

PRODUCT SPECIFICATION

Part Number PL2810R2-WCY04

Details

Features

- Right Angle Surface Mount LED •
- PLCC-2 2.85 x 1.05 x 1.2mm •
- 3,500-piece reels •
- Emitting Color: Yellow •
- AlInGaP/GaAs chip material •

- - **Rugged Package** •
 - 120° Viewing Angle
 - **RoHS** Compliant •











-1.0-



Notes:

1. Specifications subject to change without notice

2. Tolerance of measurement of dimensions: ± 0.25 mm



Device Selection Guide

Model Number	Chip		Lens Color
DI 2810D2 WCV04	Material	Emitting Color	Watar Class
PL2810R2-WC104	AlInGaP	Yellow	water Clear

Absolute Maximum Ratings at Ta=25 °C

Parameter	Symbol	Rating	Unit
Power Dissipation	Pd	72	mW
DC Forward Current	IF	30	mA
Peak Current (1/10 Duty Cycle,0.1ms Pulse Width.)	IFP	100	mA
Reverse Voltage	VR	5	V
Operating Temperature	Topr	-40~+100	°C
Storage Temperature	Tstg	-40~+100	°C
Soldering Temperature	Tsol	Reflow Soldering: 260°C for 10 sec	

Electrical and Optical Characteristics at Ta=25 °C

Parameter	Symbol	Min.	Тур.	Max.	Unit	Condition
Forward Voltage	VF		1.9	2.4	V	
Luminous Intensity	Iv	62.2	170.0		mcd	
Peak Wavelength	λΡ		591		nm	
Dominant Wavelength	λD		589		nm	IF=20mA
Viewing Angle	20 1/2		120		deg	
Spectrum Line Halfwidth	Δλ		15		nm	
Reverse Current	IR			100	μA	Vr=5V

Notes: 1. Tolerance of Luminous Intensity is ±15%
2. Tolerance of Forward Voltage is ±0.1V
3. Tolerance of Dominant Wavelength is ±1nm



Typical Electrical / Optical Characteristic Curves

 $Ta = 25 \,$ CUnless Otherwise Noted





Forward Current VS. Applied Voltage

Forward Current VS. Luminous Intensity



•



Dimensions for Tape









Precautions in Use

Storage

Recommended storage environment

Temperature: $5^{\circ}C \sim 30^{\circ}C (41^{\circ}F \sim 86^{\circ}F)$ Humidity: 60% RH Max.

Use within 7 days after opening of sealed vapor/ESD barrier bags.

If the moisture absorbent material (silica gel) has faded away or the LEDs have exceeded the storage time, baking treatment should be performed using the following conditions.

Baking treatment : $60\pm5^{\circ}$ C for 24 hours.

Fold the opened bag firmly and keep in dry environment.

Soldering

Reflow Soldering				
	Lead Solder	Lead – free So der		
Pre-heat	120~150°C	180~200°C		
Pre-heat time	120sec. Max.	120sec. Max.		
Peak temperature	240°C Max.	260°C Max.		
Soldering time	10sec. Max.	10sec. Max.		
Condition	refer to	refer to		
	Temperature-	Temperature-		
	profile 1	profile 2		

*After reflow soldering rapid cooling should be avoided

[Temperature-profile (Surface of circuit board)] Use the conditions shown to the under figure.

<1: Lead Solder>



[Recommended soldering pad design]

Use the following conditions shown in the figure.



<2 : Lead-free Solder>





Sulfur-sensitive

- I There is silver-plated metal part on the inner/outer side of the outer package.
 If exposed to the condition with corrosive gas, the silver plating surface may go bad, which will affect soldering strength and optical properties. Therefore, after opening it must be kept in a sealed container, etc.
- I Materials contain sulfur component (gasket, adhesive, etc.) may have bad effects on the surface of the coating, so please do not use such materials in the product.
- In cardboard boxes and rubber, even in the atmosphere may contain minute amount of corrosive gases; In addition, the resin material may also contain halogen which has a bad effect on the surface of the coating.
- I Even if the soldering installation and product assembly finished, by the effect of corrosive gas generated by relative materials of LED and external injected, the coating surface may go bad, so it is necessary to design the product taking into account the above factors.
- I If requires, it is best to use a silicone washer, but be aware that low molecular silicone may cause the product poor contact.
- **I** Keep the product in location where has less temperature change, because moisture condensation would be generated under a condition of strong temperature change.

Disclaimer

- 1. Our department reserves the right(s) on the adjustment of product material mix for the specification.
- 2. The product meets our department published specification for a period of twelve (12) months from date of shipment.
- 3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
- 4. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. Our department assumes no responsibility for any damage resulting from the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
- 5. These specification sheets include materials protected under copyright of our department. Reproduction in any form is prohibited without obtaining our department's prior consent.
- 6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized our department sales agent for special application request.



Арргочей Ву	Signature	Date	Notes/Remarks		
	Record of	of Revisions			
Rev.	Comments		Page	Date	
0	Released Spec			07/23/20	