Features

- 0.5” (12.7mm) Digit Height
- Dual Digit Display
- Black/Grey Face, White Segment
- IC compatible, Easy assembly
- Dynamic drive connects
- RoHS Compliant, Pb Free

Description

The INND-TD50 series is a 0.5” dual digit display. It is a through hole type LED display which can be used in various applications.

Applications

- Consumer Electronics
- Industrial Equipment

Internal Circuit Diagram

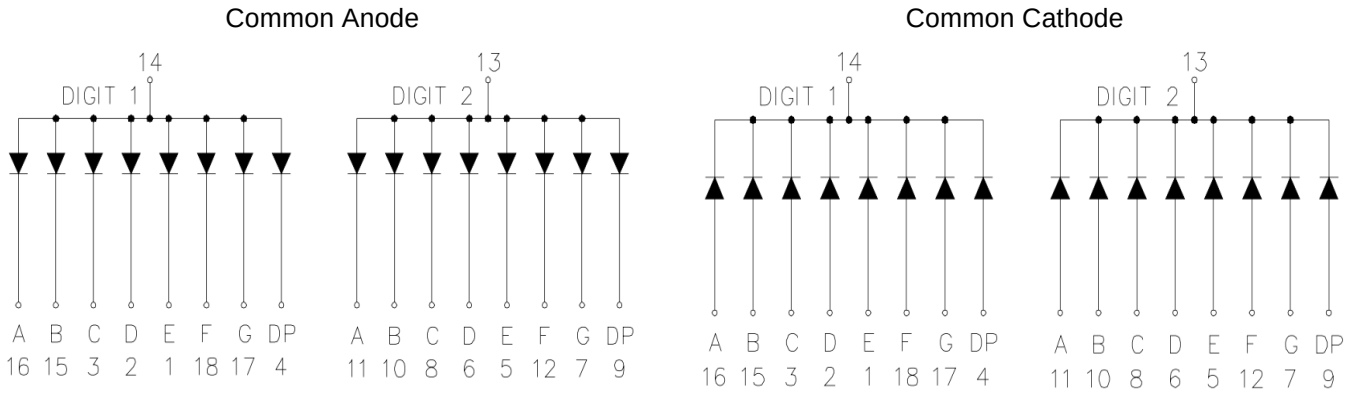


Figure 1. INND-TD50 series Internal Circuit Diagram

Package Dimensions

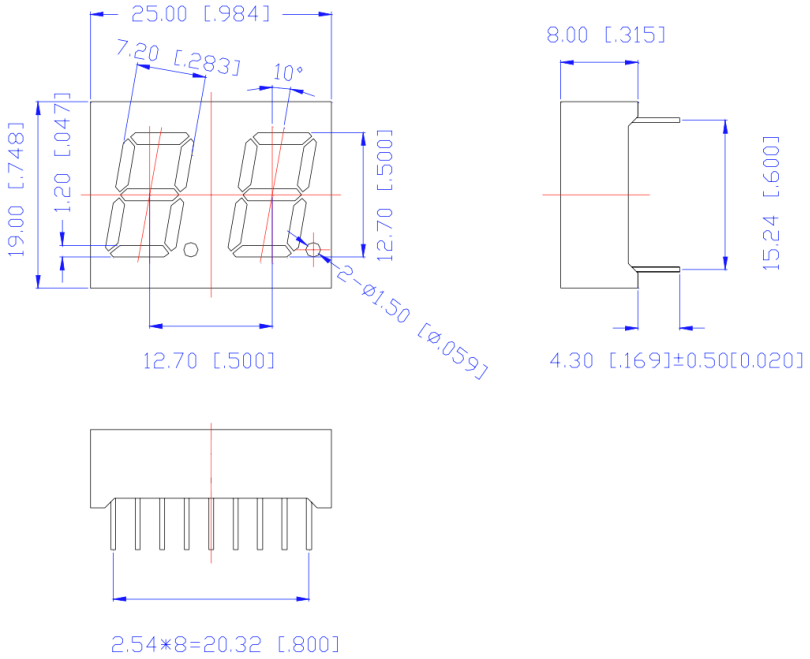


Figure 2. INND-TD50 series Package Dimensions

Notes

1. All pins are Φ0.51[.020]±0.1[.004]
2. Dimension in millimeter [inch], tolerance is ±0.25 [.010] and angle is ±1° unless otherwise noted.
3. Bending≤Length*1%.

All Light On Segments Feature & Pin Position

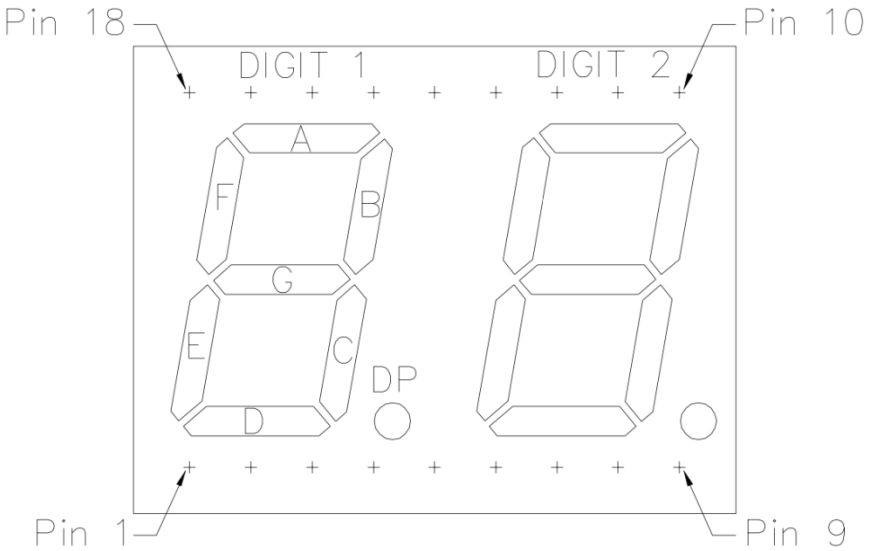


Figure 3. All Light On Segments Feature & Pin Position

Absolute Maximum Rating at 25°C (Note 1)

Product (Per Segment)	Emission Color	Technology	P_d (mW)	I_F (mA)	I_{FP}* (mA)	V_R (V)	Derate From 25°C (mA/°C)	T_{OP} (°C)	T_{ST} (°C)
INND-TD50YGXX	Yellow Green	AlGaInP	70	25	90	5	0.33	-35°C~+85°C	-35°C~+85°C
INND-TD50YXX	Yellow	AlGaInP	70	25	90	5	0.33	-35°C~+85°C	-35°C~+85°C
INND-TD50AXX	Amber	AlGaInP	70	25	90	5	0.33	-35°C~+85°C	-35°C~+85°C
INND-TD50RXX	Red	AlGaInP	70	25	90	5	0.33	-35°C~+85°C	-35°C~+85°C
INND-TD50DRXX	Deep Red	AlGaInP	70	25	90	5	0.33	-35°C~+85°C	-35°C~+85°C
INND-TD50GXX	Green	InGaN	114	30	100	5	0.4	-35°C~+85°C	-35°C~+85°C
INND-TD50BXX	Blue	InGaN	114	30	100	5	0.4	-35°C~+85°C	-35°C~+85°C
INND-TD50WXX	White	InGaN	114	30	100	5	0.4	-35°C~+85°C	-35°C~+85°C

Notes

1. Condition for IFP is pulse of 1/10 duty and 0.1msec width

Electrical Characteristics $T_A = 25℃$ (Note 1)

Product (Per Segment)	Emission Color	VF(V)@20mA			λ(nm)@20mA		I*V(mcd)@10mA			IR(μA)@VR=5V	IV-M @IF =10mA
		min	typ.	max	λD	λP	min	typ.	max	max	max
INND-TD56YGXX	Yellow Green	-	2.0	2.8	570	572	-	15	-	100	2:1
INND-TD56YXX	Yellow	-	2.0	2.8	590	592	-	50	-	100	2:1
INND-TD56AXX	Amber	-	2.0	2.8	605	612	-	70	-	100	2:1
INND-TD56RXX	Red	-	2.0	2.8	630	644	-	30	-	100	2:1
INND-TD56DRXX	Deep Red	-	2.0	2.8	645	660	-	25	-	100	2:1
INND-TD56GXX	Green	-	3.2	3.8	525	-	-	218	-	100	2:1
INND-TD56BXX	Blue	-	3.2	3.8	465	-	-	18	-	50	2:1
INND-TD56WXX	White	-	3.2	3.8	X: 0.27 Y: 0.25	-	-	120	-	50	2:1

Notes
1. Performance guaranteed only under conditions listed in above tables.

ESD Precaution

ATTENTION: Electrostatic Discharge (ESD) protection

The symbol above denotes that ESD precaution is needed. ESD protection for GaP and AlGaAs based chips is necessary even though they are relatively safe in the presence of low static-electric discharge. Parts built with AlInGaP, GaN, or/and InGaN based chips are STATIC SENSITIVE devices. ESD precaution must be taken during design and assembly.
If manual work or processing is needed, please ensure the device is adequately protected from ESD during the process.

Please be advised that normal static precautions should be taken in the handling and assembly of this device to prevent damage or degradation which may be induced by electrostatic discharge (ESD).

Characteristic Curves for YG, Y, A, R, DR, G

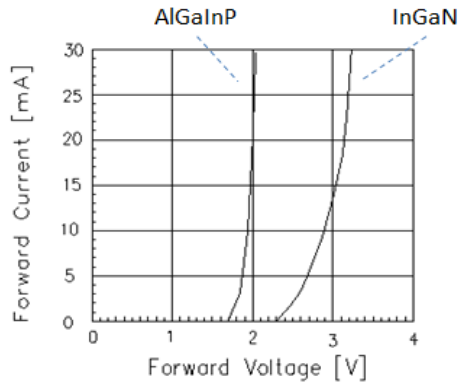


Fig 1. Forward Current vs. Forward Voltage

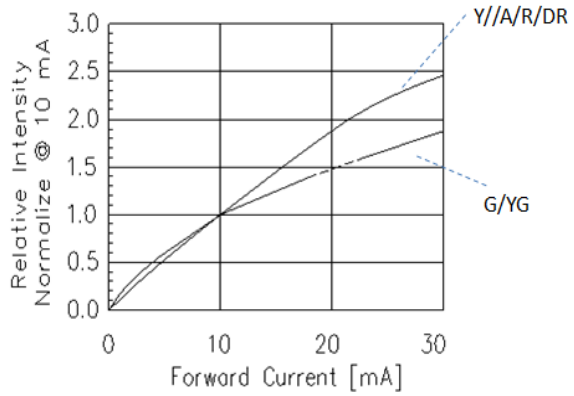


Fig 2. Relative Intensity vs. Forward Current

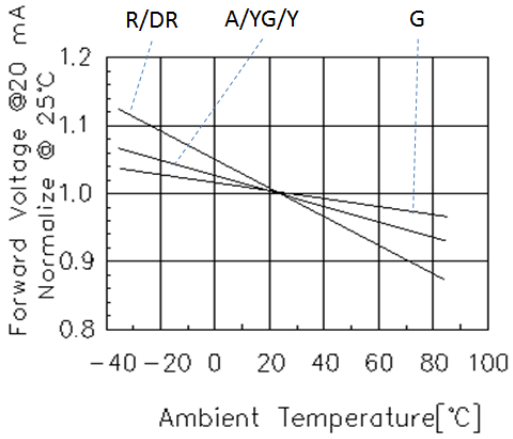


Fig 3. Forward Voltage vs. Temperature

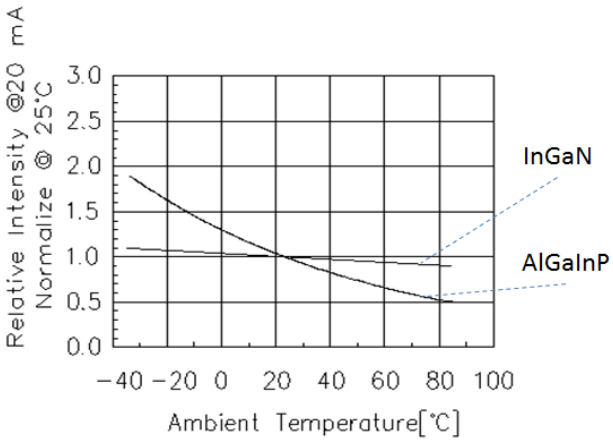


Fig 4. Relative Intensity vs. Temperature

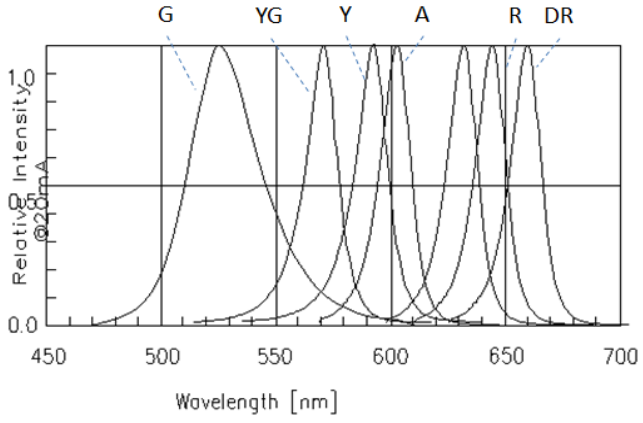


Fig 5. Relative Intensity vs. Wavelength

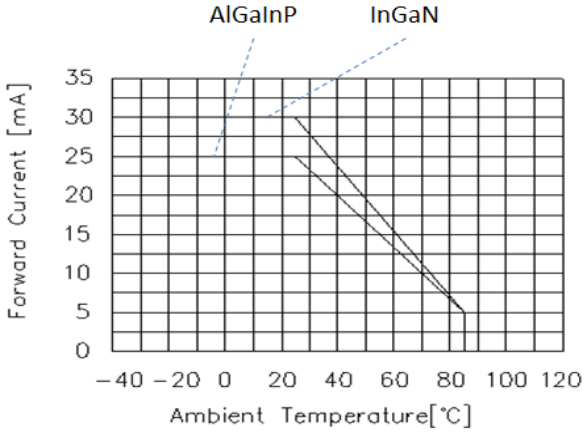


Fig 6. Forward current vs. Temperature

Characteristic Curves for B

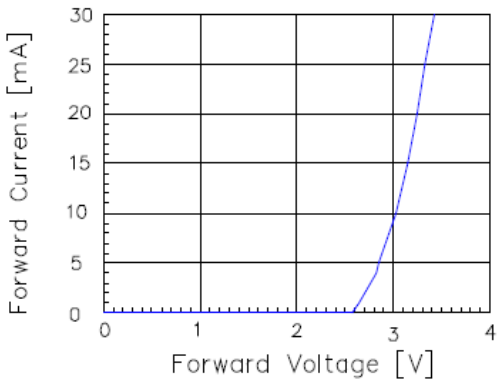


Fig 1. Forward Current vs. Forward Voltage

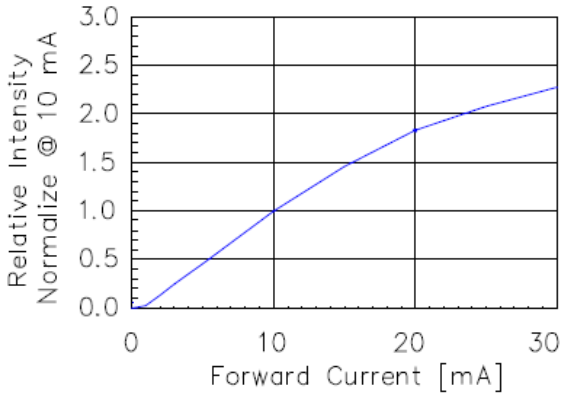


Fig 2. Relative Intensity vs. Forward Current

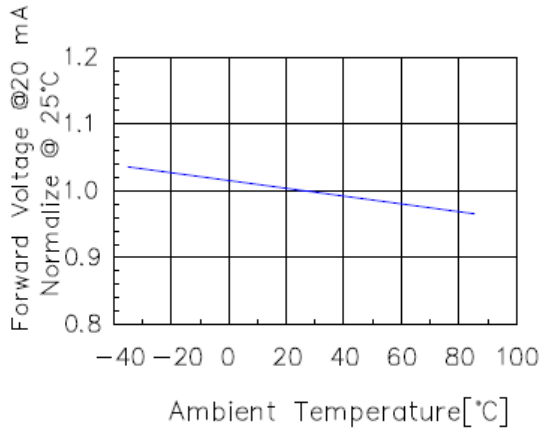


Fig 3. Forward Voltage vs. Temperature

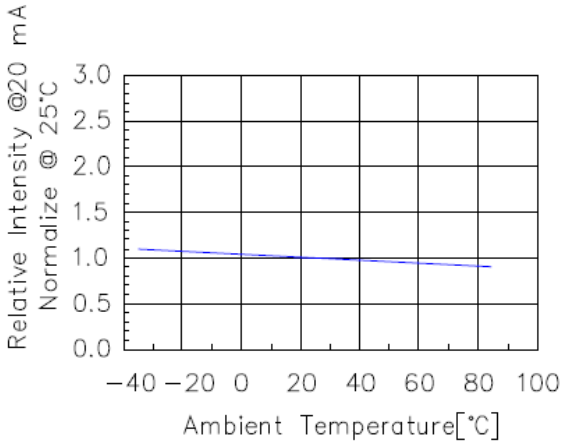


Fig 4. Relative Intensity vs. Temperature

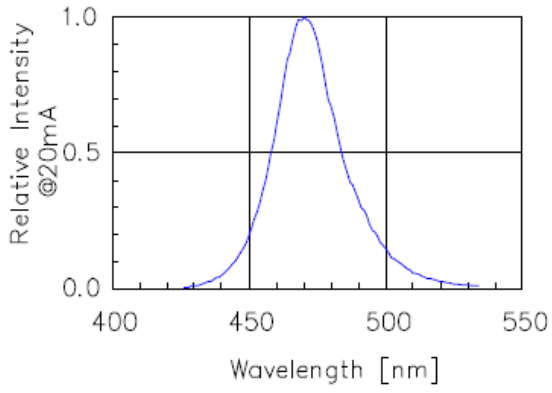


Fig 5. Relative Intensity vs. Wavelength

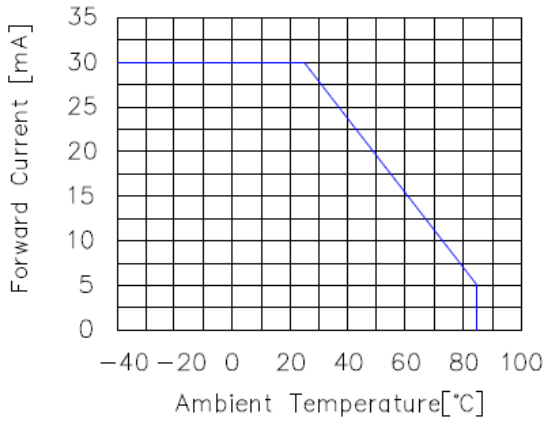


Fig 6. Forward current vs. Temperature

Characteristic Curves for W

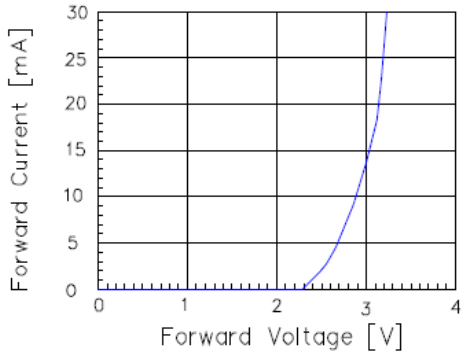


Fig 1. Forward Current vs. Forward Voltage

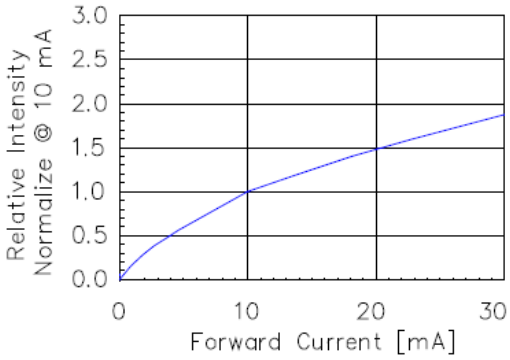


Fig 2. Relative Intensity vs. Forward Current

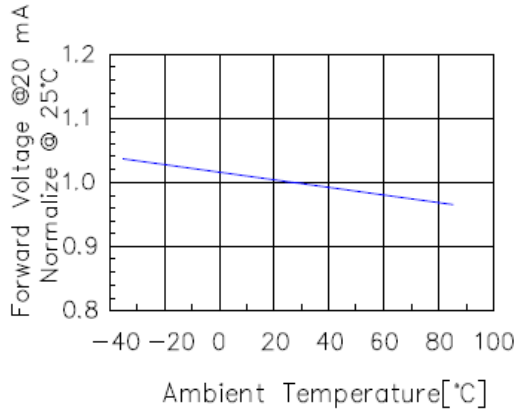


Fig 3. Forward Voltage vs. Temperature

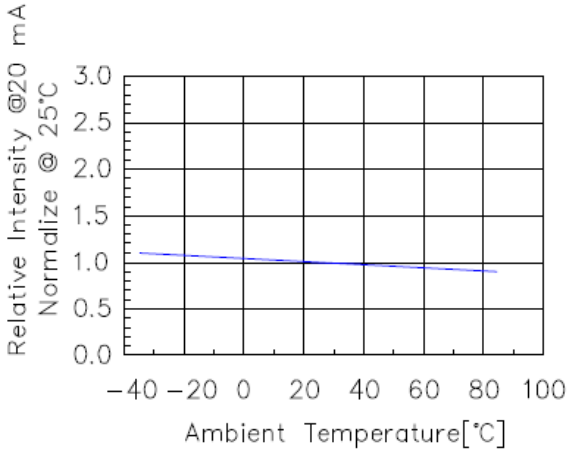


Fig 4. Relative Intensity vs. Temperature

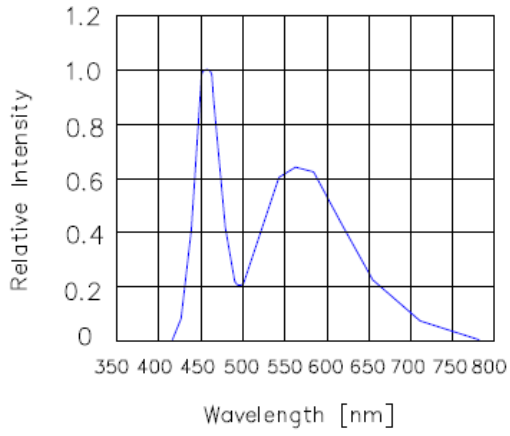


Fig 5. Relative Intensity vs. Wavelength

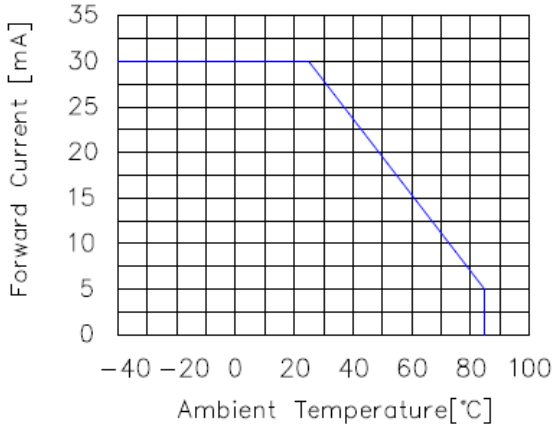
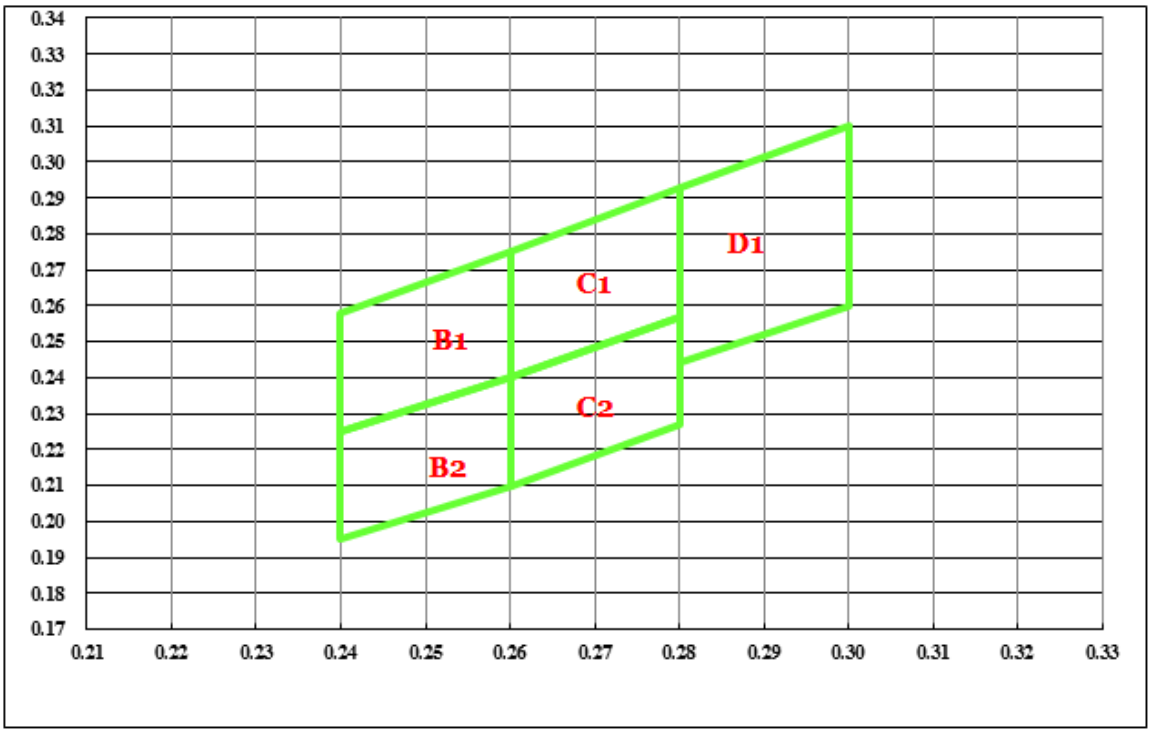


Fig 6. Forward current vs. Temperature

Chromaticity Bin (for White only)



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

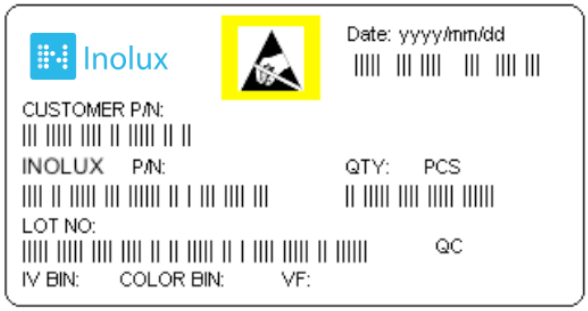
D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

Ordering Information

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-TD50YGXX	Yellow Green	AlGaInP	15	2.0	Common Anode	Black	INND-TD50YGAB
					Common Cathode	Black	INND-TD50YGCB
					Common Anode	Grey	INND-TD50YGAG
					Common Cathode	Grey	INND-TD50YGCG
INND-TD50YXX	Yellow	AlGaInP	50	2.0	Common Anode	Black	INND-TD50YAB
					Common Cathode	Black	INND-TD50YCB
					Common Anode	Grey	INND-TD50YAG
					Common Cathode	Grey	INND-TD50YCG
INND-TD50AXX	Amber	AlGaInP	70	2.0	Common Anode	Black	INND-TD50AAB
					Common Cathode	Black	INND-TD50ACB
					Common Anode	Grey	INND-TD50AAG
					Common Cathode	Grey	INND-TD50ACG
INND-TD50RXX	Red	AlGaInP	30	2.0	Common Anode	Black	INND-TD50RAB
					Common Cathode	Black	INND-TD50RCB
					Common Anode	Grey	INND-TD50RAG
					Common Cathode	Grey	INND-TD50RCG

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-TD50DRXX	Deep Red	AlGaInP	25	2.0	Common Anode	Black	INND-TD50DRAB
					Common Cathode	Black	INND-TD50DRCB
					Common Anode	Grey	INND-TD50DRAG
					Common Cathode	Grey	INND-TD50DRCG
INND-TD50GXX	Green	InGaN	218	3.2	Common Anode	Black	INND-TD50GAB
					Common Cathode	Black	INND-TD50GCB
					Common Anode	Grey	INND-TD50GAG
					Common Cathode	Grey	INND-TD50GCG
INND-TD50BXX	Blue	InGaN	18	3.2	Common Anode	Black	INND-TD50BAB
					Common Cathode	Black	INND-TD50BCB
					Common Anode	Grey	INND-TD50BAG
					Common Cathode	Grey	INND-TD50BCG
INND-TD50WXX	White	InGaN	120	3.2	Common Anode	Black	INND-TD50WAB
					Common Cathode	Black	INND-TD50WCB
					Common Anode	Grey	INND-TD50WAG
					Common Cathode	Grey	INND-TD50WCG

Label Specifications



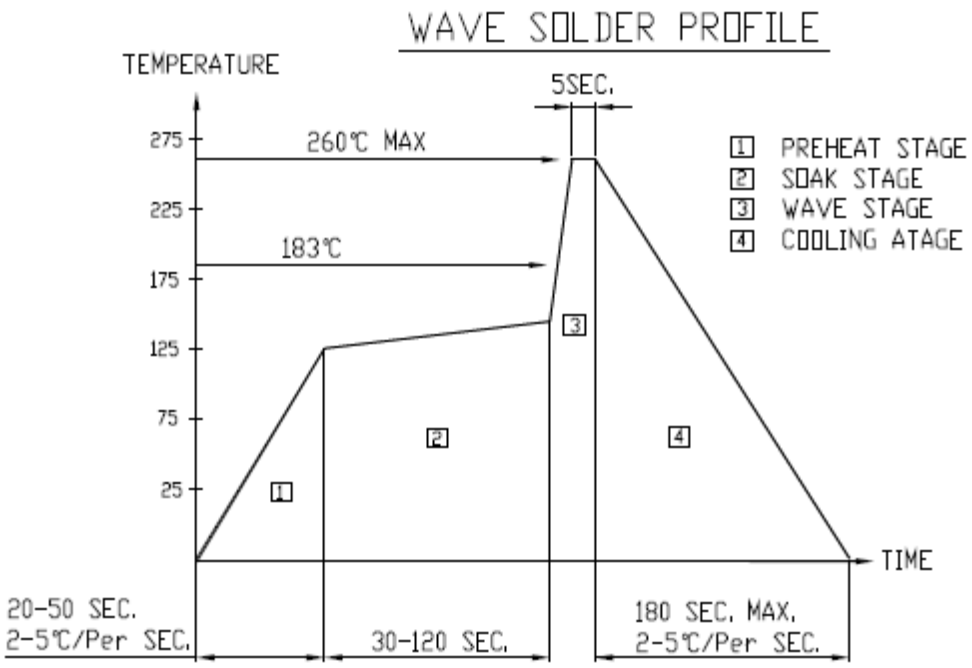
Inolux P/N:

I	N	N	D	-	T	D	5	0	X	X	X	-	X	X	X	X
		Display Type			Display Type		Dimension		Color	Polarity	Face Color		Customized Stamp-off			
Inolux		ND = Numeric Display			T: Through hole D: Dual		50 = 0.5” Display Height		YG: 570 nm Y: 590 nm A: 605 nm R: 624 nm DR: 660 nm G: 520 nm B: 470 nm W: X: 0.27 Y: 0.25	A = Common Anode C=Common Cathode	B = Black G = Grey					

Lot No.:

Z	2	0	1	7	01	24	001
Internal Tracker	Year (2017, 2018, …..)				Month	Date	Serial

Reflow Soldering



Soldering Iron

Basic Spec is ≦ 4 sec. when 260°C (+10°C ➔ -1 second). Power dissipation of Iron should be less than 15W. Surface temperature should be under 230°C

Rework

Rework should be completed within 4 second under 245°C

Revision History

Changes since last revision	Page	Version No.	Revision Date
Initial Release		1.0	12-27-2019

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