



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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開発仕様 / Tentative Specification		Prepared By H.Kubo	Checked By T.Onizuka	Approved By T.Ikeda		
品種名 / Type Number : LNJ115W87RA1 松下統一品番 / Matsushita Unified Parts Number : LNJ115W87RA1						
種別 / TYPE	ピュアグリーン・レッド 2色発光ダイオード / Pure Green・Red Bi-color Light Emitting Diode					
材質 / MATERIAL	ピュアグリーン Pure Green : GaN on SiC / レッド Red : InGaAlP					
用途 / APPLICATION	各種表示用 / Indicators					
外形 / OUTLINE	附図 / Attached					
絶対最大定格 ABSOLUTE MAXIMUM RATINGS	*1 P 消費電力 PG R 65 55 mW	*2 I _{FP} パルス順方向電流 PG R 55 60 mA	*3 I _{FDC} 順方向電流 PG R 15 20 mA	V _R 逆方向電圧 PG R 5 4 V	T _{opr} 動作周囲温度 -30 ~ +85 °C	T _{stg} 保存温度 -40 ~ +100 °C
試験条件 / CONDITION	T _a = 25 ± 3 °C					
光学的・電気的特性 / Optical Electrical Specification						
項目 Item	略号 Symbol	条件 Condition	標準値 Typ	許容値 / Limit Min Max	単位 Unit	
ピュアグリーン / Pure Green						
順方向電圧降下 Forward Voltage	V _F	I _F = 5 mA DC	2.90	3.20	V	
逆方向漏洩電流 Reverse leakage Current	I _R	V _R = 5 V		100	μA	
光度 (軸上) Luminous Intensity	I _o	I _F = 5 mA DC	40.0	15.0 110.0	mcd	
ピーク発光波長 Peak Emission Wavelength	λ _p	I _F = 5 mA DC	520.0		nm	
スペクトル半値幅 Spectral Line Half Width	Δλ	I _F = 5 mA DC	30.0		nm	
ドミナント発光波長 Dominant Emission Wavelength	λ _d	I _F = 5 mA DC	527	518 538	nm	
レッド / Red						
順方向電圧降下 Forward Voltage	V _F	I _F = 10 mA DC	1.92	2.5	V	
逆方向漏洩電流 Reverse leakage Current	I _R	V _R = 4 V		100	μA	
光度 (軸上) Luminous Intensity	I _o	I _F = 10 mA DC	24.0	12.0 60.8	mcd	
ピーク発光波長 Peak Emission Wavelength	λ _p	I _F = 10 mA DC	645.0		nm	
スペクトル半値幅 Spectral Line Half Width	Δλ	I _F = 10 mA DC	22.0		nm	
ドミナント発光波長 Dominant Emission Wavelength	λ _d	I _F = 10 mA DC	630	620 640	nm	
*1 (PG) : ピュアグリーン Pure Green (R) : レッド Red						
*2 I _{FP} の条件は、デューティ比 10%、パルス幅 1ms。 DC=1mA以下および、印加時間Pw=1ms、Duty=10%未満の特別仕様並びに疑問点につきましてはお問い合わせの程願います。 The condition of pulse current I _{FP} is 1ms pulse width, 10% duty cycle Please contact us for further information regarding special operating conditions such as If : less than DC = 1 mA , Pulse condition : less than pulse width = 1 ms , duty = 10 %						
*3 同時点灯される場合は、合計のI _{FP} 、I _{FDC} を (PG) I _{FP} <49mA、I _{FDC} <13mA / (R) I _{FP} <54mA、I _{FDC} <18mA に設定して下さい。 When 2 light emitted at the same time, the total current (I _{FP} or I _{FDC}) must be . (PG) I _{FP} <49mA、I _{FDC} <13mA / (R) I _{FP} <54mA、I _{FDC} <18mA						
*4 測定公差 / Measurement tolerance : ±20 %						
*5 測定公差 / Measurement tolerance : ±3nm						
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。 納入仕様書、承認図に記載された内容のみが有効です。 This document is " Target Specifications ", so it may be revised a part of it as time of establishment of " Regular Specifications ".						
2008-04-09						
Established		Revised				

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【注意／Note】

- (1) 静電気による製品破壊にご注意ください。 / Beware of destruction by static electricity in handling the LED.
 (2) 回路設計上の注意 / Circuit to operate LED



(A) の回路については V_F の影響により光度バラツキが懸念されますので

(B) の回路を推奨致します。

(A)The difference of brightness between the LED could be found due to the V_F characteristics of each LED. (B)Recommended circuit.

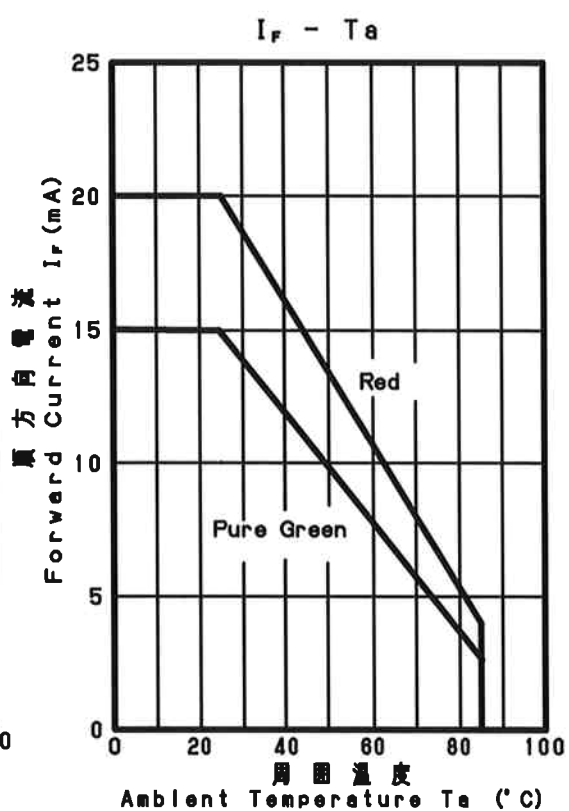
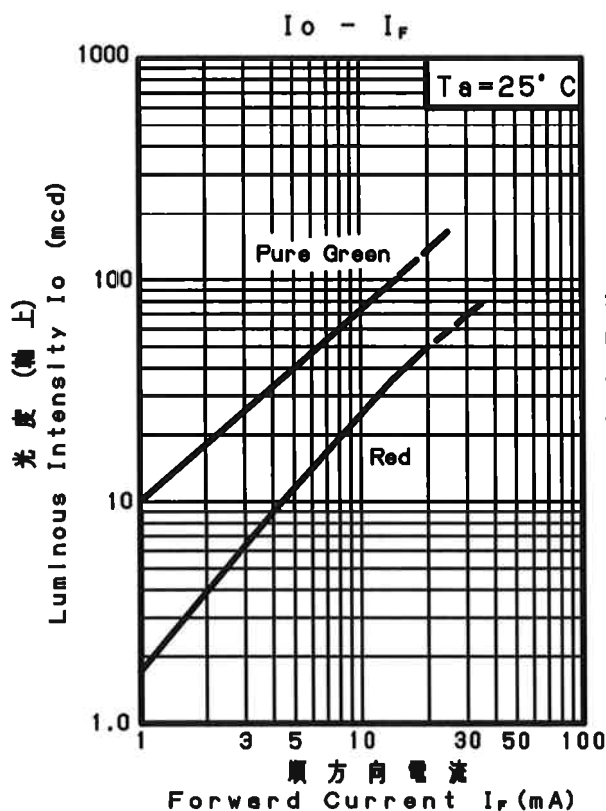
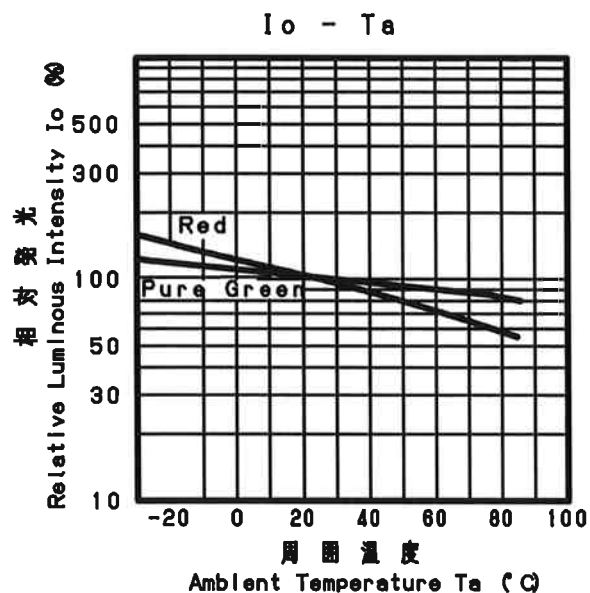
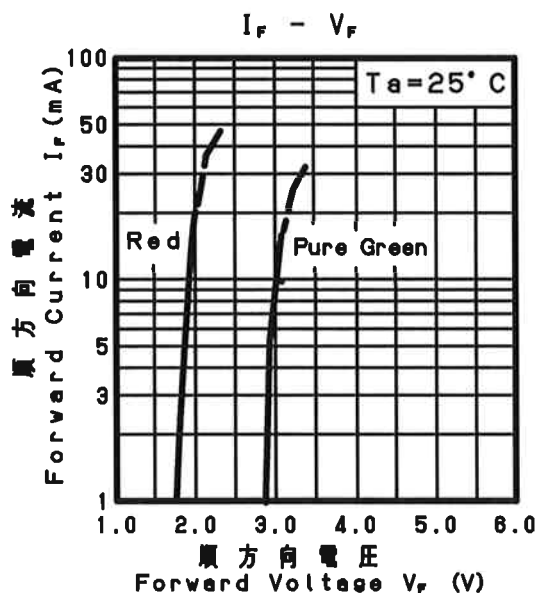
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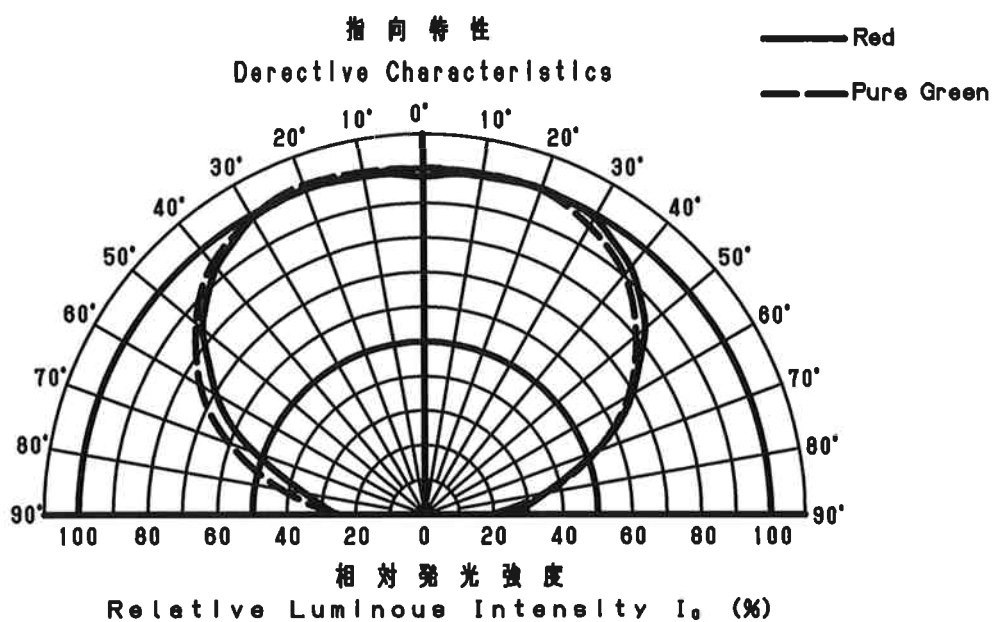
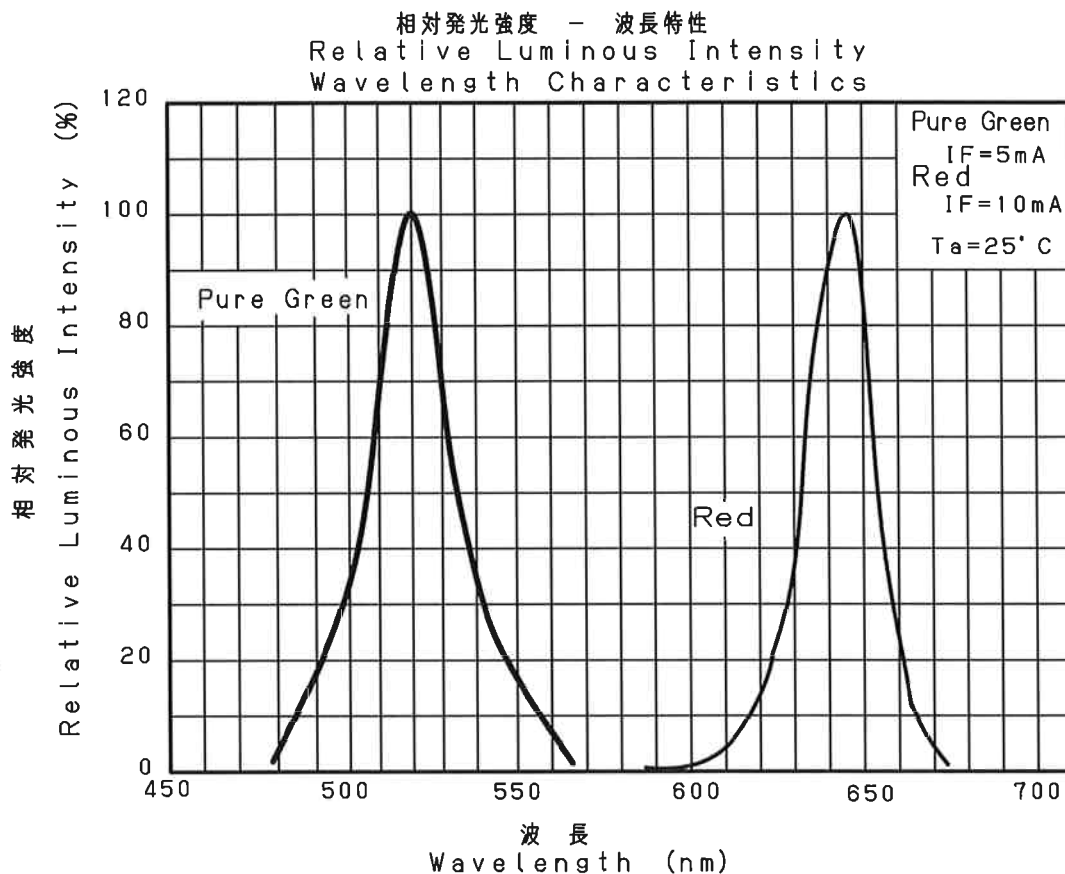
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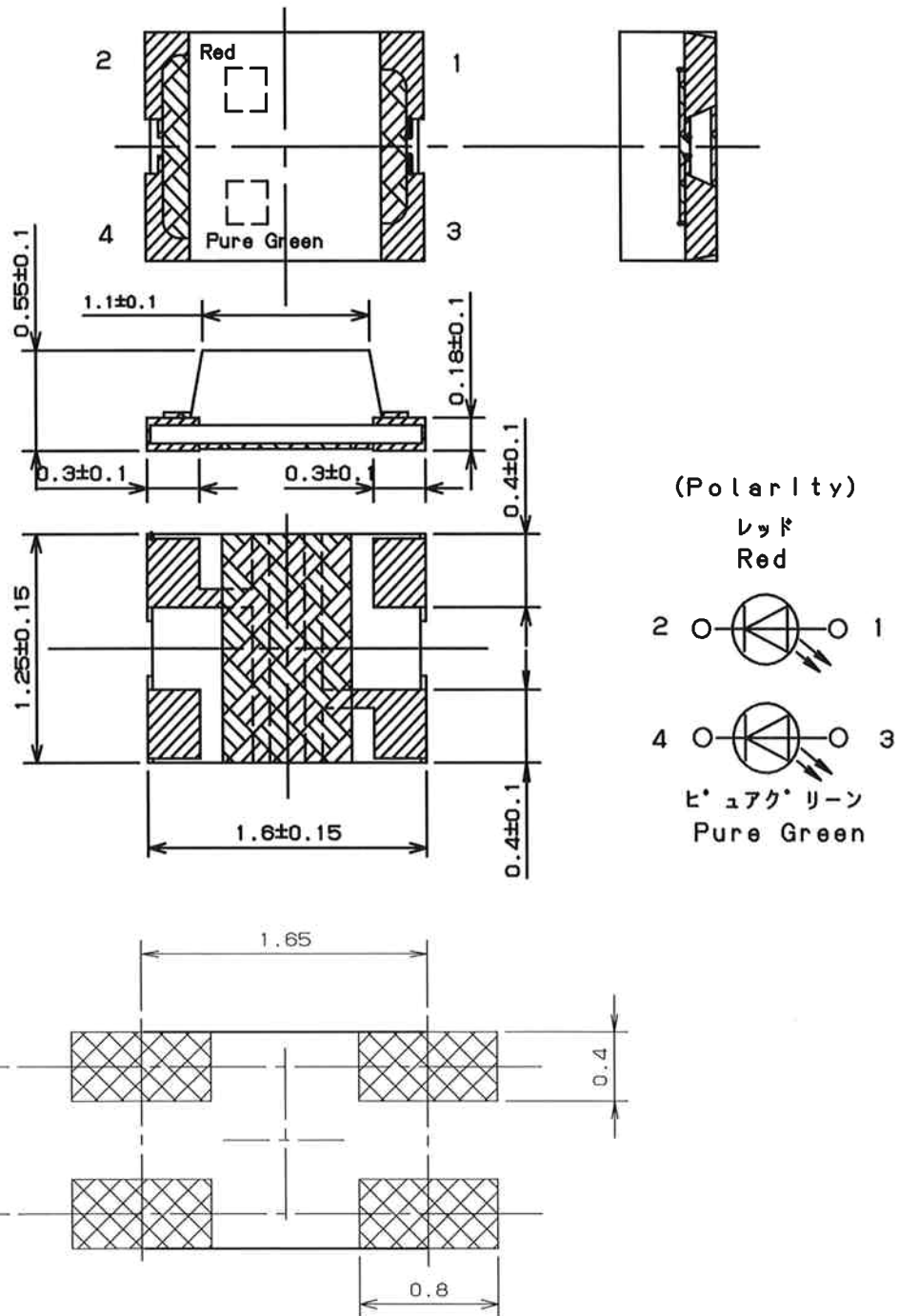
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外形図/Outline

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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) LEDの下部にプリント基板のパターンを設けないこと。
 - 3) 単位 : mm
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- 1) Package dimensions don't include electrode projection.
 - 2) Do not install the pattern of the oriented wiring board under the LED.
 - 2) Unit : mm

2008-04-09

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Revised