

## Features:

- High luminous LEDs
- 5mm round standard directivity
- IC uses CMOS technology
- Adjust grayscale circuit (can adjust 256 grayscale level)
- Series interface, cascade interface
- Built-in power on reset circuit
- Completely receive and decode data through a single wire
- Directly connect to electronic power without transformer
- White diffused type

## Applications

- Toys
- Christmas lamp

## Absolute maximum rating (Ta=25°C)

Item	Symbol	Value	Unit
Power supply	V <sub>DD</sub>	6	V
Operating temperature	Topr	-30 to +85	°C
Storage temperature	Tstg	-40 to +100	°C
Lead soldering temperature	Tsol	260°C/5sec	-

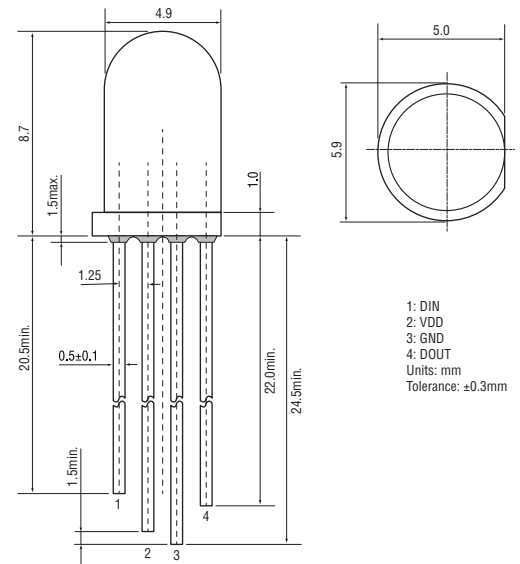
## Electrical - Optical characteristics (Ta=25°C)

Item	Symbol	Min.	Typ.	Max.	Unit
Supply voltage	V <sub>DD</sub>	3.5	-	6.0	V
High and middle level differential pressure	VI1	-	0.5xV <sub>DD</sub>	-	V
Middle and low level differential pressure	VI2	-	0.5xV <sub>DD</sub>	-	V
Withstand voltage of output terminal	DOUT	-	-	6.0	V
LED Current	I <sub>f</sub> (R/G/B)	-	15	-	mA
Data input	DIN	-	-	10	V
Dominant wavelength*	Red	620	625	630	nm
	Green	520	525	530	
	Blue	465	470	475	
Luminous intensity <sup>†</sup>	Red	350	450	-	mcd
	Green	500	600	-	
	Blue	150	200	-	
50% Power angle	2θ <sub>1/2</sub>	-	30	-	deg

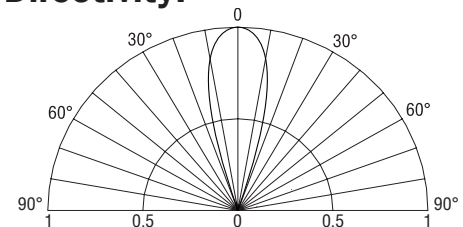
\* Tolerance of dominant wavelength is ±1nm.

† Tolerance of luminous intensity is ±15%.

## Outline dimensions:



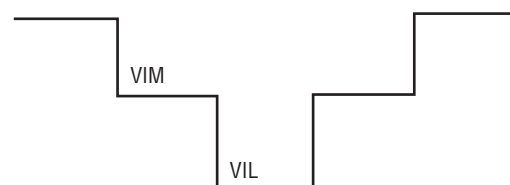
## Directivity:



## Pin Definition

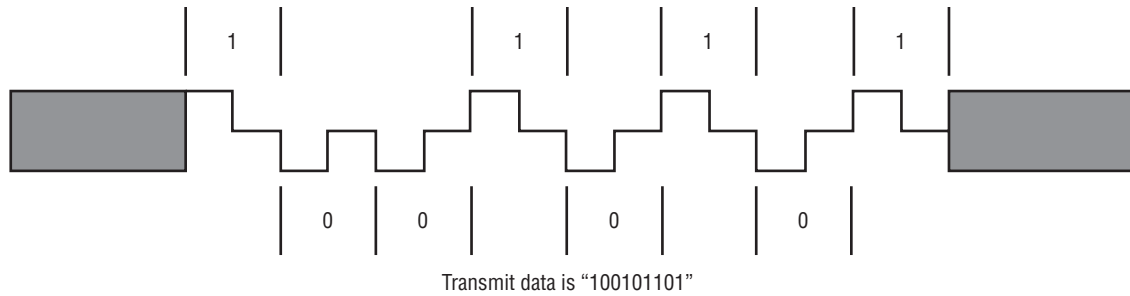
Symbol	Pin name	Description
DIN	Data input	Control data input
DO	Data output	Control data output
VDD	Logic power	Internal power of chip
GND	Logic ground	Internal ground of chip

## DIN input, PIN wave as below:

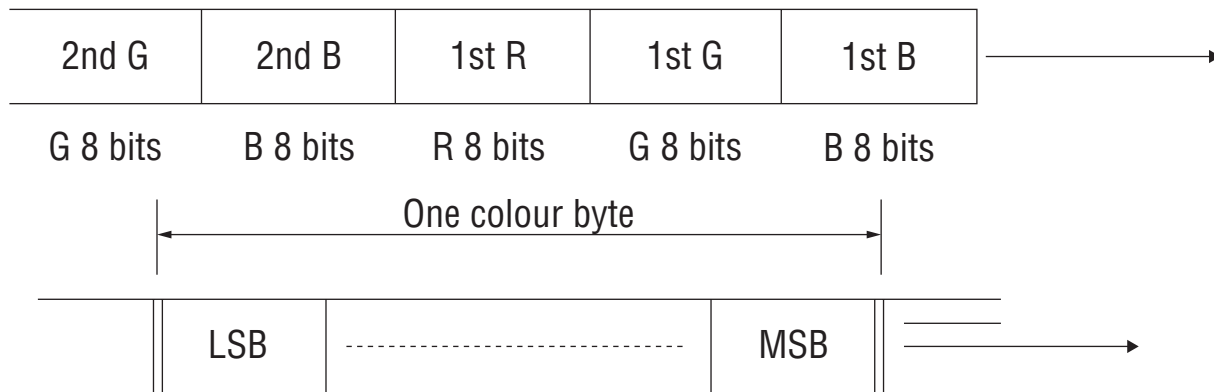


## Data information format

### 1. Data format



### 2. The minimum data unit definition



### 3. For example: 2 IC cascade

