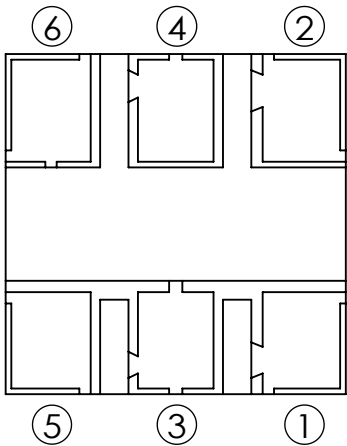
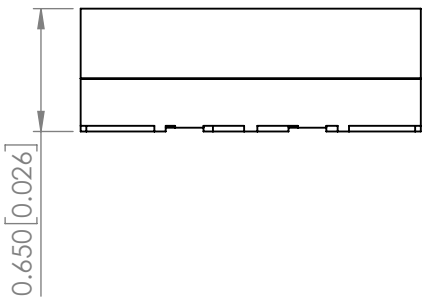
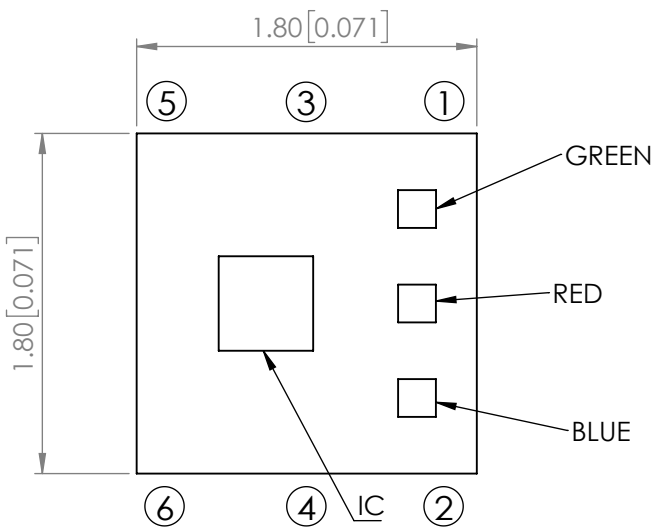
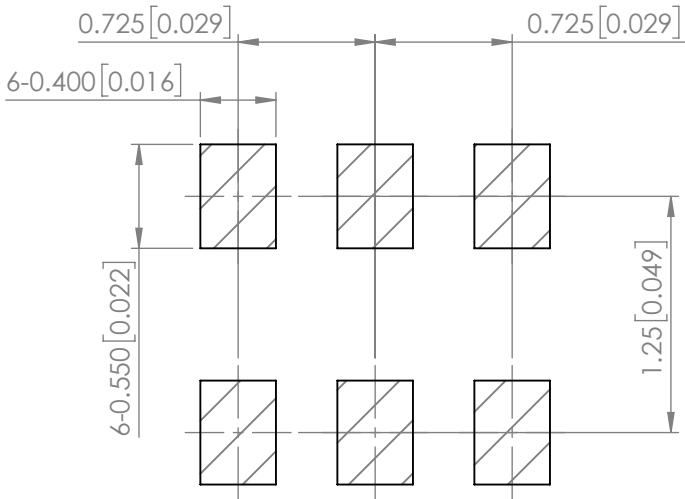


PRELIMINARY



RECOMMENDED SOLDER PAD LAYOUT



PIN ASSIMENT

PIN	SYMBOL	DESCRIPTION
1	VDD	POWER VOLTAGE
2	GND	GROUND
3	CKO	CLOCK OUT
4	CKI	CLOCK IN
5	DAO	DATA OUT
6	DAI	DATA IN

ELECTRO-OPTICAL CHARACTERISTIC TA=25°C

PARAMETER		MIN	TYP	MAX	UNITS	TEST COND
SUPPLY VOLTAGE	VDD	4.5	5	5.5	V	-
INPUT VOLTAGE(HIGH)	VIH	2.7	-	VDD+0.4	V	-
INPUT VOLTAGE(LOW)	VIL	-0.4	-	1.0	V	-
PEAK WAVELENGTH	R	-	630	-	nm	@VDD=5V (DIMMING[4:0]=1F OUT_R/G/B[7:0]=FF)
	G	-	520	-		
	B	-	470	-		
LUMINOUS INTENSITY	R	285	-	565	mcd	
	G	900	-	1800		
	B	180	-	360		
VIEWING ANGLE		-	120	-	2x theta1/2	
EPOXY LENS FINISH		WATER CLEAR				

ABSOLUTE MAXIMUM RATINGS TA=25°C

PARAMETER		MIN	TYP	MAX	UNITS
SUPPLY VOLTAGE		VDD	-	-	6.5
POWER DISSIPATION		Pd	-	-	400
STORAGE TEMPERATURE		-	-40 TO +90		°C
OPERATING TEMPERATURE		-	-25 TO +85		°C

MOISTURE SENSITIVE DEVICE
PER JEDEC LEVEL 5a STANDARDS

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= ^{+DECIMAL PRECISION}_{-0.00} MAX= ^{+0.00}_{-DECIMAL PRECISION}



425 N. GARY AVE.
CAROL STREAM, IL 60188
PHONE : 800-278-5666
FAX : 630-315-2150
WEB : WWW.LUMEX.COM

1.8(L)*1.8(W)*0.65(H)mm, SURFACE MOUNT LED, RGB FULL COLOR, 3-CHANNELs LED DRIVER WITH 13 bit PWM LINEAR CONTROL, WATER CLEAR LENS,TAPE & REEL

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICET.

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DATE : 2023.02.21

DRAWN BY : T.S.

PAGE : 1 OF 3

CHKD BY : E.C.

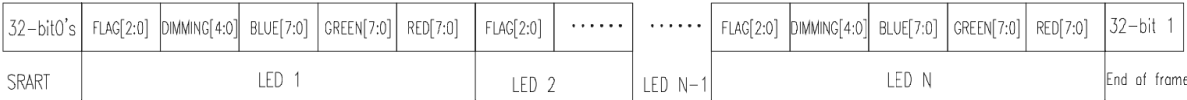
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APRVD BY : --

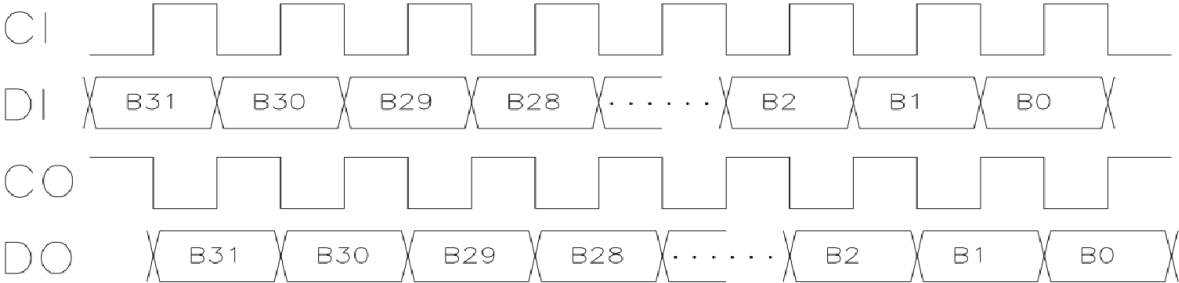
UNIT : mm [INCH]

(Pb)

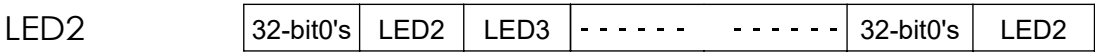
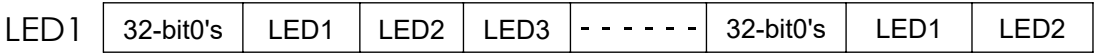
COMMAND SET



32 consecutive 0's denote the start of a command for SMD-LX1818RGBDWCTR LED. After receiving 32 0's, SMD-LX1818RGBDWCTR gets the following 32 bits as the received command, including FLAG, DIMMING, BLUE, GREEN and RED fields.

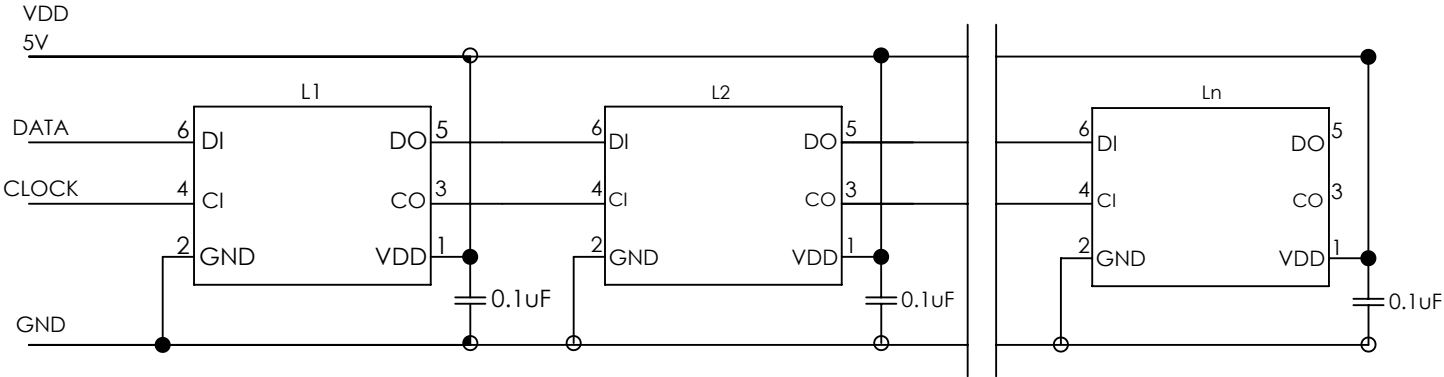


The serial command is transmitted with MSB first, DI is latched at the rising edge of CI clock. CO and DO are re-generated for the next SMD-LX1818RGBDWCTR LED. CO is inverted from CI. When 32 consecutive 0's are encountered, the next 1 is expected to start a 32-bit command, i.e., FLAG[2:0]=1xx. When FLAG[2:0]=1xx, then DIMMING,BLUE, GREEN and RED fields are latched respectively. while the current 32-bit command is got,SMD-LX1818RGBDWCTR passes remaining command bits to the next SMD-LX1818RGBDWCTR After the last one command is issued for the last LED (LED n), the following 32 consecutive 1's denote the end of the current command for SMD-LX1818RGBDWCTR LED(End of Frame) and wait for next 32 consecutive 0's to start a new command set.(Note:SMD-LX1818RGBDWCTR is workable either with or without “End of Frame” command, but MCU should issue the extra N/2 numbers of clocks signal if there are N LEDs totally connected in the strip to make sure the data transfer and display of the last one LED is complete and correct)



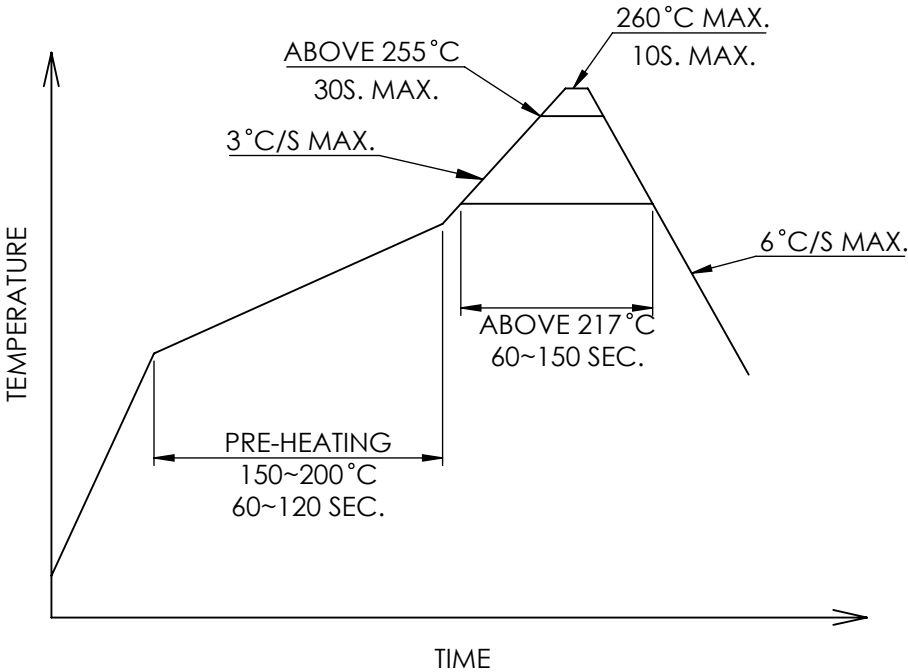
FLAG [2:0] : 1xx to start a 32-bit command
DIMMING [4:0] : 32-level current control for R/G/B drivers
BLUE [7:0] : 256 gray levels for blue LED
GREEN [7:0] : 256 gray levels for green LED
RED [7:0] : 256 gray levels for red LED

5V APPLICATION CIRCUIT

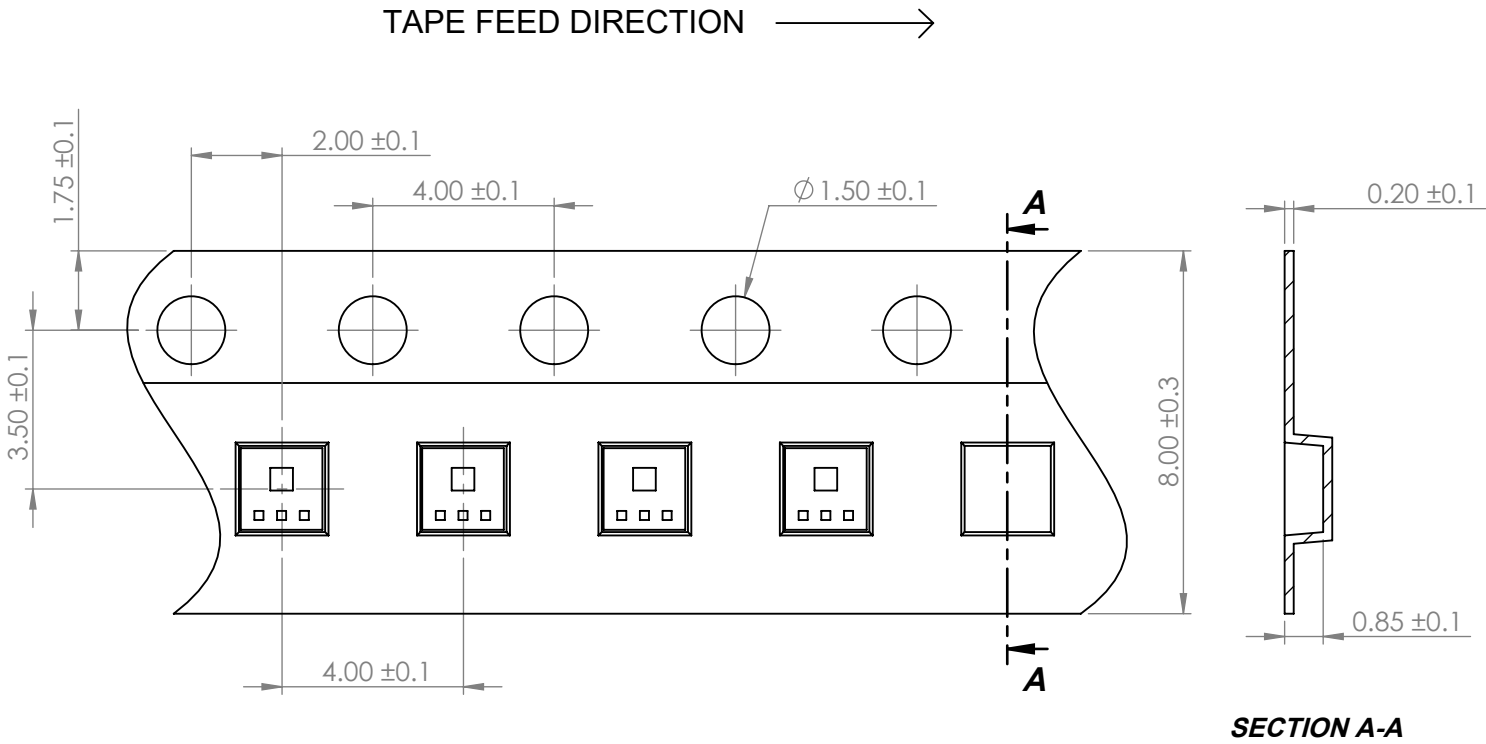


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PROFILE



CARRIER TAPE DIMENSION



NOTE:
1. PACKAGE: 2000 PCS/REEL.

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