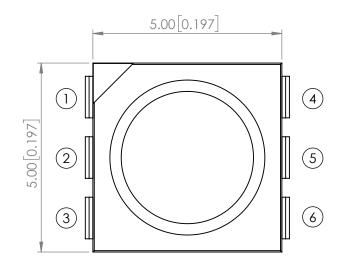
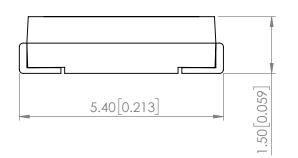
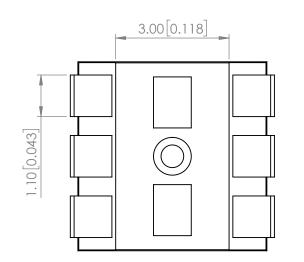
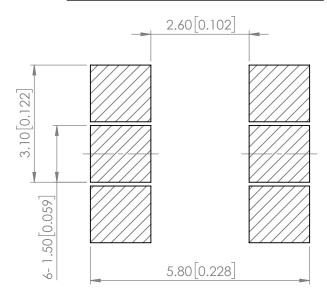
	PART NUMBER		SMD-LX5050RGB-TR	REV	Α
	REV	E.C.N.	ΓS	DATE	
I	Α	ECN-Lumex201800183			11.27.18







RECOMMENDED SOLDER PAD LAYOUT



PIN ASSIMEMT

PIN	SYMBOL	DESCRIPTION
1	VSS	GROUND
2	NA	NA
3	DIN	SIGNAL INPUT
4	DOUT	SIGNAL OUTPUT
5	NA	NA
6	VDD	POWER SUPPLY

ELECTRO-OPTICAL CHARACTERISTIC TA=25°C

PARAMETER		MIN	TYP	MAX	UNITS	TEST COND
SUPPLY VOLTAGE	V DD	-	5	-	V	-
INPUT VOLTAGE(HIGH)	VIH	3.3	-	-	V	DIN, SET
INPUT VOLTAGE(LOW)	VIL	-	-	0.3VDD	V	DIN, SET
	R	-	625	-		
DOMINANT WAVELENGTH	G	-	530	-	nm	If=5mA
	В	-	470	-		
	R	-	185	-		
LUMINOUS INTENSITY	G	-	590	-	mcd	If=5mA
	В	-	150	-		
VIEWING ANGLE		-	120	-	2x theta1/2	If=5mA
EPOXY LENS FINISH		WATER C	LEAR			

ABSOLUTE MAXIMUM RATINGS TA=25℃

PARAMETER		MIN	TYP	MAX	UNITS
SUPPLY VOLTAGE	VDD	4.2	-	5.5	V
STORAGE TEMPERATURE	-		-40 TO +90)	°C
OPERATING TEMPERATURE	-		-25 TO +85	;	°C
SOLDERING TEMPERATURE	-	3 SE	EC. MAX. @	260	°C

MOISTURE SENSITIVE DEVICE PER JEDEC LEVEL 3 STANDARDS

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.XX=±0.5 (±0.020), X.XX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= +DECIMAL PRECISION ARE: X=±0.000 (±0.002), X.XX=±0.000 (±0.000), X.XXX=±0.000 (±0.000), X.XX=±0.000 (±0.000),



425 N. GARY AVE. CAROL STREAM, IL 60188 PHONE: 800-278-5666 FAX: 630-315-2150 WEB: WWW.LUMEX.COM 5.0(L)*5.0(W)*1.5(H)mm, SURFACE MOUNT LED, RGB FULL COLOR, 3-CHANNELs LED DRIVER WITH 8 bit PWM LINEAR CONTROL, WATER CLEAR LENS, TAPE & REEL

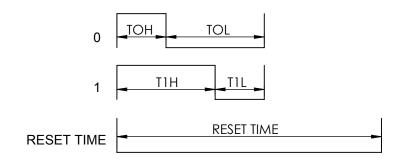
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TIMING WAVE FORM



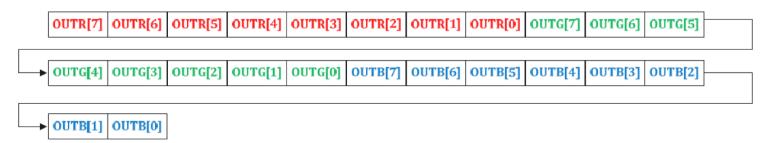
DATA TRANSFER TIME (TH+TL=1.2µs±600ns)

ITEM	DESCRIPTION	TYP.	ALLOWANCE
ТОН	0 CODE, HIGH VOLTAGE TIME	0.3us	±80ns
T1H	1 CODE, HIGH VOLTAGE TIME	0.9us	±80ns
TOL	0 CODE, LOW VOLTAGE TIME	0.9us	±80ns
T1L	1 CODE, LOW VOLTAGE TIME	0.3us	±80ns
RES	LOW VOLTAGE TIME	ABOVE 50us	-

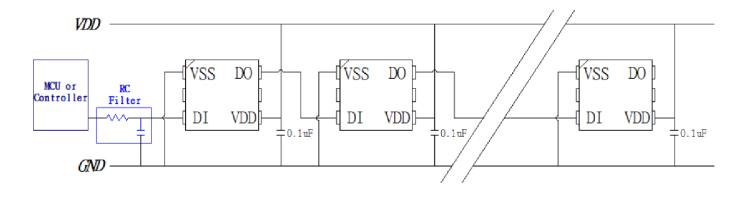
DATA COMMUNICATIOM



SINGLE DATA IN 24BIT FOR RGB



5V APPLICATION CIRCUIT



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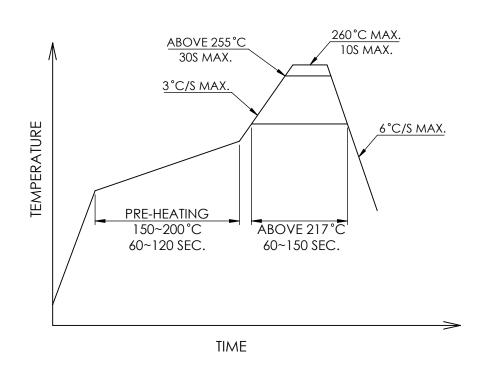
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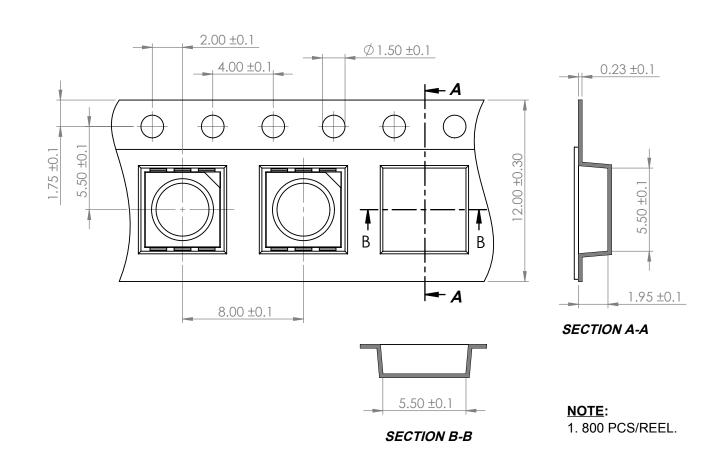
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	UNIT: mm [INCH]	Pb

PROFILE

CARRIER TAPE DIMENSION





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 UNIT: mm [INCH]	Pb

PART NUMBER SMD-LX5050RGB-TR REV

EXAMPLE OF USING STM32F030C8T6 TO DISPLAY RED, GREEN AND BLUE IN SEQUENCE

```
uint32_t color;
void Display_One_Dot(uint32_t color);
void Send_Hi(void);
void Send Lo(void):
void Init_GPIOs(void);
void main(void)
Init_GPIOs();
 while (1)
 color = 0xFF0000;
 Display_One_Dot(color);
 delay_ms(1000);
 color = 0x00FF00;
 Display_One_Dot(color);
 delay_ms(1000);
 color = 0x0000FF;
 Display_One_Dot(color);
 delay_ms(1000);
void Display_One_Dot(uint32_t color)
uint8_t j=0;
uint32_t x,y;
y = color;
for (j=0;j<24;j++)
 x = (y \& 0x800000);
 if (x>0)
  Send_Hi();
  Send_Lo();
 y = y << 1;
```

```
void Send_Lo(void)
GPIO_SetBits(GPIOB,GPIO_Pin_8);
GPIO_ResetBits(GPIOB,GPIO_Pin_8);
GPIO_ResetBits(GPIOB,GPIO_Pin_8);
GPIO ResetBits(GPIOB,GPIO Pin 8);
void Send_Hi(void)
GPIO_SetBits(GPIOB,GPIO_Pin_8);
GPIO_SetBits(GPIOB,GPIO_Pin_8);
GPIO_SetBits(GPIOB,GPIO_Pin_8);
GPIO_ResetBits(GPIOB,GPIO_Pin_8);
void Init_GPIOs(void)
GPIO_InitTypeDef GPIO_InitStructure;
RCC_AHBPeriphClockCmd(RCC_AHBPeriph_GPIOB,ENABLE);
GPIO InitStructure.GPIO Pin = GPIO Pin 8;
GPIO_InitStructure.GPIO_Mode = GPIO_Mode_OUT;
GPIO_InitStructure.GPIO_OType = GPIO_OType_PP;
GPIO_InitStructure.GPIO_PuPd = GPIO_PuPd_UP;
GPIO_InitStructure.GPIO_Speed = GPIO_Speed_50MHz;
GPIO_Init(GPIOB, &GPIO_InitStructure);
```

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