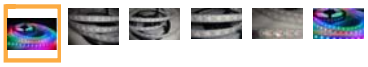


4m DC12V INK1003 led pixel srip,IP68,60pcs 1002led (5050 RGB with bulit-in INK1003 IC)/M with 60pixels;white PCB, in silicon tube

Price: **US $49.00**2 crw

Emitting Color: Changeable

This is a snapshot of the product taken when the order was placed at Tue Nov 26 03:26:24 PST 2013 .

View current product

Ray wu's store

China (Mainland) (Guangdong)

99.4% Srvlwyh#lnhgedfn

Detailed seller ratings (out of 5)

Item as Described: **4.9** Ab

Communication: **4.8** Ab

Shipping Speed: **4.6** Ab

View my store

Product Details Payment Terms

Item specifics

Item Type:	Strip
Brand Name:	RITA
Average Life (hrs):	50000
Wattage:	57.6
Certification:	CCC,CE,FCC,RoHS
Waterproof:	Yes
LED Chip Model:	SMD5050
Voltage:	12V
Power Source:	DC
Strip type:	SMD
Model Number:	RA-INK-60-W-IP68-12V

Product Description

Input voltage:.....DC12v;

Power:.....14.4watt/meter, 57.6watt/roll;

LED resource:.....1002 led(5050 SMD RGB LED with INK1003 IC)

Q'ty of LED: .....60leds/meter, 240leds/roll, each LED is separately controlled

IC Type: .....INK1003 IC

Q'ty of IC: .....60IC/meter (1 IC drives 1 led chip);

Pixels:..... 60/meter;

Pitch: .....16.6mm(1000/64);

Grey scale: 256;

Bits/color: 8-bits/color;

FPC size: .....Width: 10mm, High: 2.5mm;

FPC color: ..... white

Protection rate..... waterproof in silicon tube,IP68

Colors: .....Full color RGB, dream color changing;

Cuttable:.....every LED is cuttable;

Package: .....4meters/reel in anti-static bag,with 3M adhensive tape on the back


Store No: 701799


12V
5V
DO
DI
GND
Store No: 701799

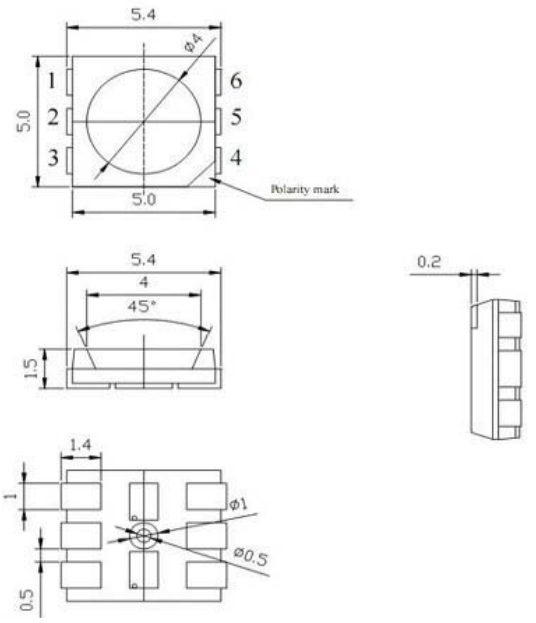

Store No: 701799


Store No: 701799


Store No: 701799
Store No: 701799

Package Information

Outline and Dimensions(in mini-meter)



Description

INK1002 is a smart full color LED lamp which integrates high quality LED chips and INK1003 single-wire LED cascadable LED driver IC in a small 5050 LED package. Its dimension is the same as the usual 5050 LED. The high uniformity driver IC INK1003 ensures the low deviation of this smart LED lamp.

The communication protocol of INK1002 is "AUTO-ZERO" code. Once the chip is reset, DI PIN is ready to receive gray level data transferred by the controller, when the first 24-bit data package is received by the first chip, the later received data will be reconstructed by the chip and transferred from DO PIN after about 150nS delay to the next chip. With this method, the cascading LED lamps are unlimited, only limited by the data transferring rate.

INK1002 is low voltage driver, friendly to environment, high efficacy, long life time, and the application board is also minimized, easier for user. Its operating temperature range is -40~85℃。

- **PIN Configuration**

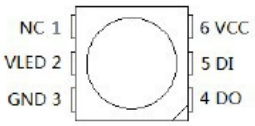
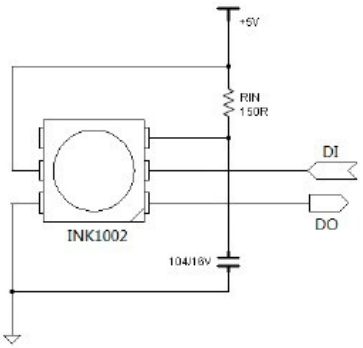


Fig1 5050 package

- **Typical Application Circuit**



Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Power Supply for Driver IC	VCC	-0.3 to 5.4	V
Power Supply for LED	VLED	-0.3 to 7.5	V
Input Voltage	V_{IN}	-0.3 to VCC+0.3V	V
Output Voltage	V_{OUT}	-0.3 to VCC+0.3V	V
LED operating Current	I_{LED}	54	mA
LED Driver Current Deviation Between Different Chips	D_{IOE}	±3	%
Data Rate	F_{CLK}	800	KHz
Maximum Power Dissipations	P_D	1200	mW
Operating Junction Temperature	Topr	-40 to + 150	℃
Storage Temperature	Tstg	-55 to + 150	
ESD Susceptibility for Driver IC		8000	V

NOTE: If the voltage on the pins exceeds the maximum ratings may cause permanent damage to the device.

Block Diagram

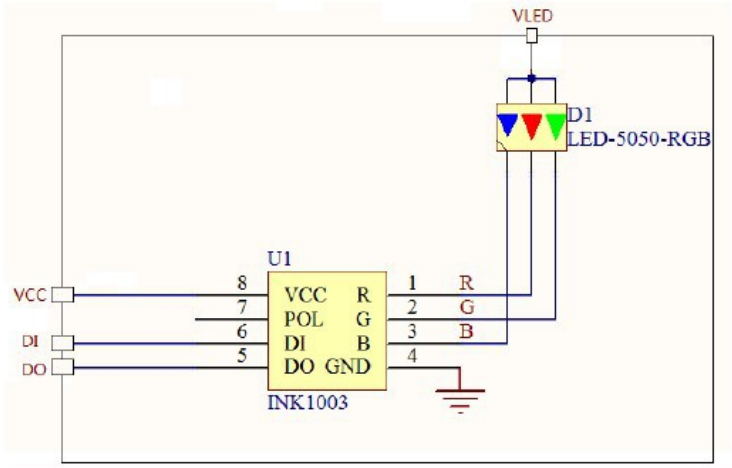


Fig2, INK1002 Block Diagram

Electrical Parameters (VCC=5V, TA= 25℃, specified otherwise.)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Driver IC Power Supply	V_{CC}		3	--	5.5	V
LED Power Supply	V_{LED}		3.5		7.5	V
Output Current	I_{outH}	V_{LED}=5V	17	--	19	mA
	I_{outL}	Output OFF, V_{LED}=7.5V	--	1	10	uA
	I_{SOURCE}	Other output	--	1	--	mA
	I_{SINK}	Other output	--	-1	--	mA
Quiescent Current	I_{STB}	LED off	--	1000	1600	μA
VCC clamp voltage	VCC_{CLAMP}	VIN=7.5V	5.1	5.4	5.6	V
Minimum Constant Current Output Time	I_{OH}	V_{IN}=V_{IH} or V_{IL},	--	2.5	--	uS
Input Current	I_{IN}	PIN：CKI，SDI V_{IN}=VDD or GND	--	--	±1	uA
Input Voltage Level	V_{IH}	TA=-40～125℃	0.8*VDD	--	VDD	V
	V_{IL}		GND	--	0.2*VDD	V
Output Voltage Regulation	$\%dV_{OUT}$		--	±1	--	%/V
Line Regulation	$\%dV_{CC}$	V_{CC}=4～5.5V,V_{OUT} between 1.0V and 3.0V	--	±1	--	%/V
Pull Down Resistance	R_{INLOW}	R_{LIN},	--	300	--	KΩ

- **PIN Function Description**

PIN No	NAME	Description
1	NC	No Connection
2	VLED	LED power supply
3	GND	Ground
4	SDO	Serial data output
5	SDI	Serial data Input
6	VCC	Driver IC power supply

Features

- INK1003 and RGB LED chips are packaged in a single 5050 LED package to form a independent pixel
- Independent LED and driver IC power supply to enhance the reliability and flexibility;
- Built-in signal reconstruct circuit ensures up to 2048 lamps cascading with no distortion
- Single-wire control, chips can tranceive signal with only one wire.
- Wide operating voltage:3.3~5.4V
- High gray level, 256 gray levels, the lamp can display more than 16777216 colors.
- Low output current deviation:
  Between channels in a single chip: ±1 %;
  Between chips: ±3%;
- Data frequency range wide: 800KHz
- Schmitt trigger input
- High reliability, ESD susceptibility high: HBM 8KV

Applications

- LED decorative lighting
- Indoor/Outdoor LED video or massage display
- Un-regular LED displays
- High pixel density LED strips
- LED strips operate between 5~12V

Packaging Details

Unit Type:	lot (4 meter/lot)
Package Weight:	0.25kg (0.551lb.)
Package Size:	1cm x 1cm x 1cm (0.39in x 0.39in x 0.39in)