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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.

Version B: Feb.26, 2018

Add Package.



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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

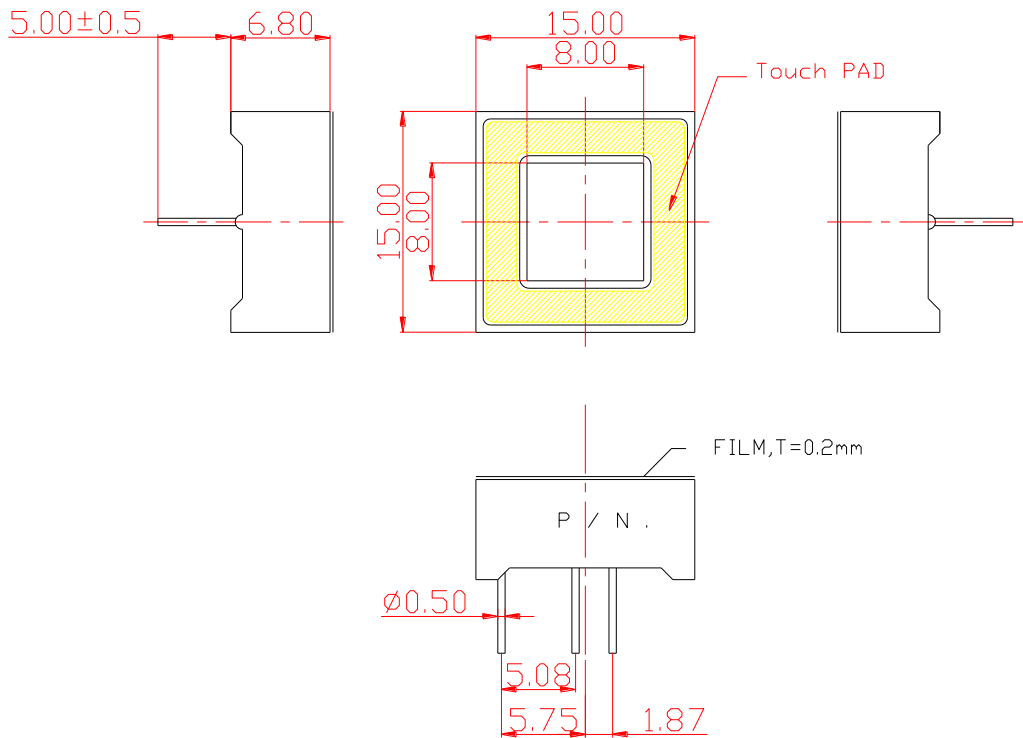
RoHS Compliance



Pb free.

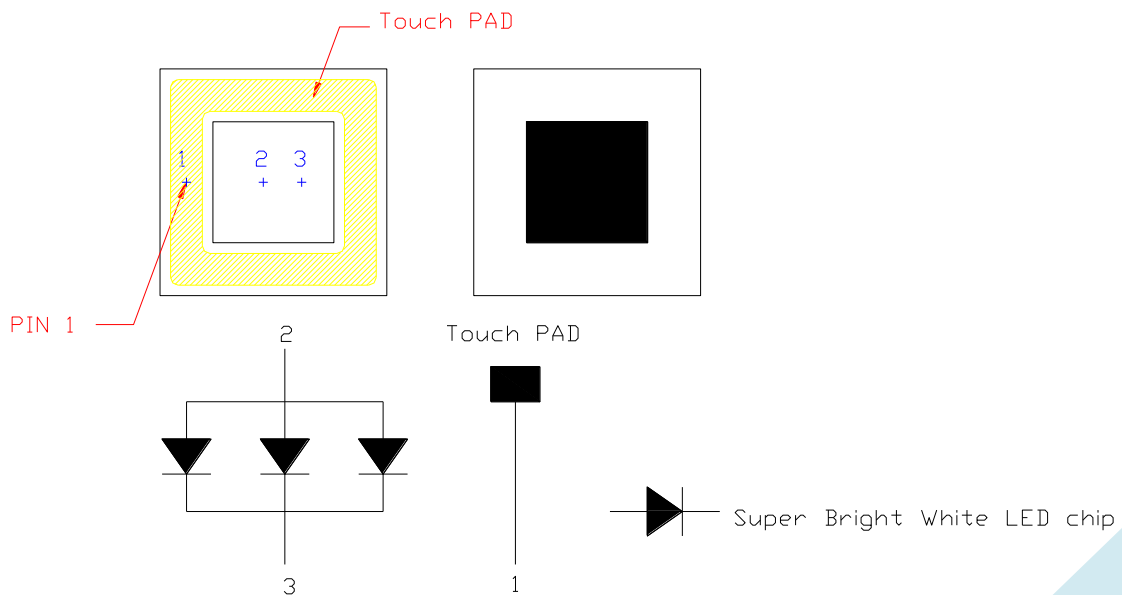


● MECHANICAL DIMENSIONS

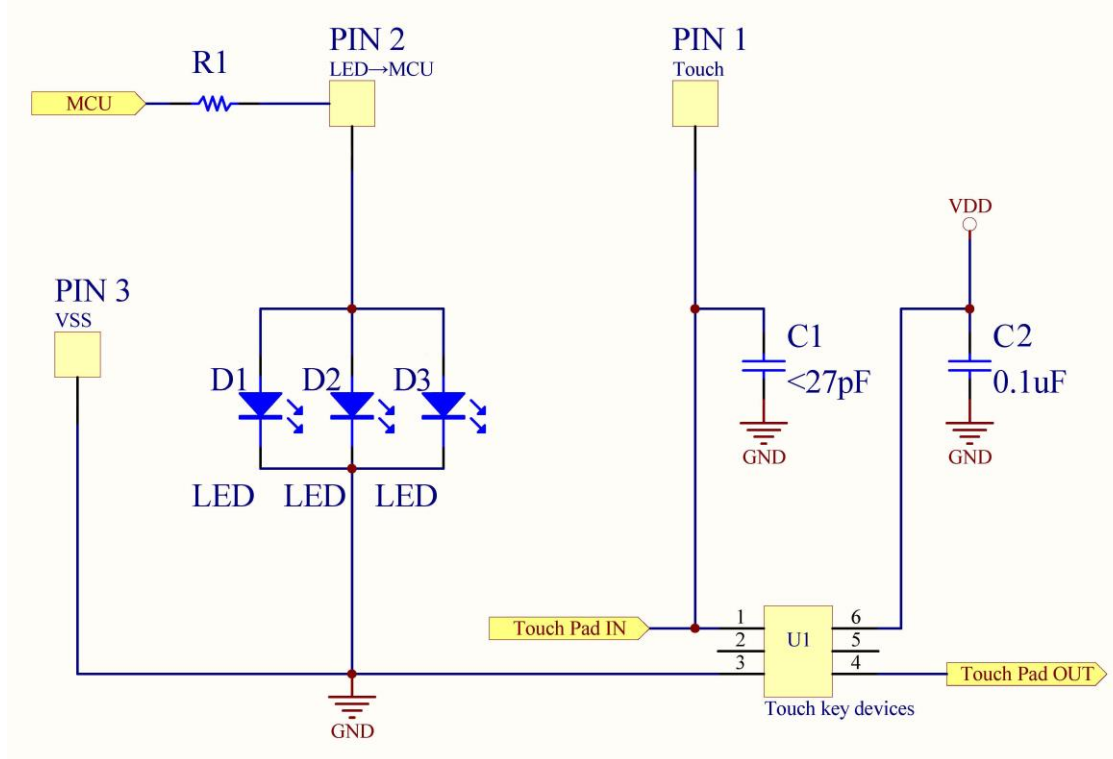


Dimension in millimeters (inches), and tolerances are $\pm 0.25\text{mm}$ (.01") specified.

● TYPICAL INTERNAL EQUIVALENT CIRCUIT

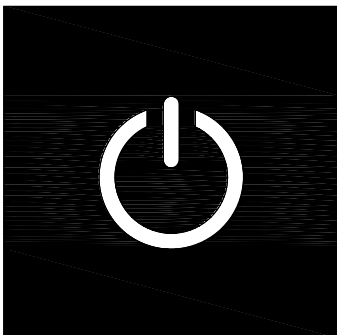


● Application Circuits



INTERNAL COMPONENTS , NOT CUSTOMER ACCESSINLE.

● FILM





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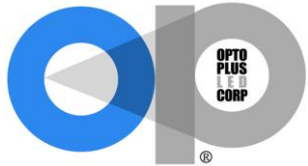
● **W: Super Bright White (InGaN/GaN)**

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	μA	
Dominant Wavelength	λ_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	

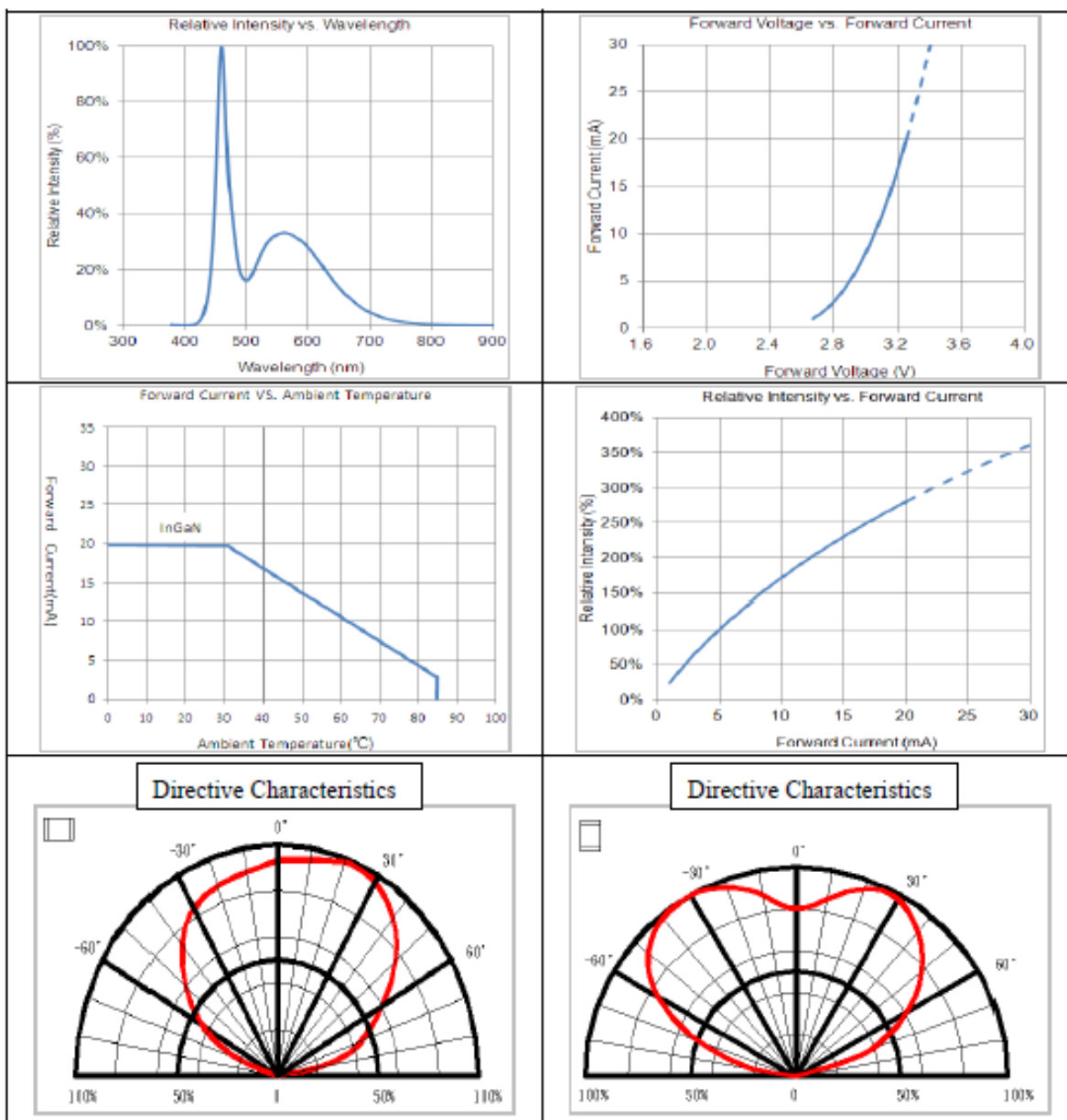


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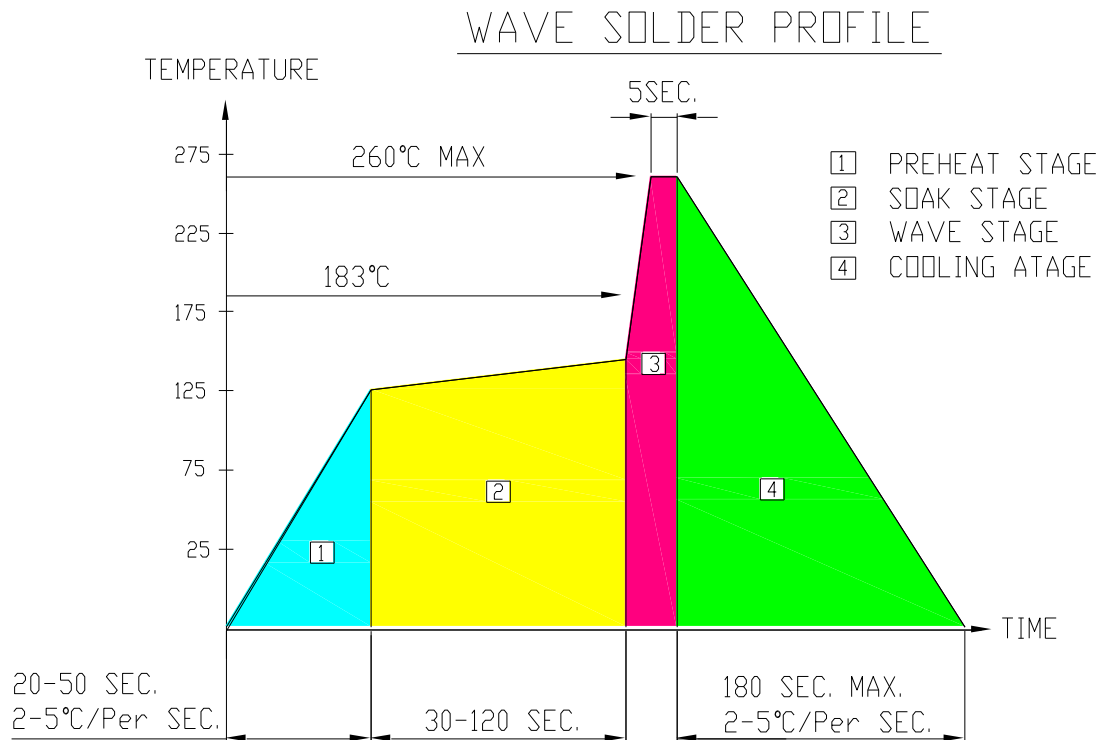
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● W: Super Bright White (InGaN/GaN) CURVE

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 ≤ 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 ≤ 3 sec under 350°C.
 The head of soldering iron cannot touch copper foil.



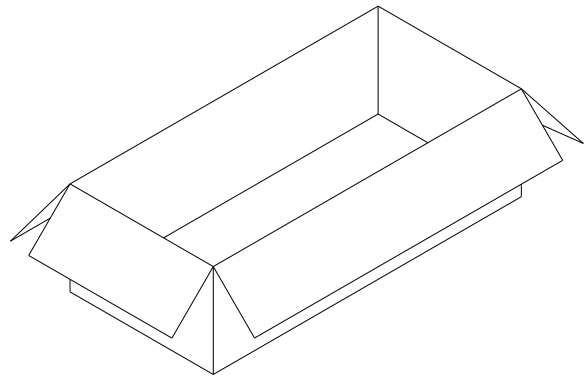
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● PACKAGE DIMENSIONS

<1> 32 PCS / 1 NIXIE TUBE

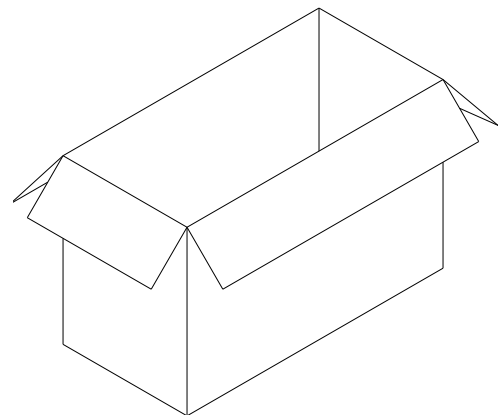


<2> 4576 PCS / 143 (13X11) NIXIE TUBE / 1 INNER CARTON



INNER BOX SIZE : 522 x 240 x 175 mm

<3> 9152 PCS / 286 NIXIE TUBE / 2 INNER CARTON / 1 OUTER CARTON



INNER BOX SIZE : 540 x 255 x 380 mm