



Raffar
Technology Corp.

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RT7907

**3-channel, 10-bit PWM RGB LED driver
with current-gain function and built-in broken-series function**

2019/05
Version: 0.9

Description

RT7907 is a 3-channel LED driver with 10 bits PWM linear control and additional 4 bits current-gain function for white-balance modulation. The RT7907 uses a single communication wire to identify LED PWM signal and in total 42 bits RGB display. This is a very simple and cost effective for any LED system design.

Due to the internal broken-series function of RT7907, the serial data can still be normally transmitted even if there is single broken-down chip in cascading chain. The LED PWM output controlled by duty ratio which depends on the 42 bits data each for RGB outputs. All chips will latch new data when DIN port received the latch signal (>50us low-level signal)

Features

- Operating supply voltage: 4.2 V ~ 5.5 V
- Constant current output: 5 mA
- Max. output voltage: 17 V
- 10 bits PWM control for each RGB output
- 4 bits current-gain function with 16 levels for each RGB output
- Built-in broken-series function
- Clock frequency: 800kbps
- Single wire signal control
- Operating temperature: 0 °C ~ +85 °C

Application

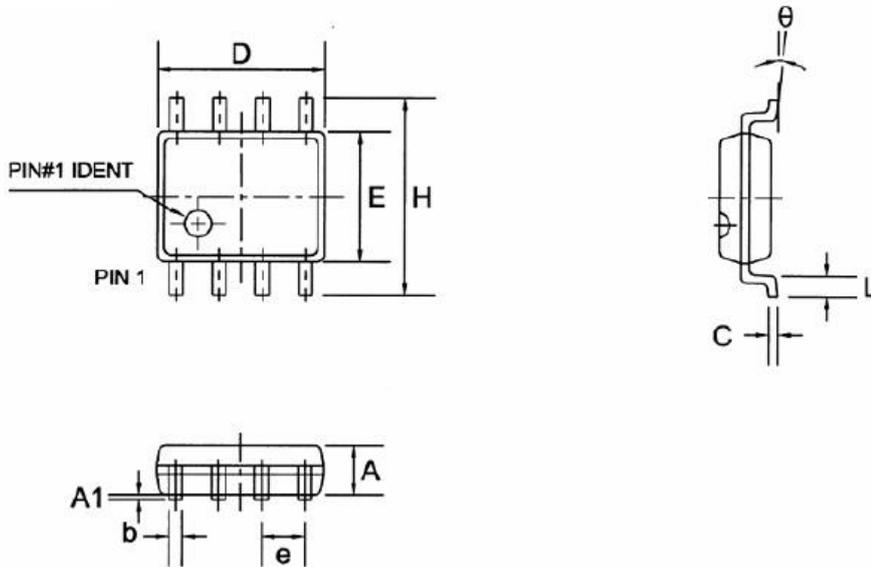
Indoor/ Outdoor LED video display
Full color LED light strip
LED decorative lighting

Purchase Information

No.	Part No.	Package
1	RT7907SP	SOP8
2	RT7907BD	Bare Die
3	RT7907DN	DFN8

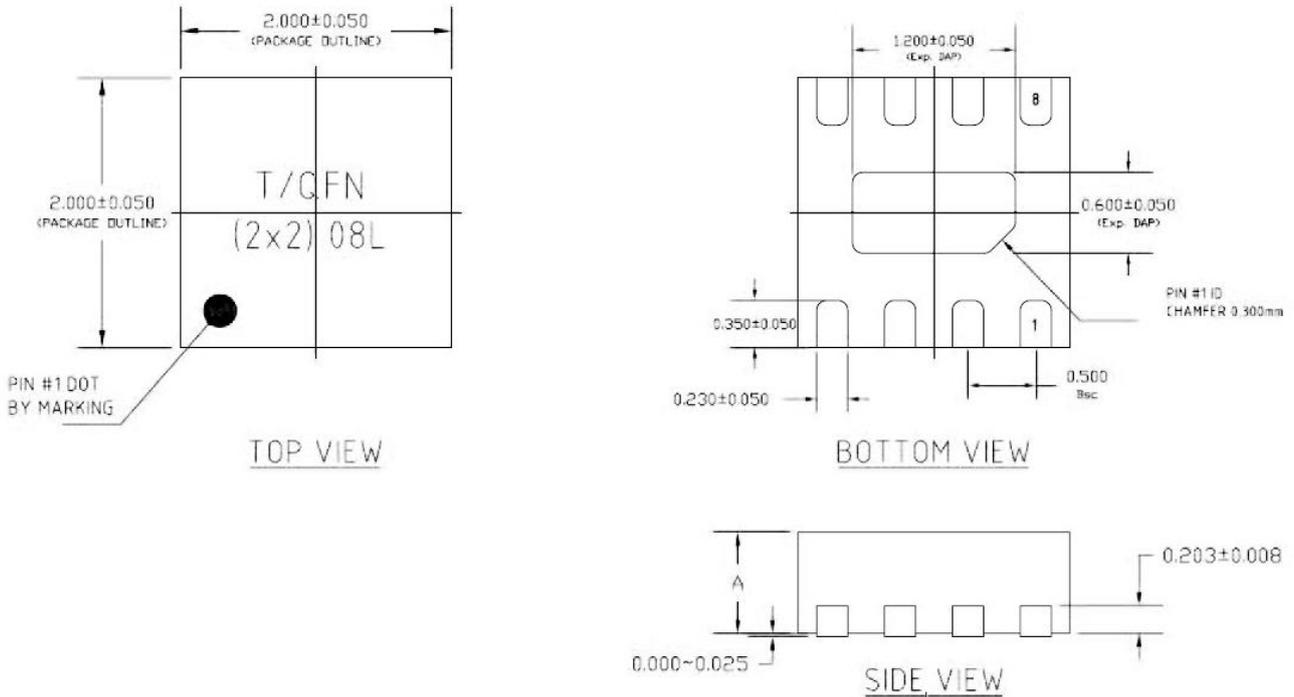
Package Outline Dimension

SOP8



Symbol	Millimeters (mm)		Inches (in)	
	Min.	Max.	Min.	Max.
A	1.3	1.7	0.051	0.067
A1	0.06	0.26	0.002	0.010
b	0.300	0.55	0.012	0.022
c	0.15	0.35	0.006	0.014
D	4.72	5.12	0.186	0.202
E	3.75	4.15	0.148	0.163
e	1.27		0.05	
H	5.7	6.3	0.224	0.248
L	0.45	0.85	0.026	0.033
θ	0°	8°	0°	8°

DFN8 Dimension



Symbol	Millimeters (mm)		
	Min.	Nom.	Max.
A	0.7	0.75	0.8

Note

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