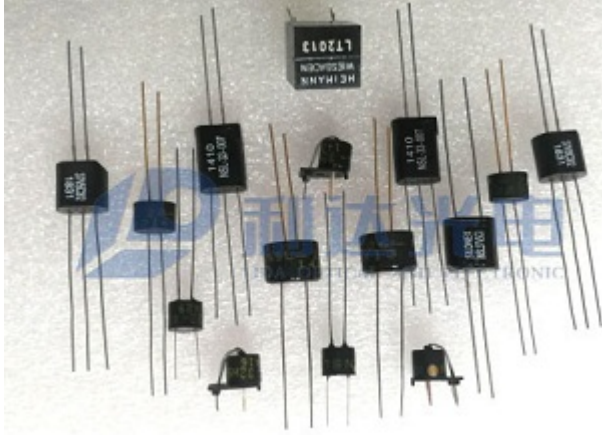


# 光电耦合器系列 Optocouplers Series



光电耦合器是以光为媒介来传输电信号的器件，把发光器与受光器封装在同一管壳内。当 LED 电流为“关”时，光敏电阻阻值高；当 LED 电流为“开”时，光敏电阻阻值低。

## Description

The optocouplers are kind of devices which transport electric signal through light. It consist one light generator and receiver packed into one case. The photocell resistance is high when the LED current is "off" and low when the LED current is "on".

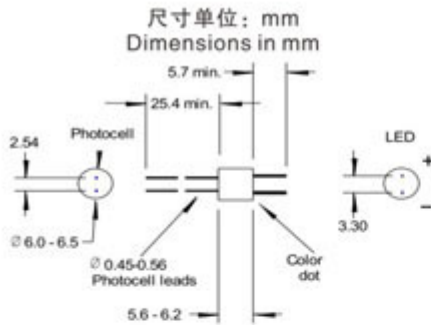
## 存储使用条件

储存温度	-30 to +70°C
操作温度	-30 to +70°C
焊接温度	<260°C
焊接时间	<3秒

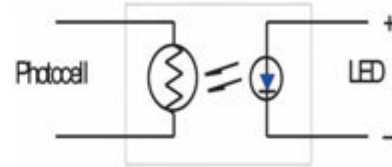
## Absolute Maximum Ratings

Storage Temperature	-30 to +70°C
Operating Temperature	-30 to +70°C
Soldering Temperature	<260°C
Soldering Time	<3 sec

## NSL-32系列 / NSL-32Series



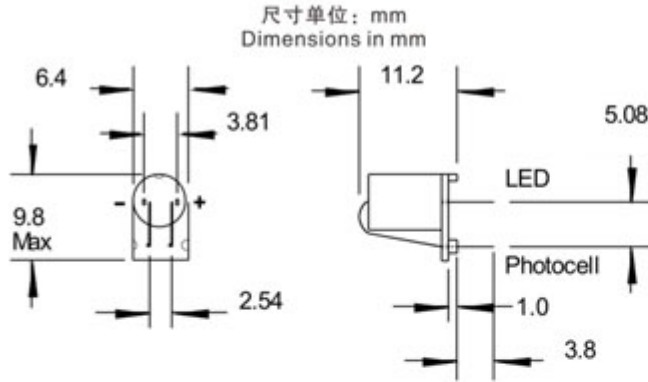
## 电路原理图 Circuit Schematic



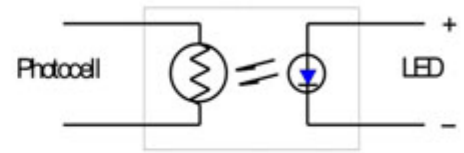
## 25°C参数值 ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

型号 Type	参数 Parameter	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Units	测试条件 Test Conditions
NSL-32SR2	亮电阻On Resistance;			40	Ω	5VDC I <sub>F</sub> = 20 mA
	暗电阻Off Resistance;	1			MΩ	10 sec after I <sub>F</sub> = 0
NSL-32SR2S	亮电阻On Resistance;	100		300	Ω	5VDC I <sub>F</sub> = 1 mA
	暗电阻Off Resistance;	600			KΩ	10 sec after I <sub>F</sub> = 0
NSL-32SR3	亮电阻On Resistance;			60	Ω	5VDC I <sub>F</sub> = 20 mA
	暗电阻Off Resistance;	25			MΩ	10 sec after I <sub>F</sub> = 0
NSL-32B-100	亮电阻On Resistance;	0.75		2.8	KΩ	5VDC I <sub>F</sub> = 1 mA
	暗电阻Off Resistance;	500			KΩ	10 sec after I <sub>F</sub> = 0
NSL-32	亮电阻On Resistance;			500	Ω	5VDC I <sub>F</sub> = 20 mA
	暗电阻Off Resistance;	500			KΩ	10 sec after I <sub>F</sub> = 0
NSL-32-034	亮电阻On Resistance;	9		18	KΩ	5VDC I <sub>F</sub> = 1 mA
	暗电阻Off Resistance;	2.5			MΩ	10 sec after I <sub>F</sub> = 0
NSL-32SR3S	亮电阻On Resistance;	300		600	Ω	5VDC I <sub>F</sub> = 1 mA
	暗电阻Off Resistance;	25			MΩ	10 sec after I <sub>F</sub> = 0
NSL-32-32SR5	亮电阻On Resistance;	40		100	Ω	5VDC I <sub>F</sub> = 20 mA
	暗电阻Off Resistance;	1			MΩ	10 sec after I <sub>F</sub> = 0
NSL-32AA	亮电阻On Resistance;			10	KΩ	5VDC I <sub>F</sub> = 10 mA
	暗电阻Off Resistance;	10			MΩ	10 sec after I <sub>F</sub> = 0

## NSL-32H系列 / NSL-32H Series



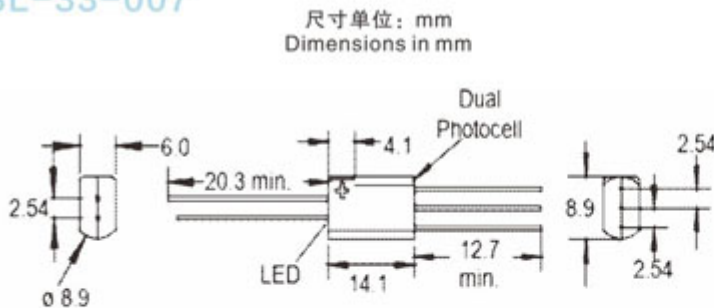
电路原理图  
Circuit Schematic



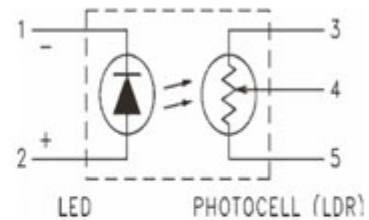
### 25°C参数值 ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

型号 Type	参数 Parameter	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Units	测试条件 Test Conditions
NSL-32HS001	亮电阻 On Resistance:			40	$\Omega$	5VDC $I_f = 20$ mA
	暗电阻 Off Resistance:	1			M $\Omega$	10 sec after $I_f = 0$
NSL-32HSR2S	亮电阻 On Resistance:	100		300	$\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance:	600			K $\Omega$	10 sec after $I_f = 0$
NSL-32HSR3-001	亮电阻 On Resistance:	50		150	$\Omega$	5VDC $I_f = 3.7$ mA
	暗电阻 Off Resistance:	10		25	M $\Omega$	5 sec after $I_f = 0$
NSL-32H100	亮电阻 On Resistance:	0.75		2.8	K $\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance:	500			K $\Omega$	10 sec after $I_f = 0$

## NSL-33-007



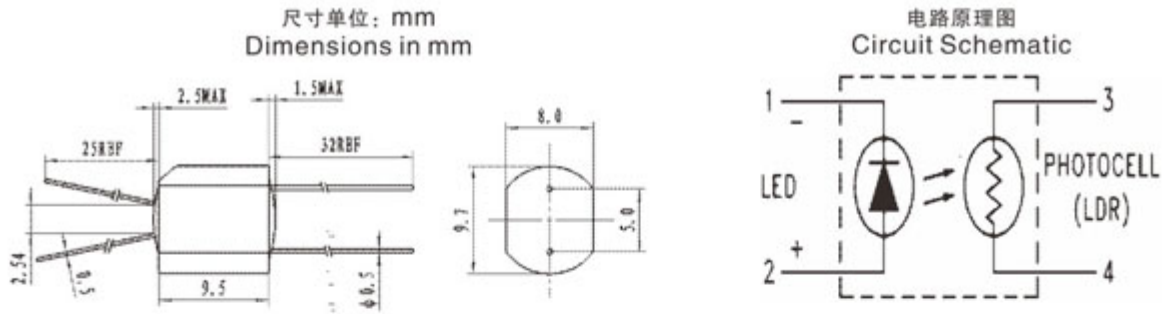
电路原理图  
Circuit Schematic



### 25°C参数值 ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

型号 Type	参数 Parameter	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Units	测试条件 Test Conditions
NSL-33-007	亮电阻 On Resistance	200		700	$\Omega$	5VDC $I_f = 4.6$ mA
	暗电阻 Off Resistance	25			M $\Omega$	5 sec after $I_f = 0$
	电阻匹配 On Resistance Matching			20	%	5VDC $I_f = 4.6$ mA

## NSL-37V5C系列 / NSL-37V5C Series



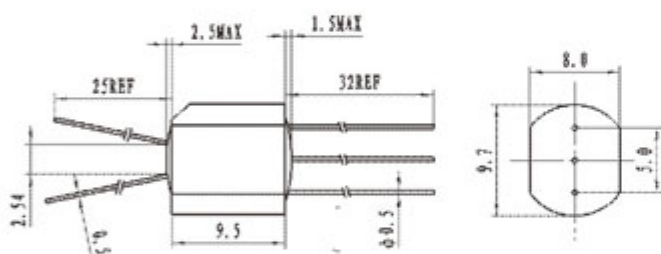
## 25°C参数值 ELECTRO-OPTICAL CHARACTERISTICS @ 25°C

型号 Type	参数 Parameter	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Units	测试条件 Test Conditions
NSL-37V5C1	亮电阻 On Resistance		200		$\Omega$	5VDC $I_f = 40$ mA
			600		$\Omega$	5VDC $I_f = 10$ mA
			6		K $\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance	50			M $\Omega$	10 sec after $I_f = 0$
NSL-37V5C2	亮电阻 On Resistance		225		$\Omega$	5VDC $I_f = 40$ mA
			540		$\Omega$	5VDC $I_f = 10$ mA
			4		K $\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance	50			M $\Omega$	10 sec after $I_f = 0$
NSL-37V5C3	亮电阻 On Resistance		1.5		K $\Omega$	5VDC $I_f = 40$ mA
			5		K $\Omega$	5VDC $I_f = 10$ mA
			30		K $\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance	10			M $\Omega$	10 sec after $I_f = 0$
NSL-37V5C4	亮电阻 On Resistance		75		$\Omega$	5VDC $I_f = 40$ mA
			125		$\Omega$	5VDC $I_f = 10$ mA
			1.2		K $\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance	0.4			M $\Omega$	10 sec after $I_f = 0$
NSL-37V5C6	亮电阻 On Resistance		2		K $\Omega$	5VDC $I_f = 40$ mA
			10		K $\Omega$	5VDC $I_f = 10$ mA
			75		K $\Omega$	5VDC $I_f = 1$ mA
	暗电阻 Off Resistance	100			M $\Omega$	10 sec after $I_f = 0$
NSL-37V5C7	亮电阻 On Resistance		1		K $\Omega$	5VDC $I_f = 2$ mA
			5		K $\Omega$	5VDC $I_f = 0.4$ mA
		暗电阻 Off Resistance	1			M $\Omega$

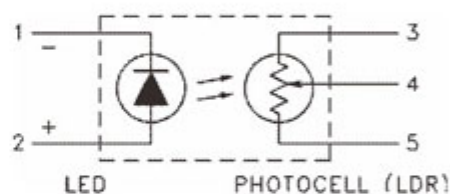
型号 Type	参数 Parameter	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Units	测试条件 Test Conditions
NSL-37V5C8	亮电阻 On Resistance		1		K $\Omega$	5VDC I <sub>F</sub> = 16 mA
			1.8		K $\Omega$	5VDC I <sub>F</sub> = 4 mA
	暗电阻 Off Resistance	10			M $\Omega$	10 sec after I <sub>F</sub> = 0
NSL-37V5C9	亮电阻 On Resistance		630		$\Omega$	5VDC I <sub>F</sub> = 2 mA
	暗电阻 Off Resistance	50			M $\Omega$	5 sec after I <sub>F</sub> = 0
NSL-37V5C10	亮电阻 On Resistance		400		$\Omega$	5VDC I <sub>F</sub> = 2 mA
	暗电阻 Off Resistance	0.4			M $\Omega$	10 sec after I <sub>F</sub> = 0

## VTL5C3/2

尺寸单位: mm  
Dimensions in mm



电路原理图  
Circuit Schematic



## 25°C参数值 ELECTRO-OPTICAL CHARACTERISTICS @25°C

型号 Type	参数 Parameter	最小值 Min.	典型值 Typ.	最大值 Max.	单位 Units	测试条件 Test Conditions
VTL5C3/2	亮电阻 On Resistance		2		K $\Omega$	5VDC I <sub>F</sub> = 40 mA
			55		K $\Omega$	5VDC I <sub>F</sub> = 1 mA
	暗电阻 Off Resistance	10			M $\Omega$	10 sec after I <sub>F</sub> = 0
	电阻匹配 On Resistance Matching			20	%	5VDC I <sub>F</sub> = 5 mA

注:

1.本规格书所列型号为常规型号, 可根据客户需求特别定制。 2.请在规格要求范围内使用, 严禁超负荷使用。

Notes:

1. Here listed types are common ones and customized selections available on request. 2. Please use it within the specifications requirements. No overload is allowed.