

# N48RC02 山东长期供应护栏管专用4.8毫米小草帽LED

产品名称	N48RC02 山东长期供应护栏管专用4.8毫米小草帽LED
公司名称	莱芜市银辉光电科技有限公司
价格	.00/PCS
规格参数	品牌:国产 型号:N48RC02 应用范围:灯具、灯饰
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## 产品详情

品牌	国产	型号	N48RC02
应用范围	灯具、灯饰	结构	点接触型
材料	磷铟砷化镓GaAsInP	封装形式	直插型
封装材料	树脂封装	功率特性	小功率
频率特性	低频	发光颜色	红色
LED封装	有色透明封装(C)	出光面特征	三角形
发光强度角分布	散射型	正向直流电流IF	20 ( A )
最高反向电压	8 ( V )		

特征：高亮度，低光衰，抗静电能力高，正规厂家方片生产，保质量

主要应用范围：护栏管、灯具、灯饰

详细参数参阅以下说明书

product specifications

type : 4.8mm hat led

part number: n48rt02

lens color: red clear

features:

- 1 . long operating life
- 2 . instant light
- 3 . low voltage operated
- 4 . cool beam,safe to the touch
- 5 . more energy efficient than incandescent and most halogen lamps
- 6 . widely used in the lighting , industrial and electronics products.

package outline dimension:

notes:

- 1、 all dimensions are in millimeters ;
- 2、 tolerances are  $\pm 0.1\text{mm}$ ,unless otherwise noted.

typical electrical & optical characteristics (ta=25 )

part number : n48rt02

absolute maximum ratings (ta=25 )

parameter	symbol	value
forward current	if	20
reverse voltage	vr	5
power dissipation	pd	60
soldering temperature	tsol	260(for 5seconds)
operating temperature range	top	-25~+80
storage temperature range	tstg	-30~+80
peak pulsing current	ifp	120
( 1/8 duty f=1khz )		
electrostatic discharge	esd	>1000

electr-optical characteristics(ta=25 ,if=50ma)

parameter	test condition	symbol	value		
			min	typ	max
walvelenth	if=20ma	d	620	---	630
forward voltage	if=20ma	vf	1.8	---	2.4
luminous intensity	if=20ma	iv	150	---	250
luminous flux	if=20ma		0.5	---	1.0
viewing angle at 50% iv	if=20ma	2 1/2	---	160	---
reverse current	vr=5v	ir	---	5	---

part number : n48rt02

typical electro-optical characteristics curves

reliability test items and conditions:

no.	test item	test condition	sample size	
1	dc operation life	if=dc20ma temp:room temperature test time:1000hrs	22	
2	hight temperature hight humidity	temp.:+85 rh=85%hr test time:1000hrs	22	
3	thermal shock	-35 ----~----+85 20min 10s 20min test time:300cycles	22	
4	hight temperature storage	high temp.:+85 test time:1000hrs	22	
5	low temperature storage	low temp.: -35 test time:1000hrs	22	
6	temperature cycle	-35 ----~----+100 15min 5min 15min test time:300cycles	22	
7	reflow soldering	operation heating: 260 (max.) within 10seconds(max.)	22	

judgement criteria of failure for the reliability

iv:below 50% of the initial value

vf:over 20% of the upper limit value

ir:over 2 times of the upper limit value

note:measurement should be taken between 2 hours and after the test leds have been returned to normal ambient condition after completion of each test.

part number : n48rt02

precautions for use:

#### 1. temperature in use

since the light generated inside the led needs to be emitted to outside efficiently , a resin with high light transparency is used, therefore, additives to improve the heat resistance or moisture resistance(silica gel,etc) which are used for semiconductors products such as transistors cannot be added to the resin.

consequently, the heat resistant ability of the resin used for led is usually low,therefore, please be careful of the following points:

avoid applying external force, stress and excessive vibration to the resins and terminals at high temperature. the glass transition temperature of epoxy resin used for the led is approximately 120-130 . if the temperature exceeding the limit, the coefficient of linear expansion of the resin doubles or more compared to that at normal temperature and the resin will be softened.

and if some external force or stress is applied at that time, it may cause a wire damage.

#### 2. soldering

after soldering, avoid applying external force, stress and excessive vibration until the products down to the room temperature(the same to terminal leads).

#### 3. designing

care must be taken to provide the current limiting resistor in the circuit so as to drive the led within the rated figures, also caution should be taken not to overload led with exorbitant voltage at the turning on and off of the circuit.

when using the pulse drive care must be taken to keep the average current within the rated figures, also the circuit should be designed so as to be subjected to reverse voltage when turning off the led.

#### 4. storage

in order to avoid the absorption of moisture, it is recommended to solder led as soon as possible after unpacking the sealed bags.

#### 5. anti-static electricity

as the blue, green, white and puples are sensitive to the esd, so during the handling, soldering , testing and packing process the anti-static measurements must be applied.otherwise the led will be damaged.