

Q23BK03 山东长期供应2*3*4小方形蓝光,绿光LED

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| 产品名称 | Q23BK03 山东长期供应2*3*4小方形蓝光,绿光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:Q23BK03 应用范围:背光、指示、灯饰 |
| 公司地址 | 莱芜市高新区鹏泉东大街156号 |
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产品详情

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|---------|-----------|----------|----------|
| 品牌 | 国产 | 型号 | Q23BK03 |
| 应用范围 | 背光、指示、灯饰 | 结构 | 点接触型 |
| 材料 | 氮化镓(GaN) | 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 | 蓝色 |
| LED封装 | 无色散射封装(W) | 出光面特征 | 方形 |
| 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) | | |

山东厂家专业制造，长期稳定供货，保质量

产品特征：高亮度、颜色一致性好，正规方片生产

主要应用范围：背光、指示、灯饰

详细参数参阅以下说明书

product specifications

type : 2*3*4mm square blue led

part number: q23bk03

lens color: white diffuse

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 : q23bk03 | | | | | |
| absolute maximum ratings (ta=25) | | | | | |
| parameter | | symbol | value | | |
| forward current | | if | 20 | | |
| reverse voltage | | vr | 5 | | |
| power dissipation | | pd | 80 | | |
| 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 |
| wavelength | if=20ma | d | 465 | --- | 470 |
| forward voltage | if=20ma | vf | 3.0 | --- | 3.6 |
| 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 | --- | 100 | --- |

| | | | | | | |
|-----------------|-------|----|-----|---|--|-----|
| reverse current | vr=5v | ir | --- | 5 | | --- |
| | | | | | | |

part number : q23bk03

typical electro-optical characteristics curves

part number : q23bk03

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 | hight 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 : q23bk03

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.