

PRODUCT SPECIFICATION

Part Number
PTDC12031W-01

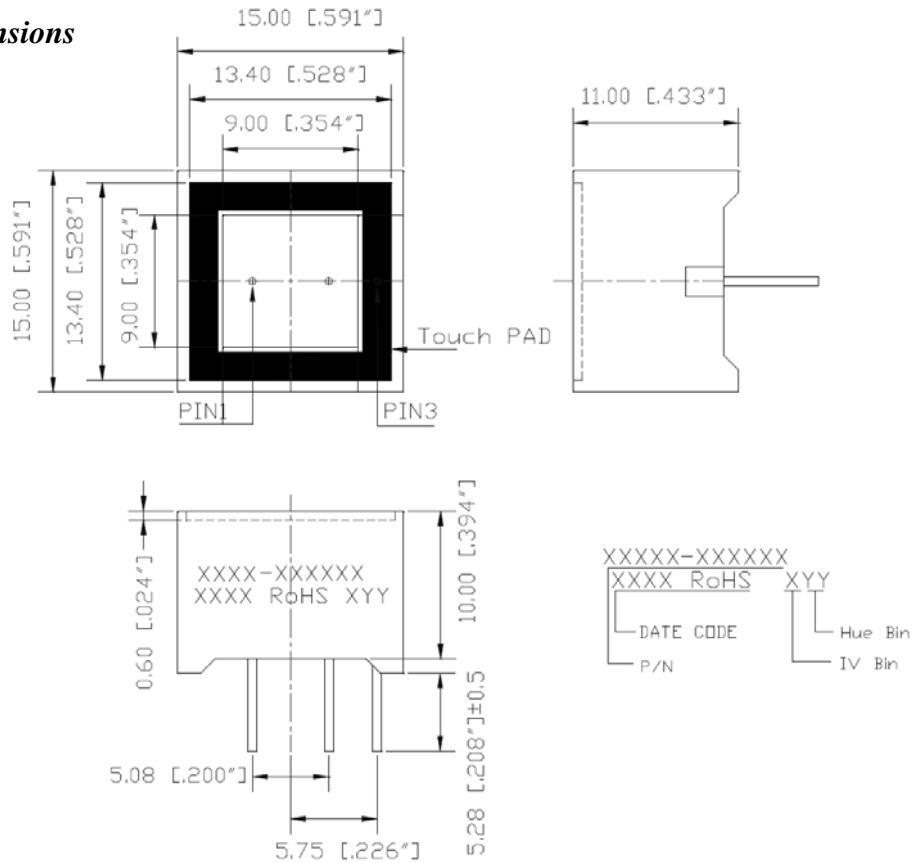
Details

- Touch LED Display
- 15 x 15 x 11mm
- Emitting Color White
- InGaN Dice Used

Features

- Case Mold Type
- White surface with white segments
- Low power consumption
- Easy mounting on PCB or socket
- RoHS Compliant

Mechanical Dimensions



Notes:

1. Dimensions in millimeters [inch], and tolerance is ± 0.25 [0.010] and angle is $\pm 1^\circ$ unless otherwise noted.
2. Bending \leq Length*1%
3. All pins are $\text{Ø}0.60\text{mm}$ (0.024")
4. Specifications subject to change without notice





Device Selection Guide

Model Number	Chip	
	Material	Emitting Color
PTDC12031W-01	InGaN	White

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
Power Dissipation	P _{AD}	114	mW
Derating Liner from 25°C	--	0.4	mA/°C
Continuous Forward Current	I _{AF}	30	mA
Peak Current (duty cycle 1/10, 1KHz)	I _{PF}	100	mA
Reverse Voltage	V _R	5	V
Electrostatic Discharge (HBM)	ESD	1500	V
Operating Temperature	T _{opr}	-35~+85	°C
Storage Temperature	T _{stg}	-35~+85	°C
Soldering Conditions	1/16 inch below seating plane for 3 seconds at 260. Or temperature of unit (during assembly) not over max. temperature rating above		

Electrical and Optical Characteristics at Ta=25°C

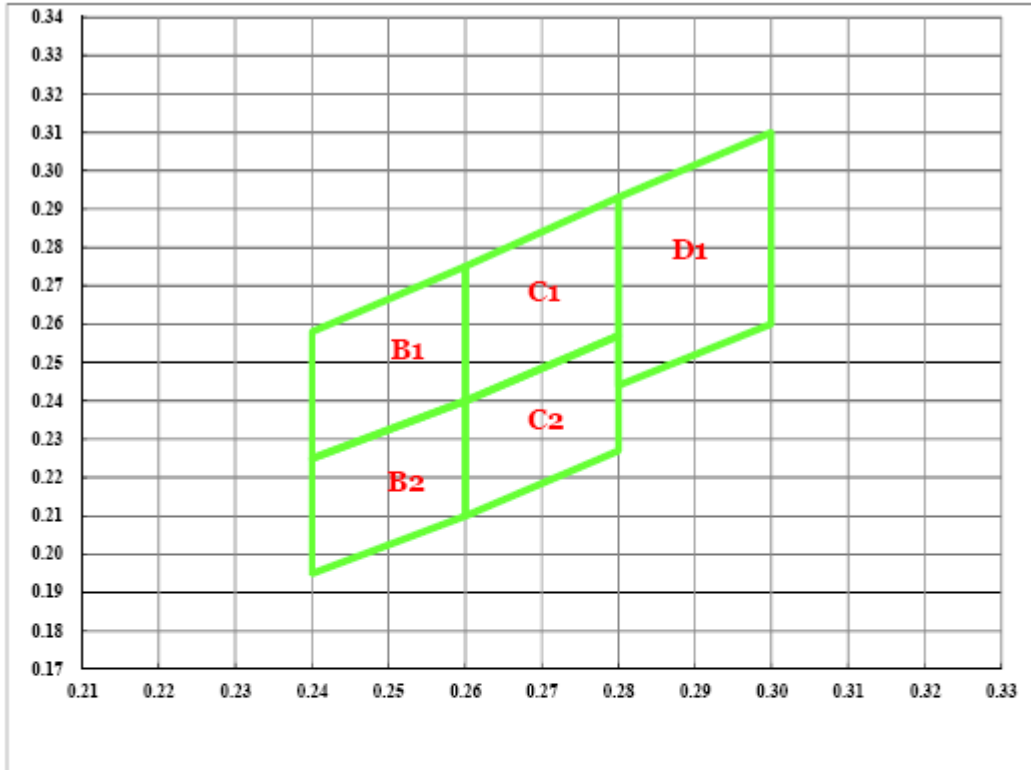
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	V _F	--	3.2	3.8	V	I _F =20mA
Luminous Intensity	I _v	27.5	68	--	mcd	I _F =20mA
Chromacity Coordinates (tolerance ±0.01)	X	--	0.27	--	nm	I _F =10mA
	Y	--	0.25	--	nm	
Reverse Current	I _R	--	--	100	μA	V _R =5V
Luminous Intensity Matching Ratio	I _{v-m}	--	--	2:1	--	I _F =10mA

Luminous General I_v Bin Grade (I_F = 20mA)

R	S	T
180.623	288.997	462.397
288.996	462.396	739.835

Remark: Unit=mcd
*Tolerance: ±20%

Color Rank Limits (IF=10mA)



B1				
X	0.240	0.240	0.260	0.260
Y	0.225	0.258	0.275	0.240

B2				
X	0.240	0.240	0.260	0.260
Y	0.195	0.225	0.240	0.210

C1				
X	0.260	0.260	0.280	0.280
Y	0.240	0.275	0.293	0.257

C2				
X	0.260	0.260	0.280	0.280
Y	0.210	0.240	0.257	0.227

D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

Typical Electrical/Optical Characteristic Curves

- $T_a = 25^\circ\text{C}$ Unless Otherwise Noted

($T_a = 25^\circ\text{C}$ Unless Otherwise Noted)

Fig 1. Forward Current Vs. Ambient Temperature

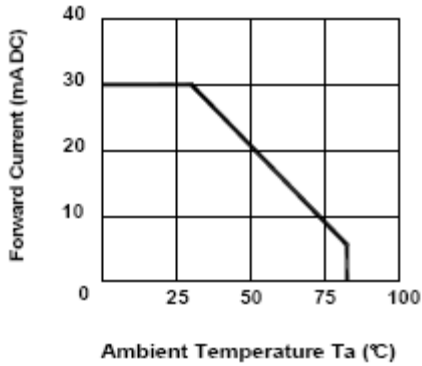


Fig 2. Forward Current Vs. Forward Voltage

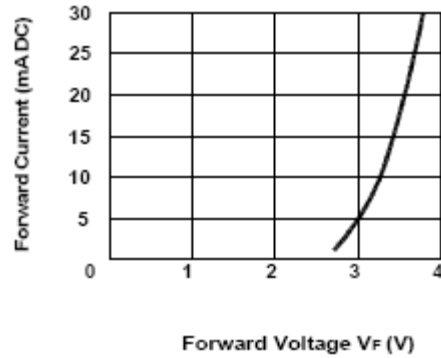


Fig 3. Relative Intensity Vs. Forward Current

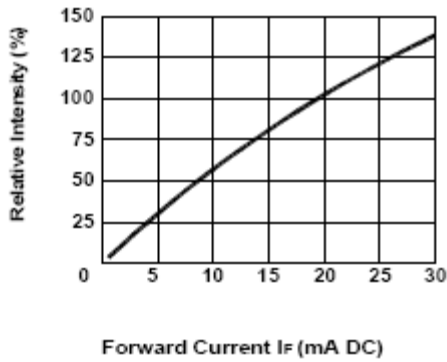


Fig 4. Peak Forward Voltage Vs. Forward Current (100us test pulse, 1% duty cycle)

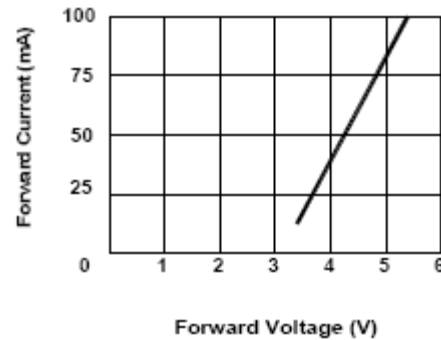
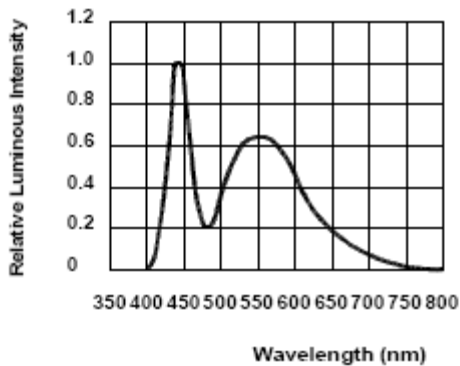
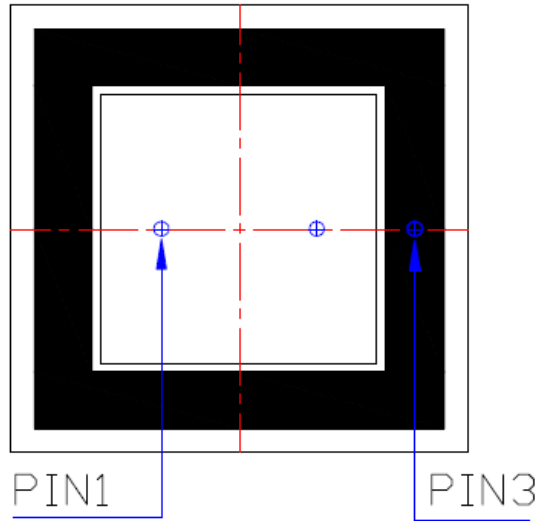


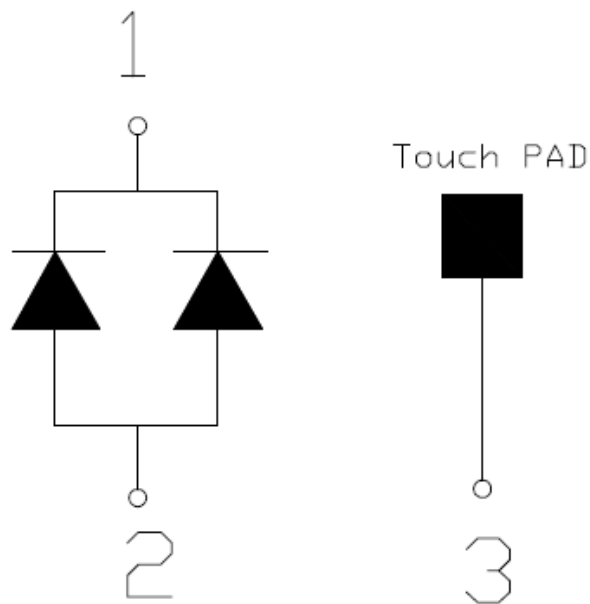
Fig 5. Relative Intensity Vs. Wavelength



All Light-On Segments Feature & Pin Position



Internal Circuit Diagram

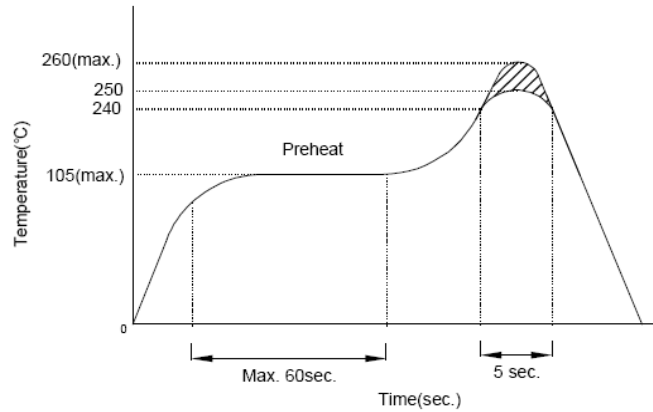


Precautions for Use

1. Recommended soldering conditions

1.1. Wave soldering

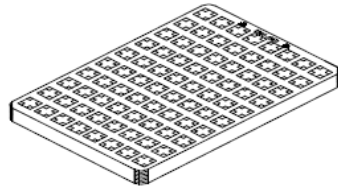
Basic SPEC. is $\leq 5\text{sec.}$ When 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec.}$).



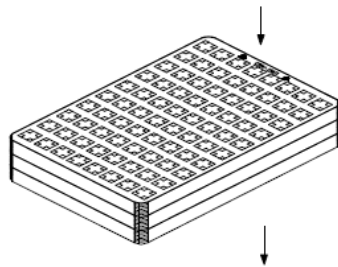
1.2. Recommended Soldering:

Power dissipation of iron should be smaller than 15W and temperature should be controllable.
Soldering temperature should be under 230, time 3sec.

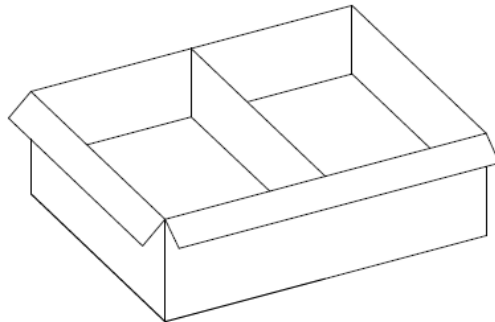
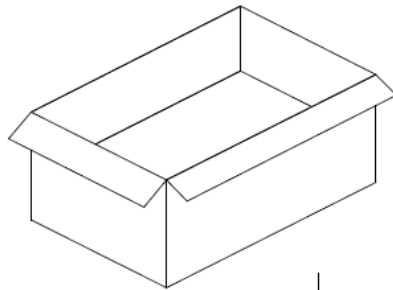
Packing Dimensions



1 Tray From Box = 80 PCS
Tray Size:
L300 x W200 x H20mm



9 Trays Per Inner Box
Q'TY: 720 Pcs.
Box Size:
L300 x W205 x H240mm



2 Inner Boxes Per Carton.
Total Q'TY: 1440 Pcs
Carton Size:
L431 x W320 x H252mm

