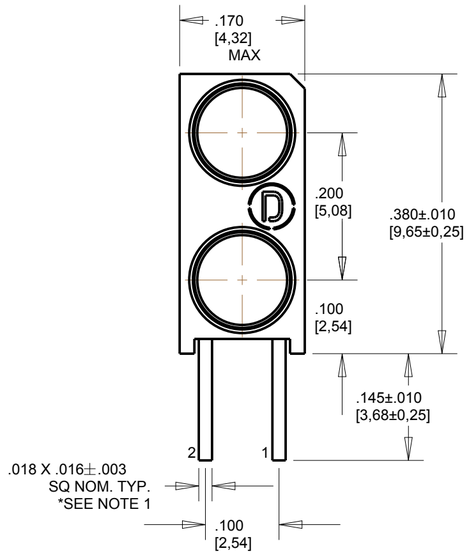
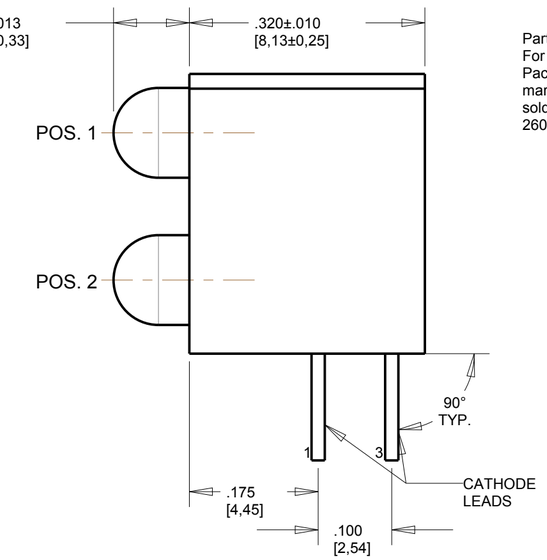
ASSY. NO. (CAT. NO.)	LED COLOR POSITION 1	LED COLOR POSITION 2
553-0101F	BLANK	RED
553-0102F	BLANK	GREEN
553-0103F	BLANK	YELLOW
553-0107F	BLANK	ORANGE
553-0108F	BLANK	BLUE
553-0110F	RED	BLANK
553-0111F	RED	RED
553-0112F	RED	GREEN
553-0113F	RED	YELLOW
553-0118F	RED	BLUE
553-0120F	GREEN	BLANK
553-0121F	GREEN	RED
553-0122F	GREEN	GREEN
553-0123F	GREEN	YELLOW
553-0127F	GREEN	ORANGE
553-0128F	GREEN	BLUE
553-0130F	YELLOW	BLANK
553-0131F	YELLOW	RED
553-0132F	YELLOW	GREEN
553-0133F	YELLOW	YELLOW
553-0171F	ORANGE	RED
553-0172F	ORANGE	GREEN
553-0173F	ORANGE	YELLOW
553-0177F	ORANGE	ORANGE
553-0181F	BLUE	RED
553-0182F	BLUE	GREEN
553-0188F	BLUE	BLUE
553-0199F	WHITE	WHITE
553-0201F	BLANK	RED
553-0202F	BLANK	GREEN
553-0203F	BLANK	YELLOW
553-0210F	RED	BLANK
553-0211F	RED	RED
553-0212F	RED	GREEN
553-0213F	RED	YELLOW
553-0220F	GREEN	BLANK
553-0221F	GREEN	RED
553-0222F	GREEN	GREEN
553-0223F	GREEN	YELLOW
553-0230F	YELLOW	BLANK
553-0231F	YELLOW	RED
553-0232F	YELLOW	GREEN
553-0233F	YELLOW	YELLOW
553-0301F	BLANK	RED
553-0302F	BLANK	GREEN
553-0303F	BLANK	YELLOW
553-0310F	RED	BLANK
553-0311F	RED	RED
553-0312F	RED	GREEN
553-0313F	RED	YELLOW
553-0320F	GREEN	BLANK
553-0321F	GREEN	RED
553-0322F	GREEN	GREEN
553-0323F	GREEN	YELLOW
553-0331F	YELLOW	RED
553-0332F	YELLOW	GREEN
553-0333F	YELLOW	YELLOW

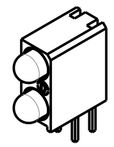




RoHS COMPLIANT 553-0XXXF

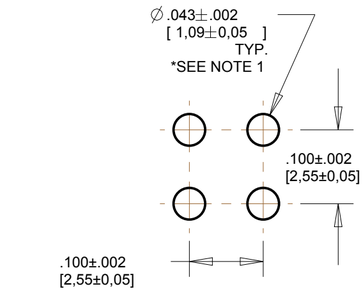
Part Numbers with the "F" suffix ending are RoHS Compliant.
For example: 553-0101F
Packaging is marked with "RoHS Compliant" label or equivalent markings. Parts can be wave soldered, dip soldered or hand soldered using typical lead-free soldering process with max 260°C temp. for 5 sec.

BIN		LIMITS (WHITE LED) (CHROMATICITY COORDINATES)			
A3	X	0.270	0.270	0.250	0.250
	Y	0.275	0.325	0.300	0.250
A4	X	0.270	0.250	0.250	0.270
	Y	0.275	0.250	0.200	0.225
B3	X	0.290	0.290	0.270	0.270
	Y	0.300	0.350	0.325	0.275
B4	X	0.290	0.270	0.270	0.290
	Y	0.300	0.275	0.225	0.250
C3	X	0.310	0.310	0.290	0.290
	Y	0.325	0.375	0.350	0.300
C4	X	0.310	0.290	0.290	0.310
	Y	0.325	0.300	0.250	0.275
D3	X	0.330	0.330	0.310	0.310
	Y	0.350	0.400	0.375	0.325
D4	X	0.330	0.310	0.310	0.330
	Y	0.350	0.325	0.275	0.300

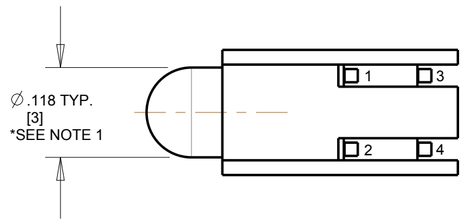


SCALE 2.000

REV	REVISIONS	DRN	CKD	APP	DATE
A	NEW RELEASE	TWC	MES	N.O.	8-5-05
B	ADDED P/N 553-0181F	SM	N.O.	MES	11-13-06
C	CHANGED IN SIDE VIEW POS 3 TO POS 2	SM	N.O.	MES	11-17-06
D	ADDED P/N 553-0199F & NOTE 4	SM	N.O.	MES	5-1-07
E	OPERATING CHARACTERISTICS TABLE CORRECTED FOR WHITE LED	SM	N.O.	MES	5-22-07
F	UPDATED WHITE LED SPECS	KLJ	NO	MES	2-7-08
G	ADDED P/Ns: 553-0107F, -0127F, -0171F, -0172F, & -0173F; ADDED ORANGE LED SPECS; UPDATED LED SPECS; ADDED DUAL DIMS; UPDATED TOLERANCES; ADDED NOTES 2 & 3; ADDED DOMINANT WAVELENGTH FOR 10 mA LEDs	JG	WFB	NO	4-29-13
H	ADDED TOLERANCES TO LEAD THICKNESS DIMENSIONS	MMB	WFB	NO	6-21-13
J	UPDATED LED SPECS FOR RED, GREEN AND YELLOW LED'S FOR P/N'S 553-01XXF	BP	—	NO	8-22-16
K	UPDATED LED SPECS FOR 553-01XXF, 553-02XXF & 553-03XXF	LD	—	NO	6-25-19



RECOMMENDED HOLE PATTERN GAUGE



ATTENTION:
OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES

NOTES:

1.(FOR ORANGE: LEADS .018 SQ. NOM.), LED BODY ∅.115±.010 AND THE PC BOARD TOLERANCE ON LEAD THICKNESS TO BE ±.003.
2. LED LEAD DIMENSIONS SHOWN ARE MEASURED AT HOUSING EXIT.
3. LEADS TO FIT INTO HOLES SPACED AS PER PATTERN.
4. PIN NUMBERS FOR REFERENCE ONLY, DESIGNATION NON-EXISTENT ON PART.
5. DIALIGHT PART NUMBERS: 553-0XXXF.
6. THIS ASSEMBLY CONTAINS ELECTROSTATIC DISCHARGE SENSITIVE DEVICES (ESDS). MAINTAIN ALL PRECAUTIONARY MEASURES DURING ASSEMBLY, HANDLING, AND STORAGE IN ACCORDANCE WITH IPC-A-610.

553-01XXF OPERATING CHARACTERISTICS AT 25 °C AMBIENT: 10 mA LEDs						
LED CHARACTERISTICS	COLOR	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
LUMINOUS INTENSITY	RED	2.5	8.7	18	mcd	I_F = 10 mA
	YELLOW	1.7	5.6	—		
	GREEN	5.6	12.6	29		
	BLUE	11	16	23		I_F = 2 mA
	ORANGE	3.4	7.0	10.8		I_F = 10 mA
	WHITE	400	1100	1900		I_F = 20 mA
PEAK WAVELENGTH	RED		635		nm	
	YELLOW		588			
	GREEN		565			
	BLUE		468			
	ORANGE		600			
	WHITE					
DOMINANT WAVELENGTH	RED	615	625	632	nm	I_F = 10 mA
	YELLOW	585	590	595		
	GREEN	564	568	573		
	BLUE	460	467	475		
	ORANGE	597	602	616		
	WHITE					
FORWARD VOLTAGE	RED		2.0	2.6	V	I_F = 10 mA
	YELLOW		2.1	2.6		
	GREEN		2.1	2.6		
	BLUE	2.0	2.7	4.1		
	ORANGE	1.5	1.9	3.5		
	WHITE		3.5	4.0		I_F = 20 mA
REVERSE CURRENT	RED			100	μA	V_R = 5V
	YELLOW			100		
	GREEN			100		
	BLUE			10		
	ORANGE			100		
	WHITE			100		
VIEWING ANGLE	RED		60		DEGREE	
	YELLOW		60			
	GREEN		60			
	BLUE		100			
	ORANGE		60			
	WHITE		45			

553-03XXF OPERATING CHARACTERISTICS AT 25° C AMBIENT: 5 V INTEGRAL RESISTOR LEDs						
LED CHARACTERISTICS	COLOR	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
LUMINOUS INTENSITY	RED	8.7	29.0		mcd	V_F = 5V
	YELLOW	3.7	12.6			
	GREEN	5.6	19.0			
PEAK WAVELENGTH	RED		635		nm	
	YELLOW		585			
	GREEN		565			
FORWARD CURRENT	RED		10	20	mA	V_F = 5V
	YELLOW		10	20		
	GREEN		10	20		
REVERSE CURRENT	RED			100	μA	V_R = 5V
	YELLOW			100		
	GREEN			100		
VIEWING ANGLE	ALL		60		DEGREE	

553-02XXF OPERATING CHARACTERISTICS AT 25° C AMBIENT: 2 mA LOW CURRENT LEDs						
LED CHARACTERISTICS	COLOR	MIN.	TYP.	MAX.	UNITS	TEST CONDITIONS
LUMINOUS INTENSITY	RED	0.75	2.5		mcd	I_F = 2 mA
	YELLOW	0.4	4.5			
	GREEN	0.4	1.1			
PEAK WAVELENGTH	RED		635		nm	
	YELLOW		585			
	GREEN		565			
FORWARD VOLTAGE	RED		1.7	2.2	V	I_F = 2 mA
	YELLOW		1.8	2.2		
	GREEN		1.9	2.2		
REVERSE CURRENT	ALL			10	μA	V_R = 5V
VIEWING ANGLE	ALL		60		DEGREE	

553-03XXF ABSOLUTE MAXIMUM RATINGS AT 25° C AMBIENT 5 V INTEGRAL RESISTOR LEDs	COLOR RED	COLOR GREEN	COLOR YELLOW	UNITS
CONTINUOUS FORWARD VOLTAGE	7.5			V
REVERSE VOLTAGE	5			V
LINEAR DERATING FROM 50° C	0.071			V/° C
LEAD SOLDERING TEMPERATURE (.063" [1.6mm] FROM BODY) FOR 5 SEC.	260			° C
OPERATING TEMPERATURE	-40 TO +85			° C
STORAGE TEMPERATURE	-55 TO +100			° C

553-02XXF ABSOLUTE MAXIMUM RATINGS AT 25° C AMBIENT: 2 mA LOW CURRENT LEDs	COLOR RED	COLOR GREEN	COLOR YELLOW	UNITS
POWER DISSIPATION	20			mW
PEAK FORWARD CURRENT (1/10 DUTY CYCLE, 0.1ms PULSE WIDTH)	500			mA
CONTINUOUS FORWARD CURRENT	7			mA
LINEAR DERATING FROM 95° C	0.7			mA/° C
REVERSE VOLTAGE	5			V
LEAD SOLDERING TEMPERATURE (.063" [1.6mm] FROM BODY) FOR 5 SEC.	260			° C
OPERATING TEMPERATURE	-55 TO +100			° C
STORAGE TEMPERATURE	-55 TO +100			° C

553-01XXF ABSOLUTE MAXIMUM RATINGS AT 25° C AMBIENT	COLOR RED	COLOR YELLOW	COLOR GREEN	COLOR BLUE	COLOR ORANGE	COLOR WHITE	UNITS
POWER DISSIPATION	100	60	120	120	135	120	mW
PEAK FORWARD CURRENT (1/5 DUTY CYCLE, 1 ms PULSE WIDTH) (1/10, .1mS FOR BLUE) (t< 10 μs D=.005 FOR ORANGE)	90	60	90	100	500	100	mA
CONTINUOUS FORWARD CURRENT	30	20	30	30	30	30	mA
LINEAR DERATING FROM 50° C (30° C FOR BLUE, 30° C FOR WHITE)	0.40	0.25	0.40	.5	0.50	.45	mA/° C
REVERSE VOLTAGE	5						V
LEAD SOLDERING TEMPERATURE (.063" [1.6mm] FROM BODY) FOR 5 SEC.	260						° C
OPERATING TEMPERATURE	-55 TO +100			-40 TO +85	-55 TO +100	-40 TO +85	° C
STORAGE TEMPERATURE	-55 TO +100			-55 TO +100	-55 TO +100	-40 TO +100	° C

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SCALE: 6.000
ALL DIM'S IN: INCHES (MM)
TOLERANCES: UNLESS OTHERWISE SPECIFIED
FRACTIONS: ±1/64
DECIMALS (.XX): ±.02
DECIMALS (.XXX): ±.015
ANGLES: ±3°
FINISH
FSCM 83330

DRAWING NUMBER: C-17277
REV: K
TITLE: 3mm LED BI-LEVEL CBI RoHS COMPLIANT
MATERIAL

Dialight
1501 ROUTE 34 SOUTH
FARMINGDALE, NJ 07727
(732) 919-3119
www.dialight.com

SHEET 1 OF 1 FAMILY TABLES: