

ASSY. NO. (CAT. NO.)	LED COLOR	
	POSITION 1	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)			
	X	Y	Z	U
A3	0.270	0.270	0.250	0.250
	0.275	0.325	0.300	0.250
A4	0.270	0.250	0.250	0.270
	0.275	0.250	0.200	0.225
B3	0.290	0.290	0.270	0.270
	0.300	0.350	0.325	0.275
B4	0.290	0.270	0.270	0.290
	0.300	0.275	0.225	0.250
C3	0.310	0.310	0.290	0.290
	0.325	0.375	0.350	0.300
C4	0.310	0.290	0.290	0.310
	0.325	0.300	0.250	0.275
D3	0.330	0.330	0.310	0.310
	0.350	0.400	0.375	0.325
D4	0.330	0.310	0.310	0.330
	0.350	0.325	0.275	0.300



SCALE 2.000



**ATTENTION:**  
 OBSERVE PRECAUTIONS FOR  
 HANDLING ELECTROSTATIC  
 SENSITIVE DEVICES

**NOTES:**

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



553-01XXXF						
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		
	ORANGE	3.4	7.0	10.8		
	WHITE	400	1100	1900		
PEAK WAVELENGTH	RED		635		nm	$I_F = 10$ mA
	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		
REVERSE CURRENT	RED			100	$\mu$ A	$V_R = 5$ V
	YELLOW			100		
	GREEN			100		
	BLUE			10		
	ORANGE			100		
	WHITE			100		
VIEWING ANGLE	RED		60		DEGREE	$I_F = 20$ mA
	YELLOW		60			
	GREEN		60			
	BLUE		100			
	ORANGE		60			
	WHITE		45			

553-03XXXF						
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	$V_F = 5$ V
	YELLOW	3.7	12.6			
	GREEN	5.6	19.0			
PEAK WAVELENGTH	RED		635		nm	$I_F = 10$ mA
	YELLOW		585			
	GREEN		565			
FORWARD CURRENT	RED		10	20	mA	$V_F = 5$ V
	YELLOW		10	20		
	GREEN		10	20		
REVERSE CURRENT	RED			100	$\mu$ A	$V_R = 5$ V
	YELLOW			100		
	GREEN			100		
VIEWING ANGLE	ALL		60		DEGREE	

553-02XXXF						
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	$I_F = 2$ mA
	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	$\mu$ A	$V_R = 5$ V
VIEWING ANGLE	ALL		60		DEGREE	

553-03XXXF				
ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT				
	RED	GREEN	YELLOW	UNITS
5 V INTEGRAL RESISTOR LEDs				
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

553-01XXXF							
ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT							
	RED	YELLOW	GREEN	BLUE	ORANGE	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) ( $t_c < 10 \mu$ s 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		°C
STORAGE TEMPERATURE	-55 TO +100		-55 TO +100		-40 TO +100		°C

553-02XXXF				
ABSOLUTE MAXIMUM RATINGS AT 25 °C AMBIENT:				
	RED	GREEN	YELLOW	
2 mA LOW CURRENT LEDs				
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

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SCALE: 6.000

DRAWING NUMBER: **C-17277**

REV: **K**

TOLERANCES: UNLESS OTHERWISE SPECIFIED

FRACTIONS: ±1/64

DECIMALS (XX): ±.02

DECIMALS (XXX): ±.015

ANGLES: ±3°

FINISH

TITLE: **3mm LED BI-LEVEL CBI**  
**RoHS COMPLIANT**

MATERIAL

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

FSCM 83330

SHEET 1 OF 1 FAMILY TABLES: