



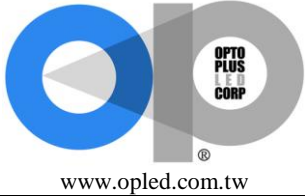
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**Opto Plus LED Corp.**  
**Case Mold Type LED Display**  
**OPD-V1515W-PD-BW**

● **EDIT HISTORY**

Version A: Nov.18, 2017

Preliminary Spec.



# Opto Plus LED Corp. Case Mold Type LED Display OPD-V1515W-PD-BW

## ● FEATURES

- Excellent character appearance.
- Case mold type.
- Touch pad.
- Black face (overlay) / White segment.
- RoHS compliant, Pb Free.

## ● DESCRIPTION

The OPD-V1515W-PD-BW is a Touch Pad with 15.0 mm X 15.0 mm icon LED display. This device utilizes Super Bright White LED chip which are made from InGaN on a transparent GaN substrate. The display has Black face (overlay), White segment. This mold of display is attached with overlay.

## ● DEVICE

PART NO.	DESCRIPTION
OPD-V1515W-PD-BW	Touch pad with LED Display

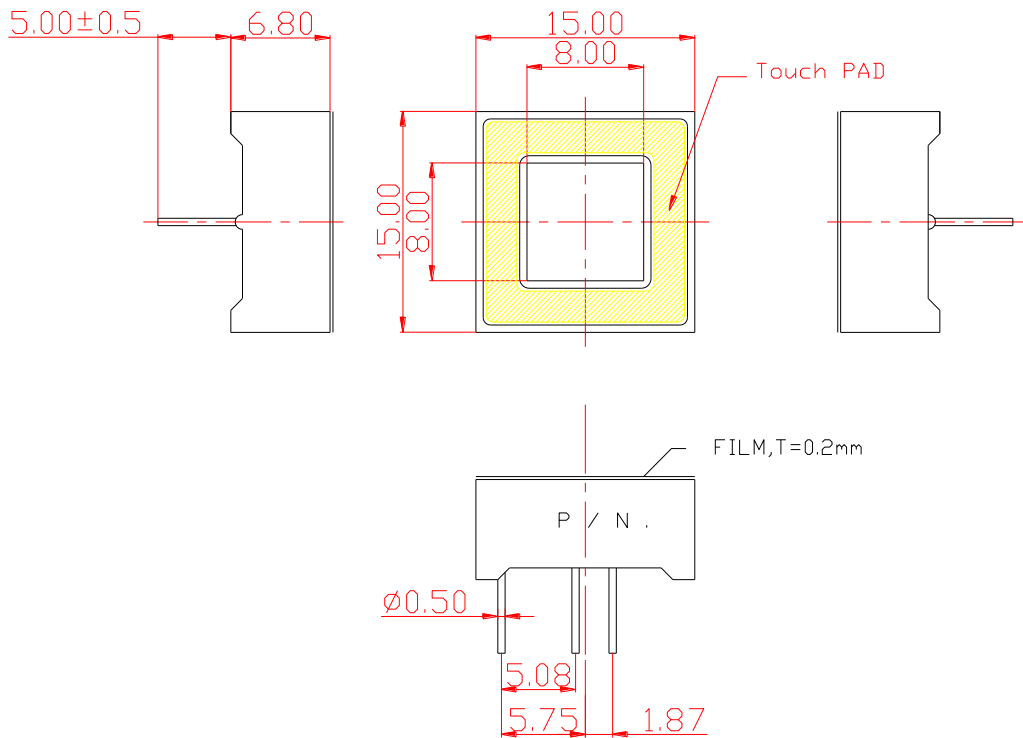
### RoHS Compliance



### Pb free.

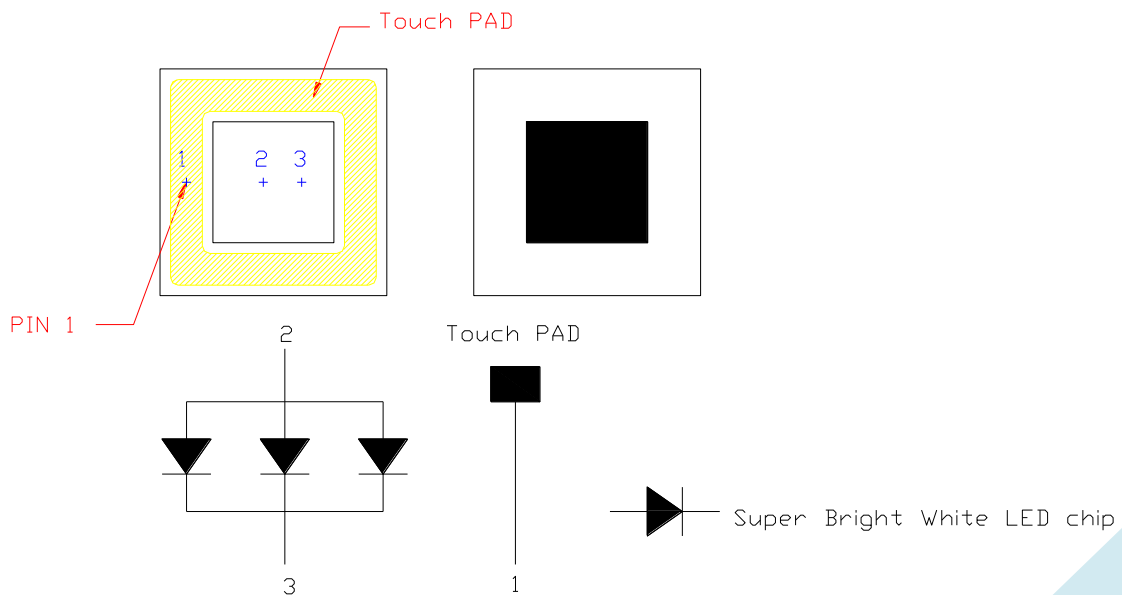


## ● MECHANICAL DIMENSIONS

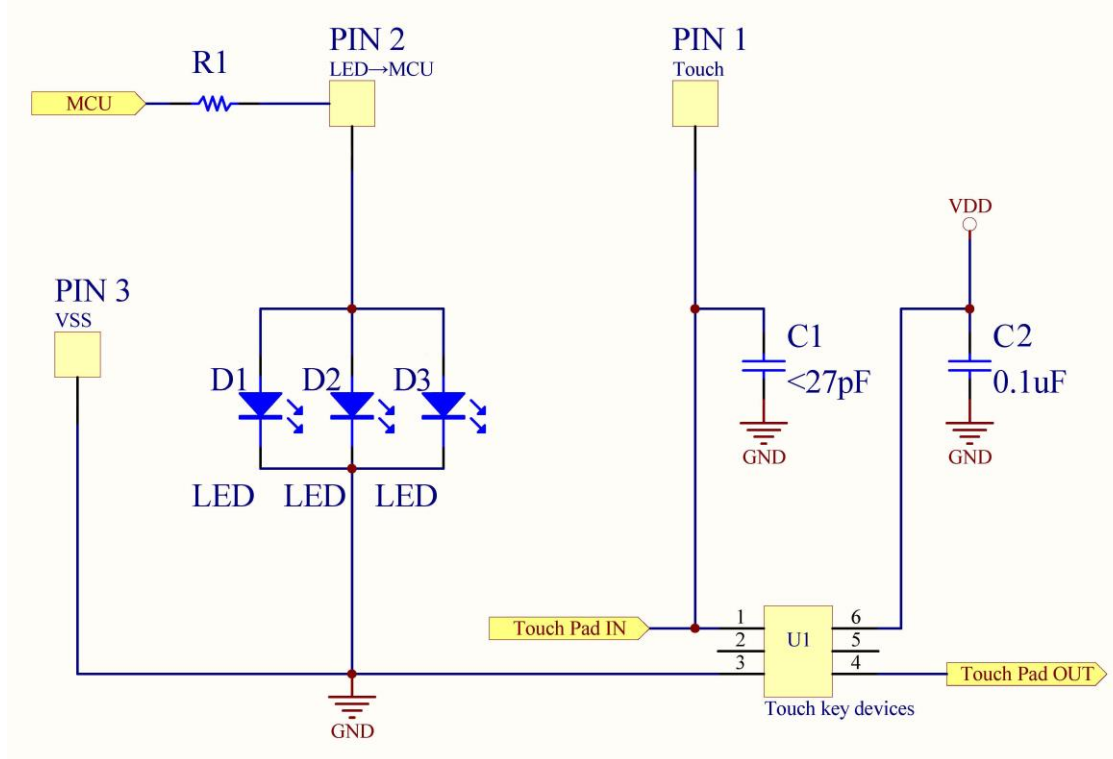


Dimension in millimeters (inches), and tolerances are  $\pm 0.25\text{mm}$  (.01") specified.

## ● TYPICAL INTERNAL EQUIVALENT CIRCUIT

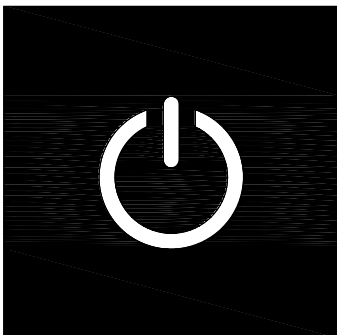


## ● Application Circuits



INTERNAL COMPONENTS , NOT CUSTOMER ACCESSINLE.

## ● FILM





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## ● W: Super Bright White (InGaN/GaN)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

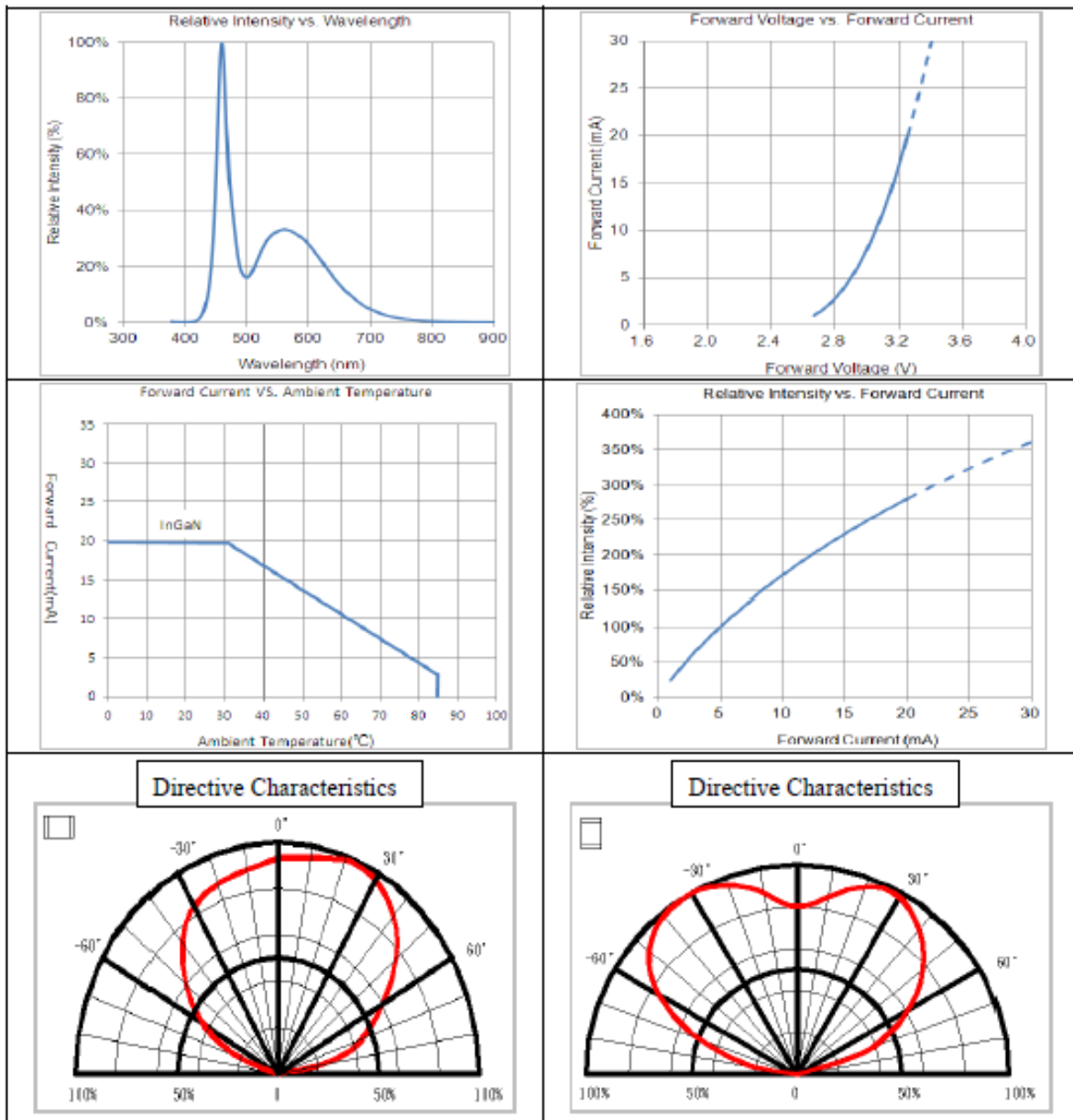
Parameter	Symbol	Maximum Rating	Unit
Power dissipation	$P_{AD}$	78	mW
Continuous forward current	$I_{AF}$	20	mA
Peak current (duty cycle 1/10, 1kHz)	$I_{PF}$	60	mA
Reverse voltage	$V_R$	5	V
Operating temperature	$T_{OPR}$	-40 to + 85	°C
Storage temperature	$T_{STG}$	-40 to + 85	°C

## ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

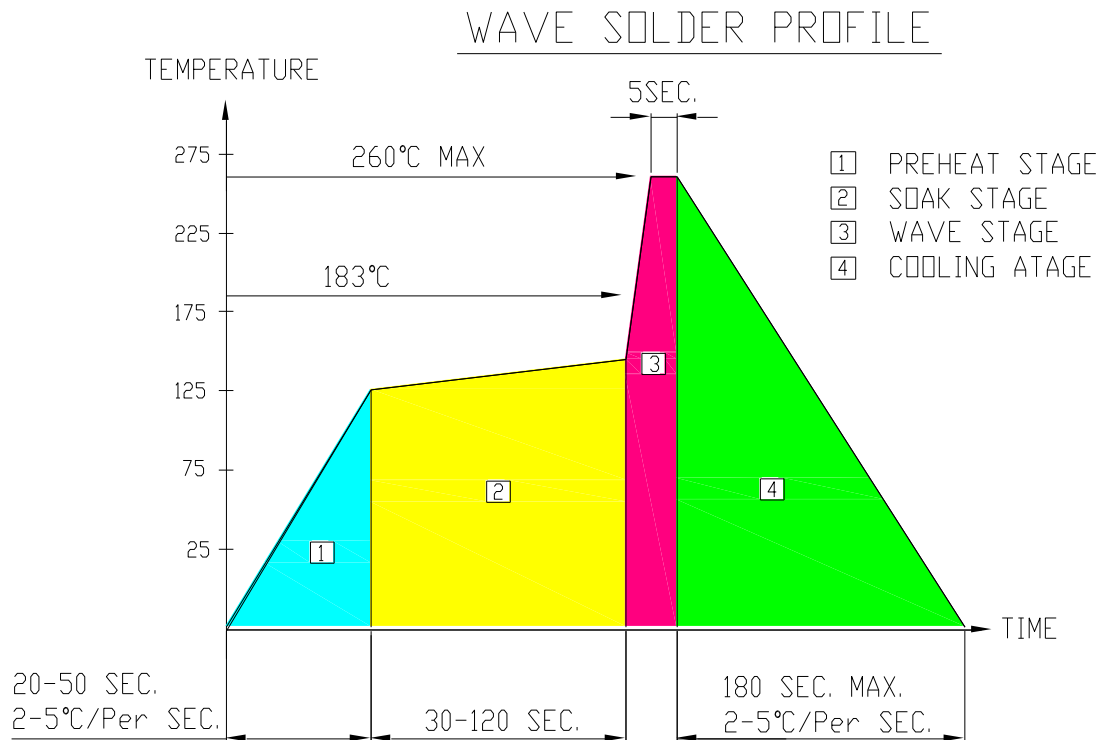
Characteristic	Symbol	Condition	Min.	Type	Max.	Unit	
Forward Voltage	$V_F$	$I_F = 5mA$	-	2.8	3.6	V	
Reverse Current	$I_R$	$V_R = 5V$	-	-	10	$\mu A$	
Dominant Wavelength	$\lambda_D$	$I_F = 5mA$	X	-	0.28	-	nm
			Y	-	0.27	-	
Average Luminous Intensity	$I_v$	$I_F = 5mA$	-	50	-	mcd	
Spectrum Radiation Bandwidth	$\Delta\lambda$	$I_F = 5mA$	-	30	-	nm	

● **W: Super Bright White (InGaN/GaN) CURVE**

Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)



● **RECOMMEND SOLDERING PROFILE**



● **Note:**

- Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
- Peak wave soldering temperature between 245°C ~ 225°C for 3 sec (5 sec max)
- No more than one wave soldering pass

● **SOLDERING IRON**

Basic spec is  $\leq 4$  sec when 260°C. If temperature is higher, time should be shorter (+10°C → 1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C.

● **REWORK**

Customer must finish rework within  $\leq 3$  sec under 350°C.  
 The head of soldering iron cannot touch copper foil.