE	UNITS
PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 10µs PULSE WIDTH)	100	100	100	100	mA	
CONTINUOUS FORWARD CURRENT	30	20	30	20	mA	
LINEAR DERATING FROM 80°C	1.0	1.0	1.0	1.0	mA/°C	
LEAD REFLOW SOLDERING TEMPERATURE (FOR 5 SEC.)	260 °C					
OPERATING TEMPERATURE	-40 TO +100 °C					
STORAGE TEMPERATURE	-40 TO +100 °C					

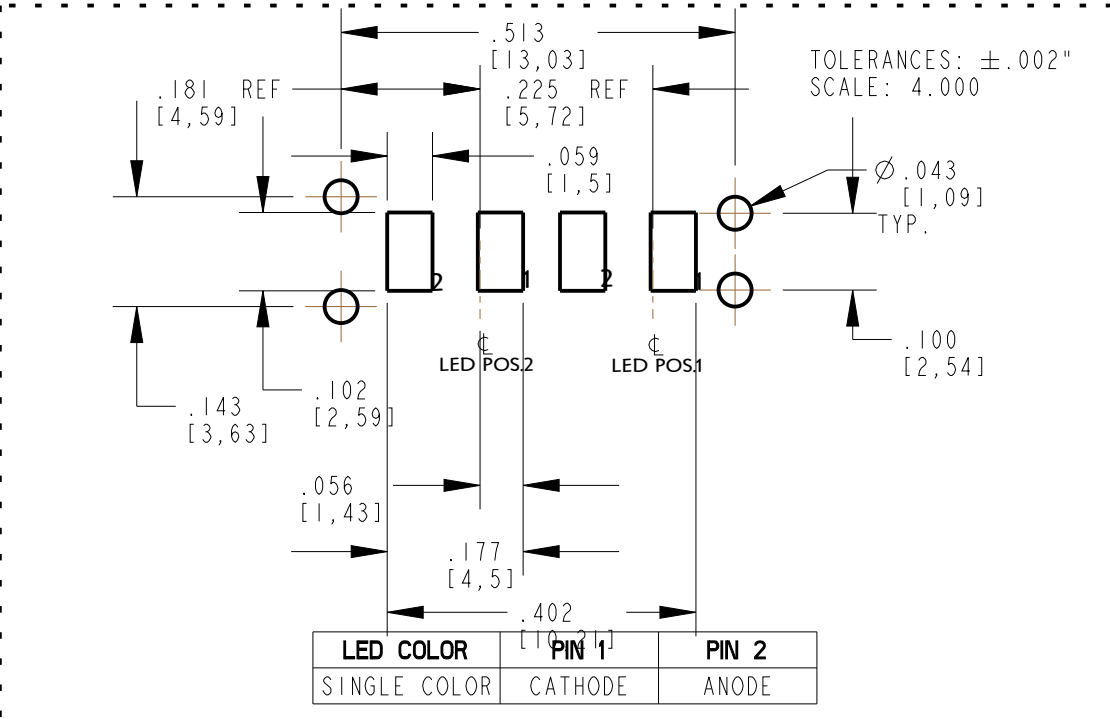
#35 OPERATING CHARACTERISTICS AT 25°C AMBIENT - RED/GRN/BLUE TRI-COLOR LED											
COLOR	LUMINOUS INTENSITY (mcd)	TEST CURRENT (mA)	DOMINANT WAVELENGTH (nm)			PEAK WAVELENGTH (nm)		FORWARD VOLTAGE (V)			
	TYP		MIN	TYP	MAX	TYP	TYP	MAX	MAX	MAX	
RED	31	20	626	626	635	645	1.9	2.4	—	—	—
GREEN	84	20	525	525	523	523	3.4	4.1	—	—	—
BLUE	16	20	470	470	468	468	3.4	4.1	—	—	—

ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT - RED/GRN/BLUE TRI-COLOR LED						RED	GREEN	BLUE	UNITS
POWER DISSIPATION	72	120	120	72	120	120	120	120	mW
PEAK FORWARD CURRENT (1/200 DUTY CYCLE, 10µs PULSE WIDTH)	30	20	20	30	20	20	20	20	mA
CONTINUOUS FORWARD CURRENT	30	20	20	30	20	20	20	20	mA
LINEAR DERATING FROM 80°C (+BLUE & GREEN FROM 70°C) 1 CHIP ON	1.00	+0.50	+0.50	1.00	+0.50	+0.50	1.00	+0.50	mA/°C
LINEAR DERATING FROM 65°C (+BLUE & GREEN FROM 50°C) 3 CHIPS ON	0.75	+0.30	+0.30	0.75	+0.30	+0.30	0.75	+0.30	mA/°C
LEAD REFLOW SOLDERING TEMPERATURE (FOR 5 SEC.)	260 °C								
OPERATING TEMPERATURE	-55 TO +100 °C								
STORAGE TEMPERATURE	-55 TO +100 °C								

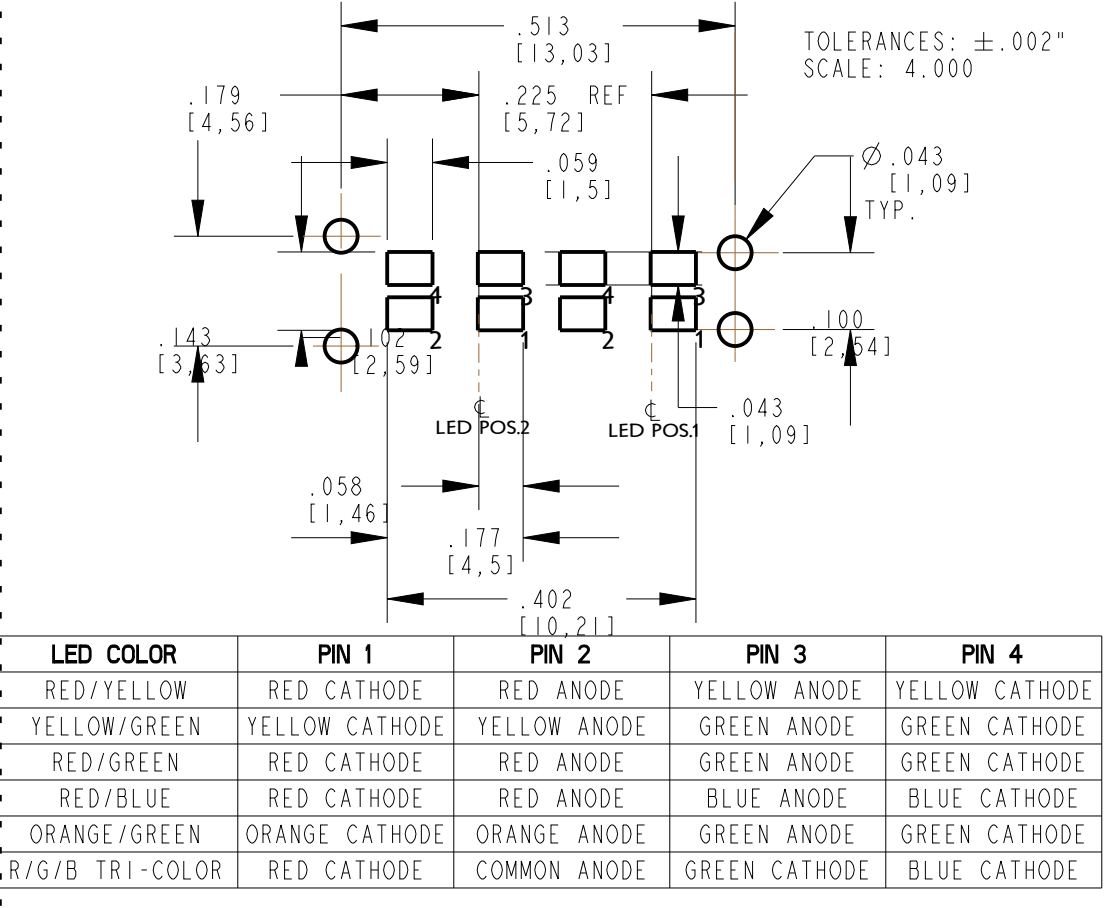
#36 OPERATING CHARACTERISTICS AT 25°C AMBIENT - ORANGE/GREEN BI-COLOR LED											
COLOR	LUMINOUS INTENSITY (mcd)	TEST CURRENT (mA)	DOMINANT WAVELENGTH (nm)			PEAK WAVELENGTH (nm)		FORWARD VOLTAGE (V)			
	TYP		MIN	TYP	MAX	TYP	TYP	MAX	MAX	MAX	
ORANGE	3	10	600	606	612	610	2.0	2.5	—	—	—
GREEN	4	10	564	570	576	572	2.0	2.5	—	—	—

ABSOLUTE MAXIMUM RATINGS AT 25°C AMBIENT - ORANGE/GREEN BI-COLOR LED				ORANGE	GREEN	UNITS
POWER DISSIPATION	95	95	95	95	mW	
PEAK FORWARD CURRENT (1/200 DUTY CYCLE, 10µs PULSE WIDTH)	500	500	500	500	mA	
CONTINUOUS FORWARD CURRENT	30	30	30	30	mA	
LINEAR DERATING FROM 55°C	0.66	0.66	0.66	0.66	mA/°C	
LEAD REFLOW SOLDERING TEMPERATURE (FOR 5 SEC.)	260 °C					
OPERATING TEMPERATURE	-40 TO +100 °C					
STORAGE TEMPERATURE	-40 TO +100 °C					

RECOMMENDED PAD LAYOUT - SINGLE COLOR



RECOMMENDED PAD LAYOUT - MULTI-COLOR



NOTES :

- DIALIGHT PART NUMBERS: 592-XXXX-3XXNF.
- ...-302NF SUFFIX MEANS PARTS ARE SUPPLIED ON A 10 PCS. SAMPLE STRIP. ...-313NF SUFFIX MEANS PARTS ARE SUPPLIED ON A 13 INCH REEL, 3