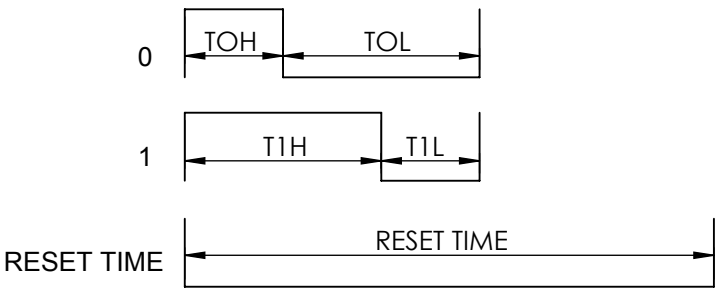


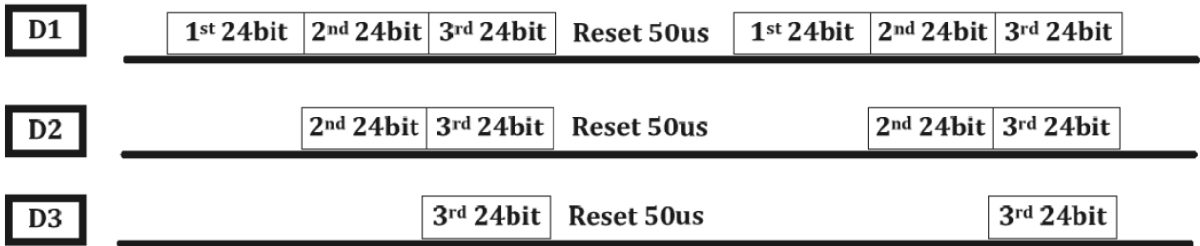
TIMING WAVE FORM



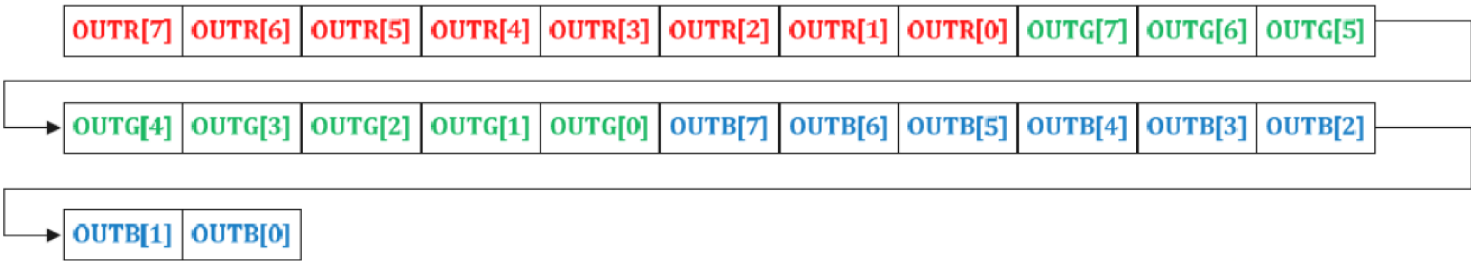
DATA TRANSFER TIME (TH+TL=1.2μs±600ns)

ITEM	DESCRIPTION	TYP.	ALLOWANCE
T0H	0 CODE, HIGH VOLTAGE TIME	0.3us	±80ns
T1H	1 CODE, HIGH VOLTAGE TIME	0.9us	±80ns
T0L	0 CODE, LOW VOLTAGE TIME	0.9us	±80ns
T1L	1 CODE, LOW VOLTAGE TIME	0.3us	±80ns
RES	LOW VOLTAGE TIME	ABOVE 50us	-

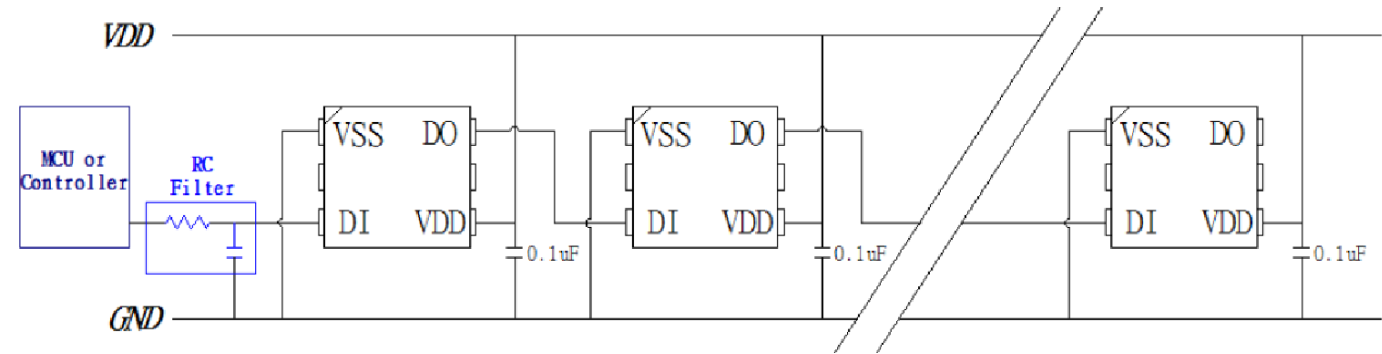
DATA COMMUNICATION



SINGLE DATA IN 24BIT FOR RGB

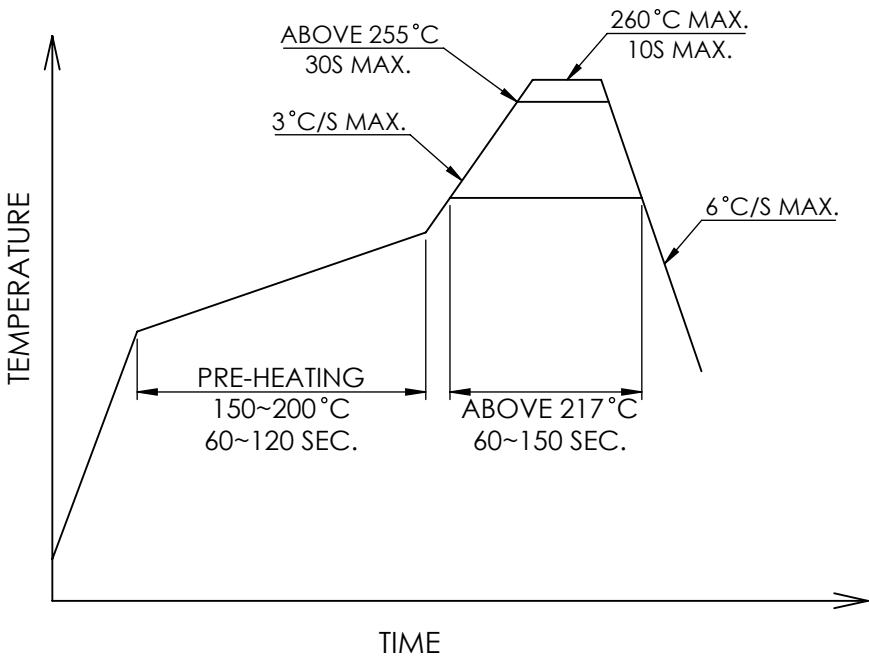


5V APPLICATION CIRCUIT

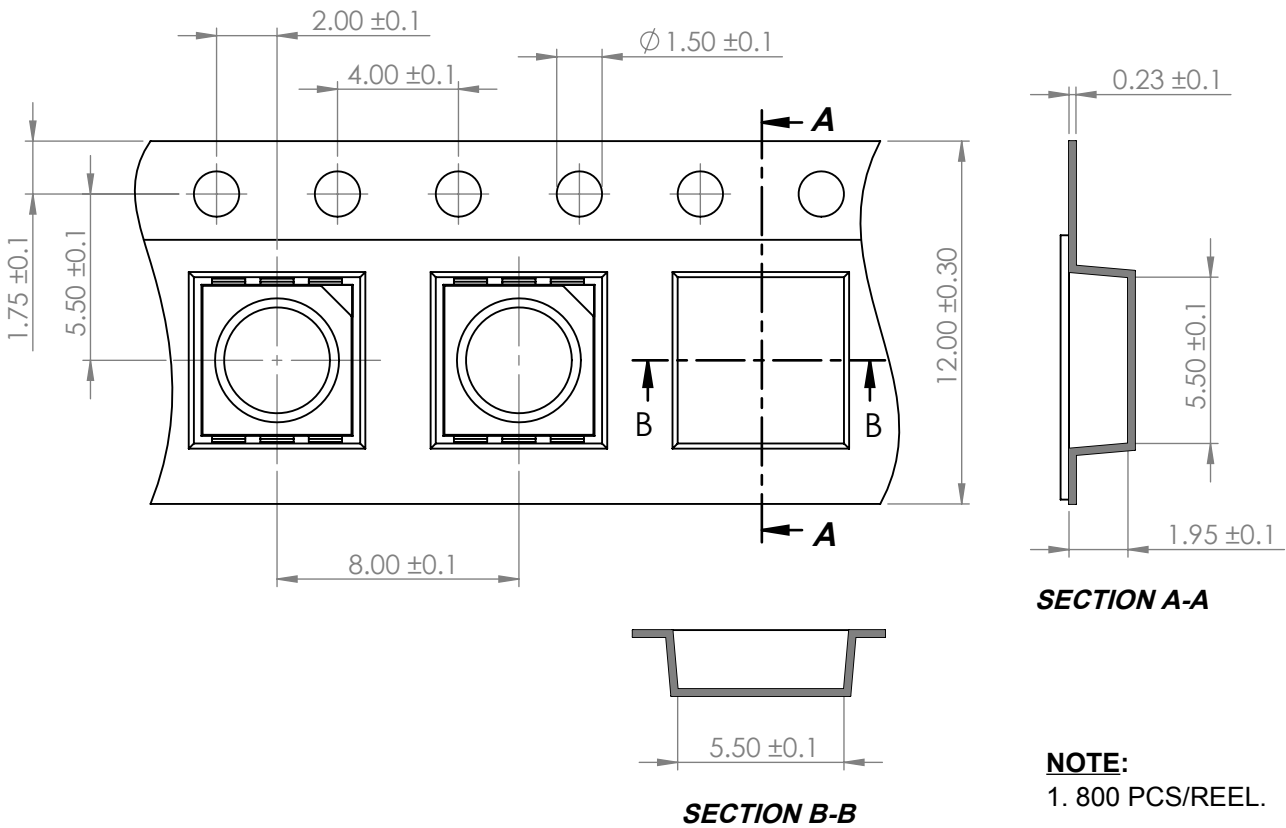


*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN= ^{+DECIMAL PRECISION}/_{-0.00} MAX.= ^{+0.00}/_{-DECIMAL PRECISION}

PROFILE



CARRIER TAPE DIMENSION



*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

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

THE SPECIFICATIONS MAY CHANGE AT ANY TIME WITHOUT NOTICE.

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DATE : 2018.10.23

DRAWN BY : C.C.

PAGE : 3 OF 4

CHKD BY : E.C.

SCALE : NTF

APRVD BY : G.Y.

UNIT : mm [INCH]

(Pb)

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();
        else
            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);
}

```