

PRODUCT SPECIFICATION

Part Number
PTDC12031B-01

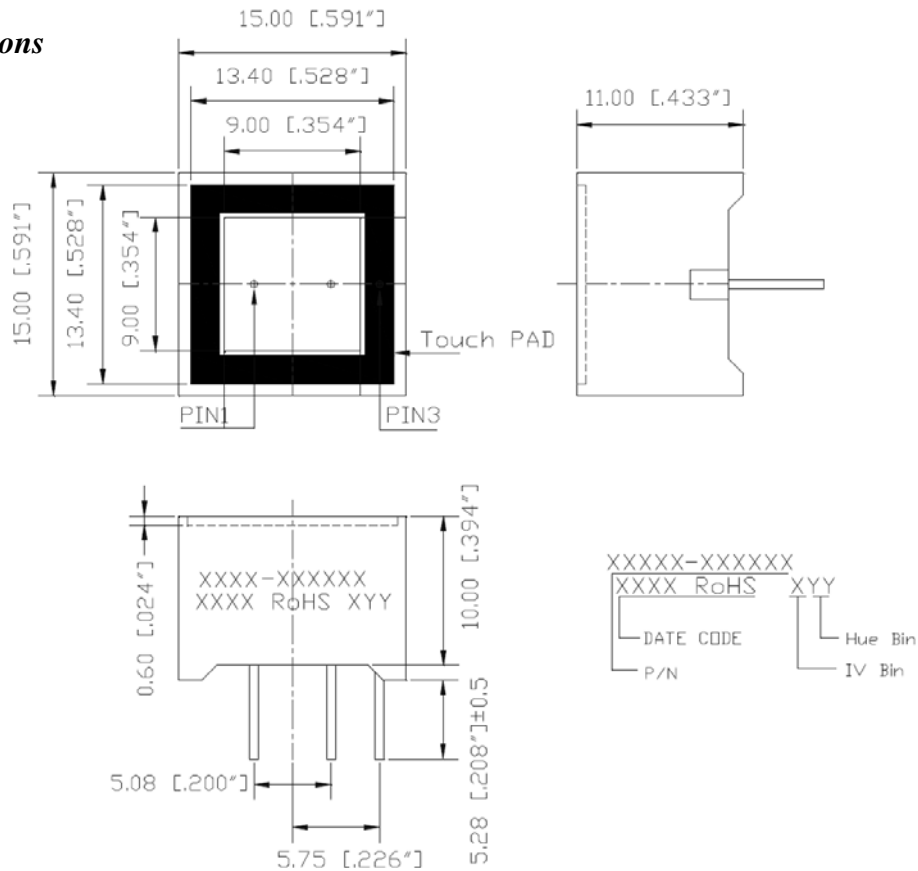
Details

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

Features

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

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
PTDC12031B-01	InGaN	Blue

Absolute Maximum Ratings at Ta=25°C

Parameter	Symbol	Rating	Unit
		B	
Power Dissipation	PAD	114	mW
Derating Liner from 25°C	--	0.4	mA/°C
Continuous Forward Current	IAF	30	mA
Peak Current (duty cycle 1/10, 1KHz)	IPF	100	mA
Reverse Voltage	VR	5	V
Electrostatic Discharge (HBM)	ESD	1500	V
Operating Temperature	Topr	-35~+85	°C
Storage Temperature	Tstg	-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	VF	--	3.2	3.8	V	IF=20mA
Luminous Intensity	Iv	27.5	68	--	mcd	IF=20mA
Dominant Wavelength	λD	--	470	--	nm	IF=20mA
Spectrum Radiant Bandwidth	Δλ	--	30	--	nm	IF=20mA
Reverse Current	IR	--	--	100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m	--	--	2:1	--	IF=10mA

Luminous General Iv Bin Grade (IF = 10mA)

M	N	P
27.559	44.096	70.555
44.095	70.554	112.888

Remark: Unit=mcd
*Tolerance: ±20%

Color Rank Limits (IF=20mA)

1	2	3	4	5	6	7
453.0	456.0	459.0	462.0	465.0	468.0	471.0
}		}		}		}
455.9	458.9	461.9	464.9	467.9	470.9	474.0

Remark: Unit=mcd
*Tolerance: ±20%

Typical Electrical/Optical Characteristic Curves

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

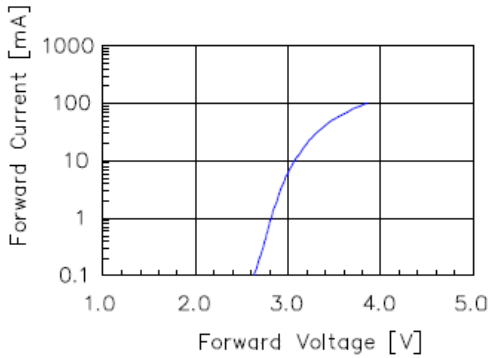


Fig 1. Forward Current vs. Forward Voltage

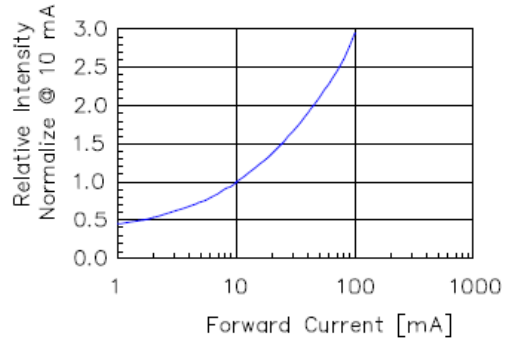


Fig 2. Relative Intensity vs. Forward Current

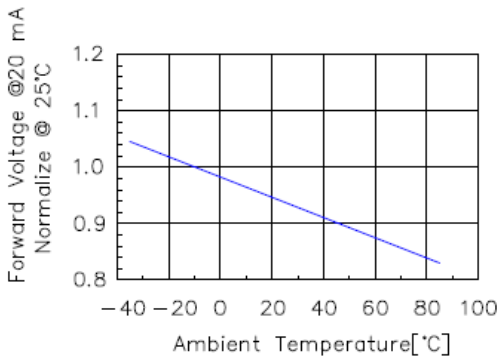


Fig 3. Forward Voltage vs. Temperature

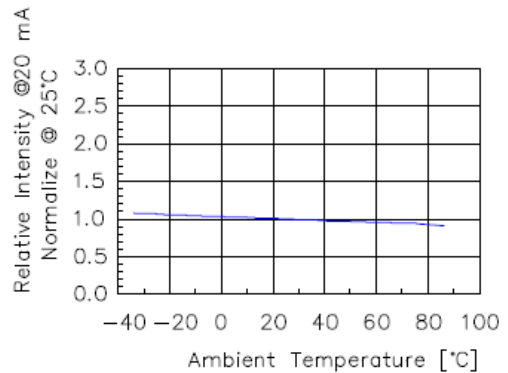


Fig 4. Relative Intensity vs. Temperature

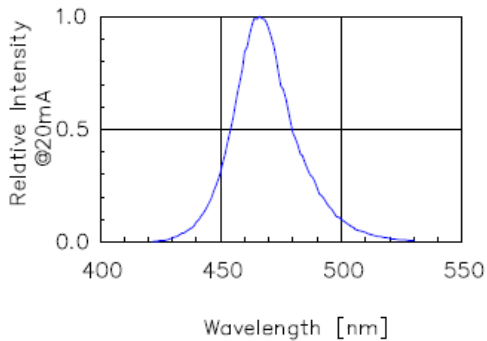
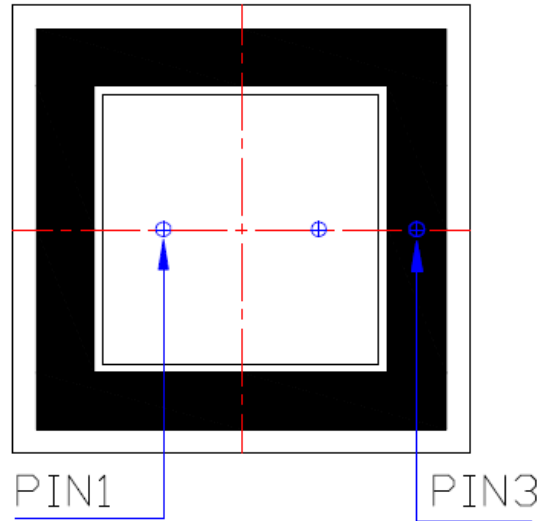
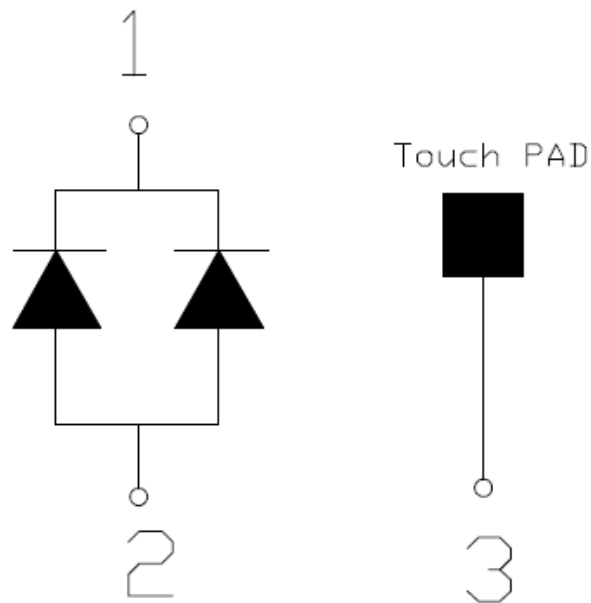


Fig 5. Relative Intensity vs. Wavelength

All Light-On Segments Feature & Pin Position



Internal Circuit Diagram

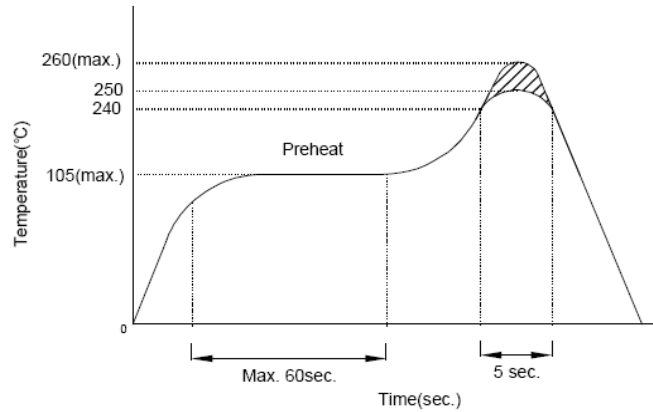


Precautions for Use

1. Recommended soldering conditions

1.1. Wave soldering

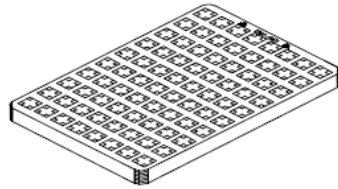
Basic SPEC. is $\leq 5\text{sec.}$ When 260°C . If temperature is higher, time should be shorter ($+10^{\circ}\text{C} \rightarrow -1\text{sec.}$).



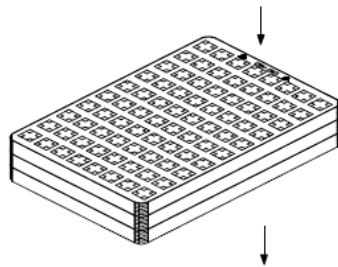
1.2. Recommended Soldering:

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

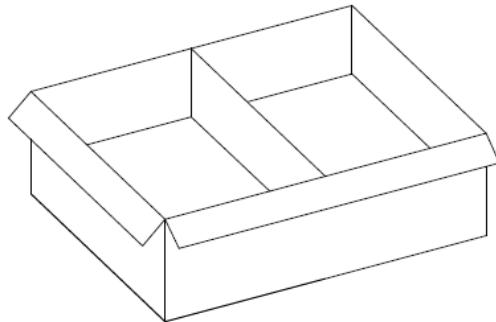
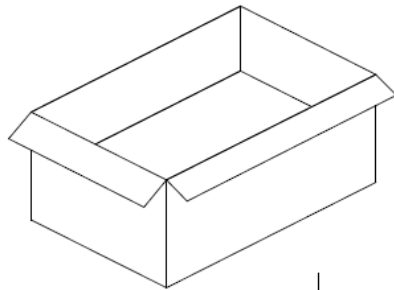
Packing Dimensions



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



Customer Approval Signatures	Approved By	Checked By	Prepared By

Record Of Revisions			
Rev.	Comments	Page	Date
0	Released Spec	--	04/24/14