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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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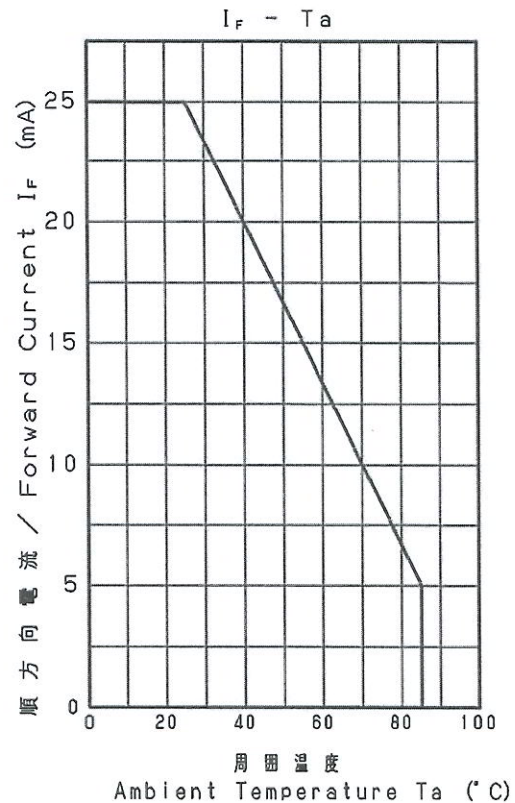
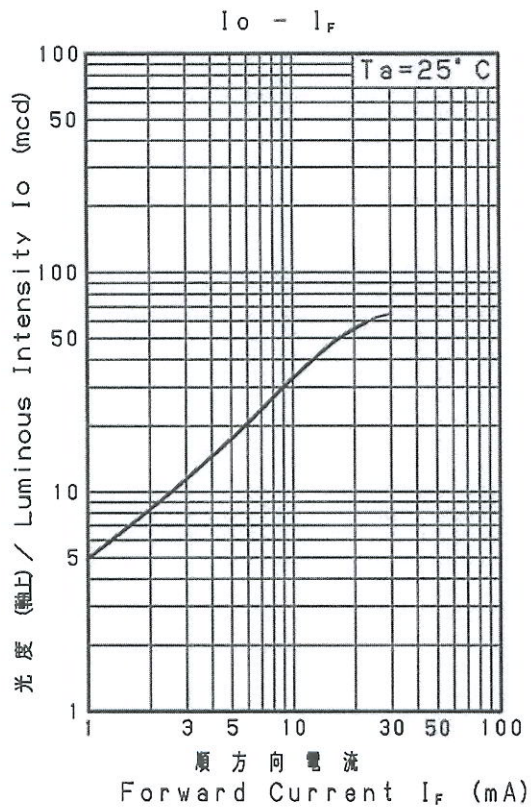
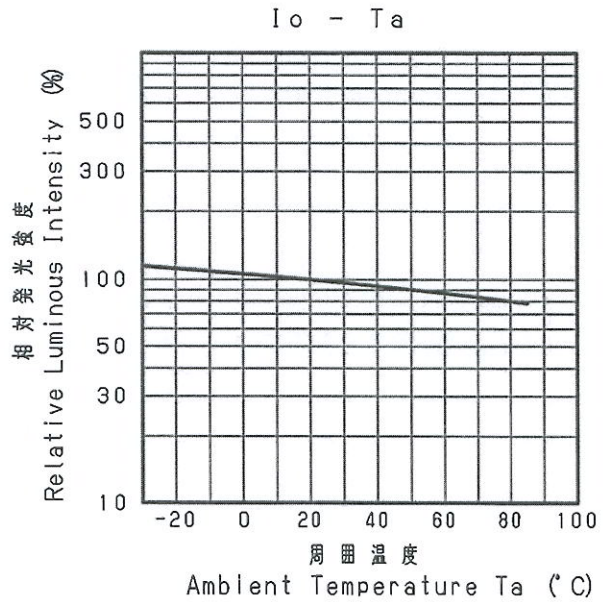
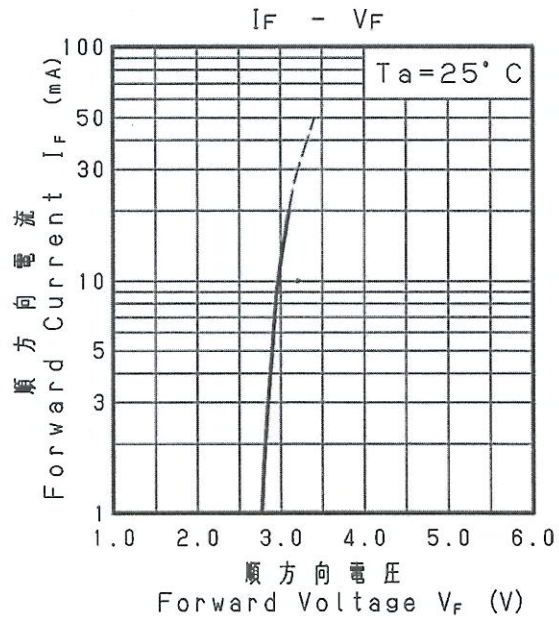
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|------------------------------------------------|-----------------------------------------------|------------------------------------------------|----------------|----------|-----------|-------|-----------|-----------|----|----|----|---|-----------|------------|----|----|----|---|----|----|
| 開発仕様/Tentative Specification                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                          |                                | Prepared<br>by<br><div>M. Obara</div> M. Obara | Checked<br>by<br><div>T. Maeda</div> T. Maeda | Approved<br>by<br><div>T. Ikeda</div> T. Ikeda |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 品 種 名 /Type Number: LNJ923W8CRA1<br>松 下 統 一 品 番 /Matsushita Unified Parts Number<br>: LNJ923W8CRA1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 種 別 /Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | ブルー発光ダイオード / Blue Light Emitting Diode<br>(サイドビュータイプチップ LED/ Side-view type chip LED)                                                                                                                                                                                                                                                                                                    |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 用 途 /Application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 各種表示用/Indicators                                                                                                                                                                                                                                                                                                                                                                         |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 材 質 /Material                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | InGaN on SiC                                                                                                                                                                                                                                                                                                                                                                             |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 外 形 /Out line                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 附図/Attached                                                                                                                                                                                                                                                                                                                                                                              |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 絶対最大定格<br>Absolute Maximum<br>Ratings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <div>(注 1)(Note1)</div> <table><tr><td><math>P_D</math></td><td><math>I_{FP}</math></td><td><math>I_{FDC}</math></td><td><math>V_R</math></td><td><math>T_{opr}</math></td><td><math>T_{stg}</math></td></tr><tr><td>90</td><td>70</td><td>25</td><td>5</td><td>-30 ~ +85</td><td>-40 ~ +100</td></tr><tr><td>mW</td><td>mA</td><td>mA</td><td>V</td><td>°C</td><td>°C</td></tr></table> |                                |                                                |                                               |                                                | $P_D$          | $I_{FP}$ | $I_{FDC}$ | $V_R$ | $T_{opr}$ | $T_{stg}$ | 90 | 70 | 25 | 5 | -30 ~ +85 | -40 ~ +100 | mW | mA | mA | V | °C | °C |
| $P_D$                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | $I_{FP}$                                                                                                                                                                                                                                                                                                                                                                                 | $I_{FDC}$                      | $V_R$                                          | $T_{opr}$                                     | $T_{stg}$                                      |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 90                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 70                                                                                                                                                                                                                                                                                                                                                                                       | 25                             | 5                                              | -30 ~ +85                                     | -40 ~ +100                                     |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| mW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | mA                                                                                                                                                                                                                                                                                                                                                                                       | mA                             | V                                              | °C                                            | °C                                             |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 試験条件/Condition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | $T_a=25\text{ }^{\circ}\text{C}\pm 3\text{ }^{\circ}\text{C}$                                                                                                                                                                                                                                                                                                                            |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 電 氣 的 ・ 光 学 的 特 性 /Electrical-Optical Characteristics ( $T_a=25\text{ }^{\circ}\text{C}\pm 3\text{ }^{\circ}\text{C}$ )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 項 目<br>Item                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 略 号<br>Symbol                                                                                                                                                                                                                                                                                                                                                                            | 測 定 条 件<br>Measuring Condition | Typ.                                           | Limit                                         |                                                | Unit           |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                                | Min.                                          | Max.                                           |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 順方向電圧降下<br>Forward Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | $V_F$                                                                                                                                                                                                                                                                                                                                                                                    | $I_F=5\text{ mA DC}$           | 2.9                                            | 2.65                                          | 3.20                                           | V              |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 逆方向漏洩電流<br>Reverse Leakage Current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | $I_R$                                                                                                                                                                                                                                                                                                                                                                                    | $V_R=5\text{ V}$               | —                                              | —                                             | 100                                            | $\mu\text{ A}$ |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 光度(軸上) (注 2)(Note2)<br>Luminous Intensity                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | $I_o$                                                                                                                                                                                                                                                                                                                                                                                    | $I_F=5\text{ mA DC}$           | 18                                             | 10.0                                          | 32.0                                           | mcd            |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| ドミナント発光波長 (注 3)(Note3)<br>Dominant Wavelength                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | $\lambda_d$                                                                                                                                                                                                                                                                                                                                                                              | $I_F=5\text{ mA DC}$           | 477.0                                          | 474.0                                         | 481.0                                          | nm             |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| ピーク発光波長<br>Peak Emission Wavelength                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | $\lambda_p$                                                                                                                                                                                                                                                                                                                                                                              | $I_F=5\text{ mA DC}$           | 472.0                                          |                                               |                                                | nm             |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| スペクトル半値幅<br>Spectral Line Half Width                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | $\Delta \lambda$                                                                                                                                                                                                                                                                                                                                                                         | $I_F=5\text{ mA DC}$           | 20                                             |                                               |                                                | nm             |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| <div>(注 1) <math>I_{FP}</math> の条件は、duty 10 %, Pulse width 1 ms.<br/><math>I_{FDC}=1\text{ mA}</math> 以下およびパルス印加時間 pulse width 1 ms, duty 10 %未満の使用ならびに疑問点に関しましては、お問い合わせのほどお願い申し上げます。</div> <div>(Note1) The condition of <math>I_{FP}</math> is duty 10 %,pulse width 1 ms<br/>Please contact us for further information regarding special operating conditions such as<br/><math>I_F</math>:less than DC =1 mA<br/><math>I_{FP}</math>:less than pulse width =1 ms, duty=10 %</div> <div>(注 2)(Note2) 光度(軸上)の測定公差<math>\pm 20\%</math>を各値に対し別途考慮してください。<br/>Measurement tolerance is <math>\pm 20\%</math>.</div> <div>(注 3)(Note3) 波長の測定公差<math>\pm 3\text{nm}</math>を各値に対し別途考慮して下さい。<br/>Tolerance of dominant wavelength is <math>\pm 3\text{nm}</math>.</div> <div>(注 4)(Note4) 回路設計上の注意/Circuit to operate LED.<br/>(A)の回路については、<math>V_F</math>の影響により光度バラツキが懸念されますので、(B)の回路を推奨します。<br/>※ (A) The difference of brightness between the LED could be found due to the <math>V_F</math> characteristics of each LED. (B) Recommended circuit.</div> <div><div>(A)</div><div>(B)</div></div> <div><div>この資料は技術検討用参考資料ですので規格および保証を意味するものではありません。<br/>納入仕様書、承認図に記載された内容のみが有効です。<br/>This document is "Target Specifications", so it may be revised a part of it as time<br/>of establishment of "Regular Specifications".</div></div> |                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| 2007-11-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                          |                                |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |
| Established                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                          | Revised                        |                                                |                                               |                                                |                |          |           |       |           |           |    |    |    |   |           |            |    |    |    |   |    |    |

## 開発仕様/Tentative Specification

品種名/Type Number: LNJ923W8CRA1  
 松下統一品番/Matsushita Unified Parts Number  
 : LNJ923W8CRA1



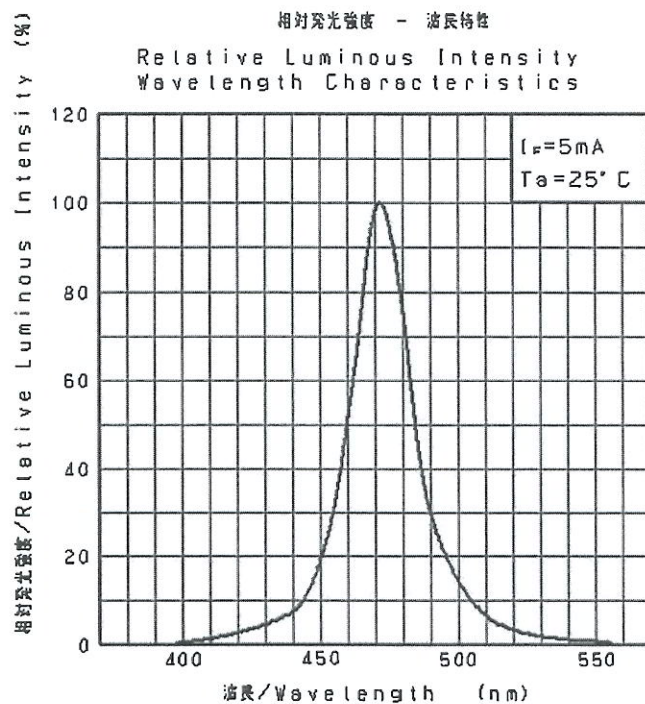
2007-11-15

Established

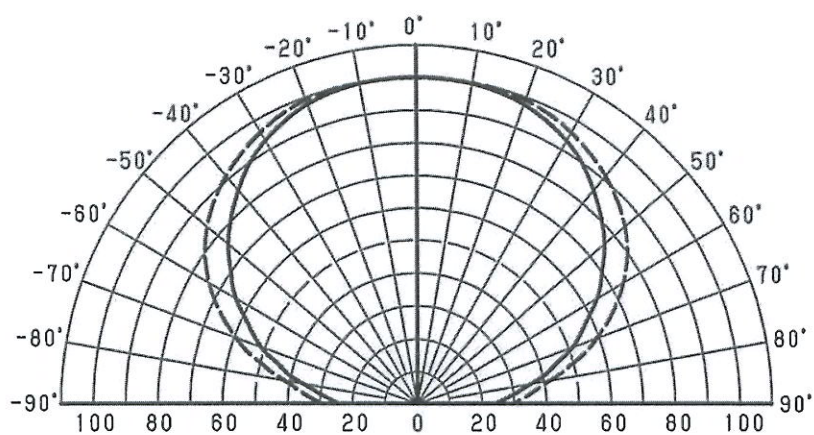
Revised

## 開発仕様/Tentative Specification

品種名/Type Number: LNJ923W8CRA1

松下統一品番/Matsushita Unified Parts Number  
: LNJ923W8CRA1

## 指向特性 / Directive Characteristics



— X

--- Y



相対発光強度/Relative Luminous Intensity (%)

2007-11-15

Established

Revised

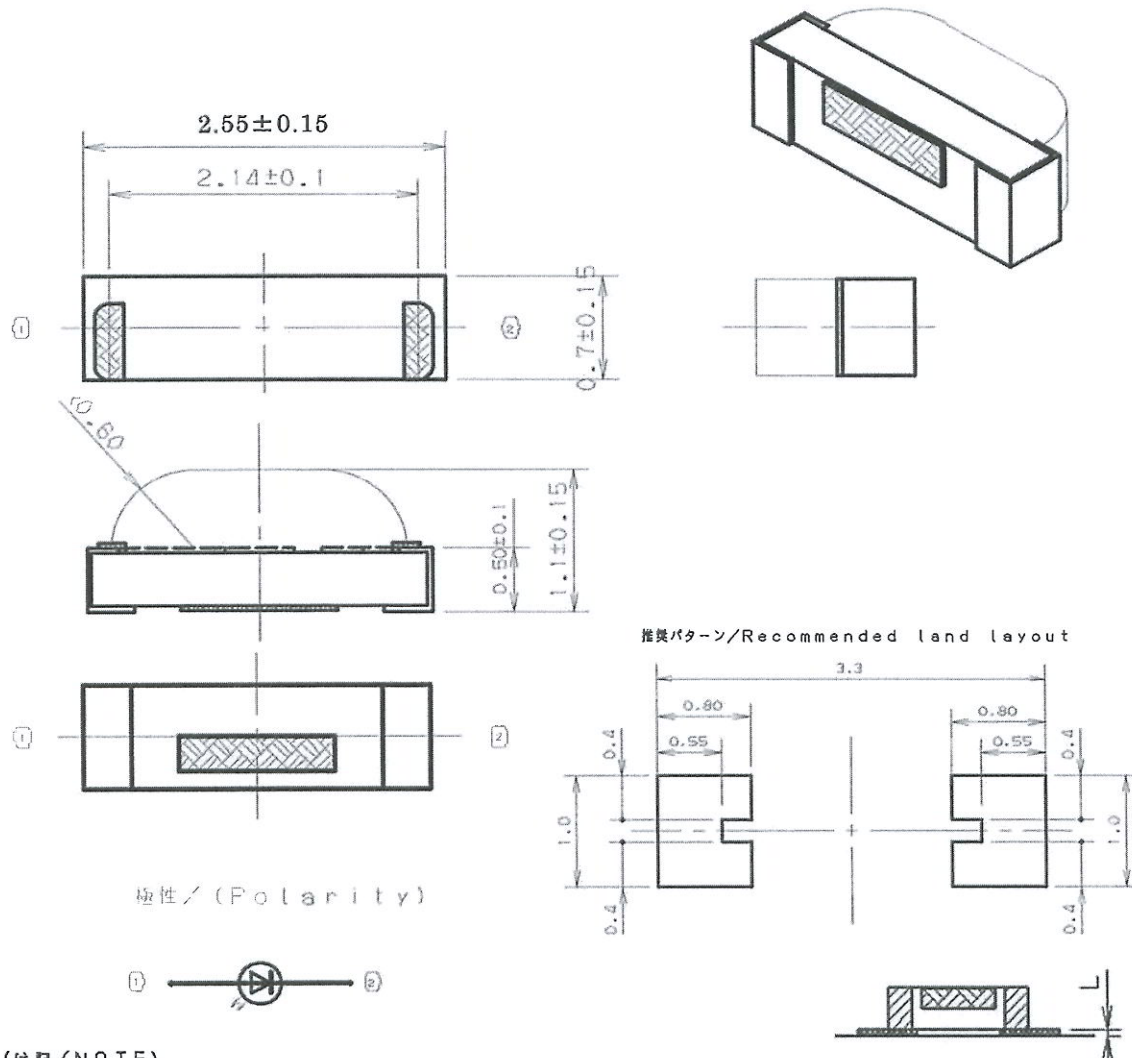
## 開発仕様/Tentative Specification

## 外形図/Outline

品種名/Type Number: LNJ923W8CRA1

松下統一品番/Matsushita Unified Parts Number  
: LNJ923W8CRA1

単位/Unit:mm



## (注記/NOTE)

- 1) パッケージ寸法については電極バリを含まない。
- 2) 単位:mm
- 3) 当製品は、工法上、半田付け面端子端部にメッキバリカエリが発生することや製品背面部に端子を有する縦型面実装タイプであるため、リフロー半田付けの際、不濡れ等が懸念されます。従いまして、半田の種類の検討ならびに各パットに対し、適正な半田量を考慮して塗布してください。
- 4) 基本的にLED直下範囲には固着フットパターンの厚み以上のシルク印刷をしないで下さい。

- 1) Measurement of the package doesn't include electrode projection.
- 2) Unit:mm
- 3) Precaution to soldering  
Assembly conditions such like mechanical lode in placing LED and also suitable volume and type of solder paste has to be fully investigated.  
Please use pattern size, solder thickness, etc, affirmation enough.  
Insufficient soldering may occur because of the condition of solder terminal surface which is caused by its unique production process.
- 4) Measurement of the package doesn't include electrode projection.

2007-11-15

Established

Revised