

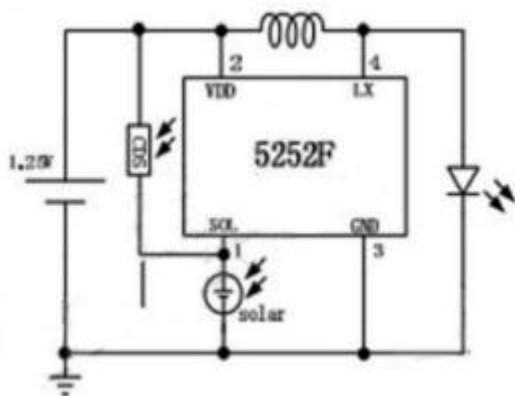
Data Sheet

Solar LED driver IC QX5252F TO-94

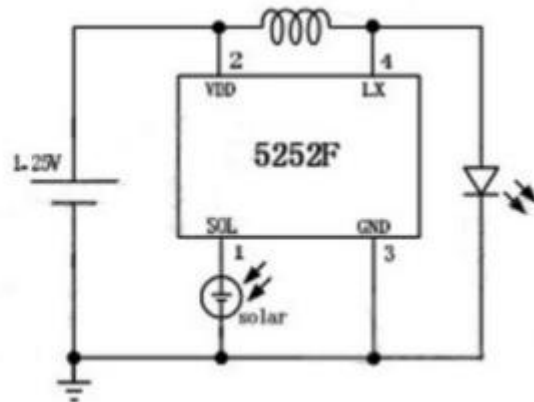


Drawings:

1. Single color LED

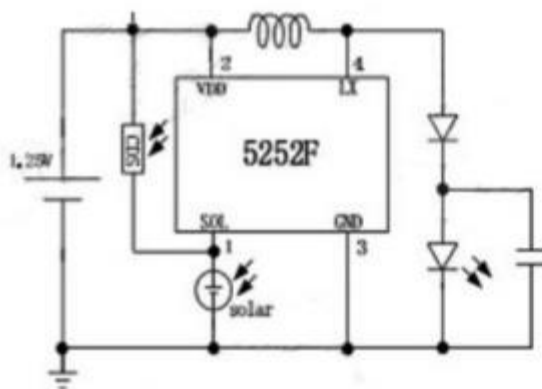


Photoresistor control

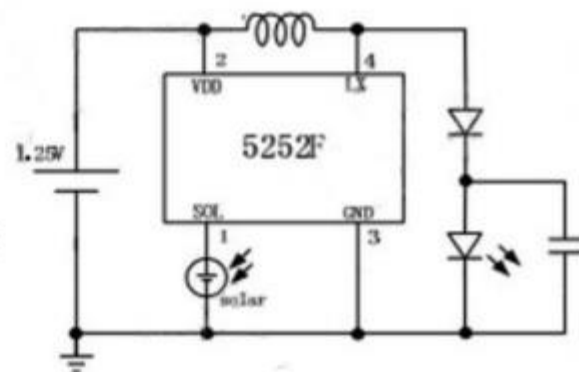


Solar cell control

2. Colorful LED



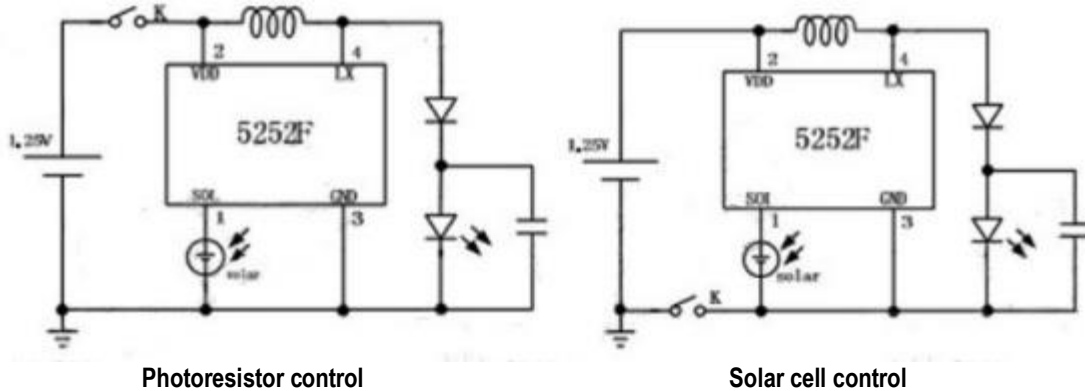
Photoresistor control



Solar cell control

Data Sheet

3. Switch



Technical data

($V_{in}=1.2\text{ V}$, $T_A=25\text{ }^\circ\text{C}$)

Spec.	Symbol	Test	Min.	Normal	Max.	Unit
Input						
Input voltage	V_{in}	$I_{in}=40\text{ mA}$	0.9		1.8	V
Input current	I_{in}	$V_{in}=1.2\text{ V}$, $L=10\text{ }\mu\text{H}$	3		40	mA
Close current	ISD	$V_{in}=1.2\text{ V}$, $V_{CE}=0.4\text{ V}$		30		μA
Power switch						
Switch resistance	RDS	$V_{in}=1.2\text{ V}$, $I_{in}=40\text{ mA}$, $L=10\text{ }\mu\text{H}$		1.85		ohm
Electric leakage	ILEAKAG	$V_{SOL}=2.4\text{ V}$		6		μA
Solar control						
Power threshold	$V_{on/off}$	$V_{in}=1.2\text{ V}$		0.37		V
	$V_{off/on}$			0.29		V
Charge voltage	V_{CHmin}	$V_{in}=1.2\text{ V}$, $I_{sol}=1\text{ mA}$		87.8		mV
Charge electric	ICH	$V_{in}=1.2\text{ V}$, $V_{SOL}-V_{DO}=300\text{ mV}$		86.5		mA
Resistance	RSOL-GND			33		Kohm
Work frequency						
Work frequency	flx	$V_{in}=1.2\text{ V}$, $L=82\text{ }\mu\text{H}$		295		KHz
Work efficiency						
Work efficiency	η			83		%
Overdischarge voltage						
Overdischarge voltage	VOD	$L=82\text{ }\mu\text{H}$		0.9		V

Data Sheet

Current regulation reference

5252f changes the input current by changing the peripheral inductance value. The following shows the relationship between inductance and input current when driving LED.

Single color LED

Inductance	Spec.	LED	Input current (mA)
220 μ H	0307	1 LED	5.3
150 μ H			7.9
82 μ H			13.9
68 μ H			18.2
47 μ H			25.4
22 μ H			46.8

Colorful LED

Inductance	Spec.	LED	Input current (mA)	Output current (mA)
220 μ H	0307	1 LED	5.3	1.8
150 μ H			7.7	2.7
82 μ H			13.5	4.2
68 μ H			18.3	4.8
47 μ H			25.7	7.9
22 μ H			49.3	14.8