Features

- 1.0” (25.40mm) Digit Height
- Single Digit Display
- Black/Grey Face, White Segment
- IC compatible, Easy assembly
- Dynamic drive connects
- RoHS Compliant, Pb Free

Applications

- Consumer Electronics
- Industrial Equipment

Description

The INND-TS100 series is a 1.0” single digit display. It is a through hole type LED display which can be used in various applications.

Internal Circuit Diagram

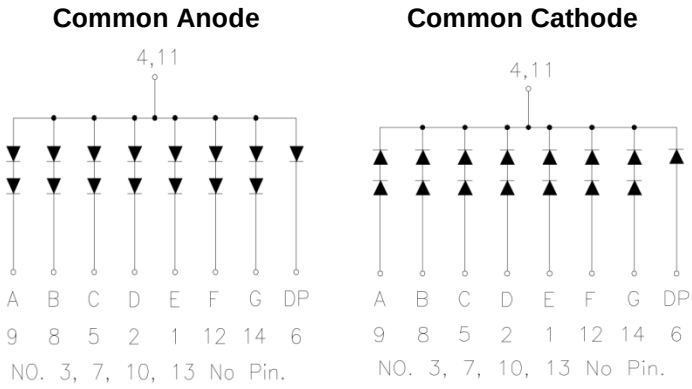


Figure 1. INND-TS100 series Internal Circuit Diagram

Package Dimensions

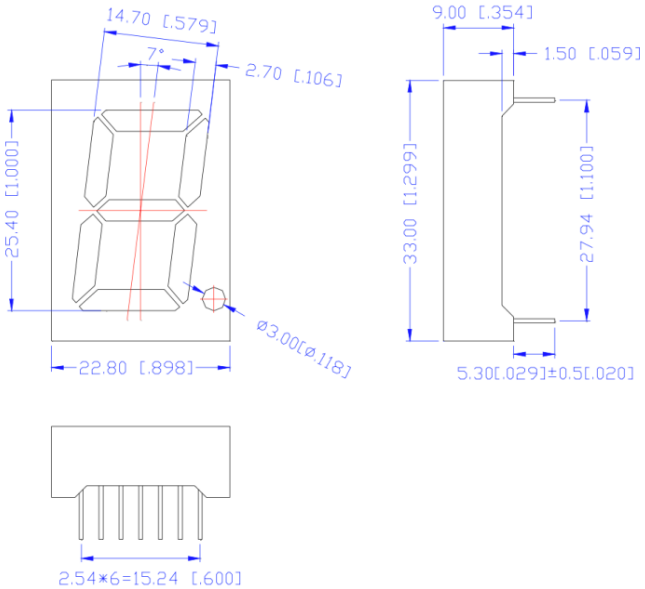
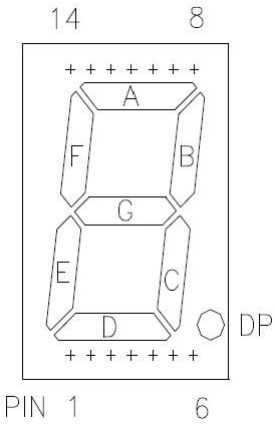


Figure 2. INND-TS100 series Package Dimensions

Notes

1. All pins are ⌀0.51[.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



Absolute Maximum Rating at 25ºC (Note 1)

Product (Per Segment)	Emission Color	Technology	Pd (mW)	IF (mA)	IFP* (mA)	VR (V)	Derate From 25°C (mA/°C)	T_{OP} (ºC)	T_{ST} (ºC)
INND-TS100YGXX	Yellow Green	AlGaInP	70	25	90	5	0.33	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100YXX	Yellow	AlGaInP	70	25	90	5	0.33	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100AXX	Amber	AlGaInP	70	25	90	5	0.33	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100RXX	Red	AlGaInP	70	25	90	5	0.33	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100DRXX	Deep Red	AlGaInP	70	25	90	5	0.33	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100GXX	Green	InGaN	114	30	100	5	0.4	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100BXX	Blue	InGaN	114	30	100	5	0.4	-35ºC~+85ºC	-35ºC~+85ºC
INND-TS100WXX	White	InGaN	114	30	100	5	0.4	-35ºC~+85ºC	-35ºC~+85ºC

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	V_F(V)@20mA Forward Voltage Per Segment (DP)			λ(nm)@20mA		I^*_V(mcd)@10mA			I_R(μA) @V_R=5V	I_{V-M} @I_F =10mA
		min	typ.	max	λ_D	λ_P	min	typ.	max	max	max
INND-TS100YGXX	Yellow Green	-	4(2)	5.6(2.8)	570	572	-	32	-	100	2:1
INND-TS100YXX	Yellow	-	4(2)	5.6(2.8)	590	592	-	137	-	100	2:1
INND-TS100AXX	Amber	-	4(2)	5.6(2.8)	605	612	-	181	-	100	2:1
INND-TS100RXX	Red	-	4(2)	5.6(2.8)	630	644	-	60	-	100	2:1
INND-TS100DRXX	Deep Red	-	4(2)	5.6(2.8)	645	660	-	46	-	100	2:1
INND-TS100GXX	Green	-	6.4(3.2)	7.6(3.8)	525	-	-	576	-	100	2:1
INND-TS100BXX	Blue	-	6.4(3.2)	7.6(3.8)	465	-	-	60	-	50	2:1
INND-TS100WXX	White	-	6.4(3.2)	7.6(3.8)	X: 0.27 Y: 0.25	-	-	232	-	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

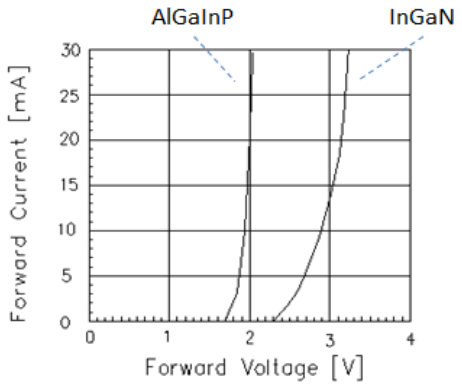


Fig 1. Forward Current vs. Forward Voltage

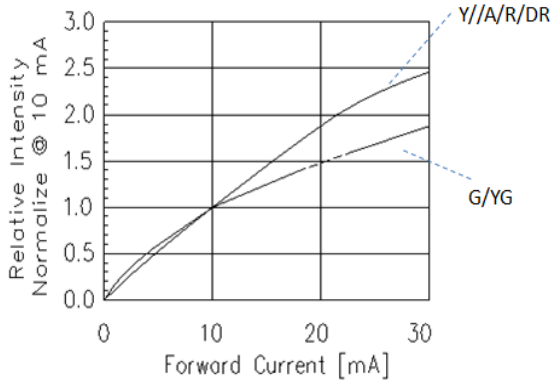


Fig 2. Relative Intensity vs. Forward Current

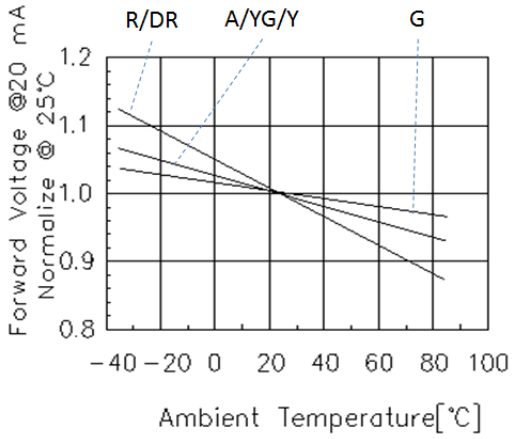


Fig 3. Forward Voltage vs. Temperature

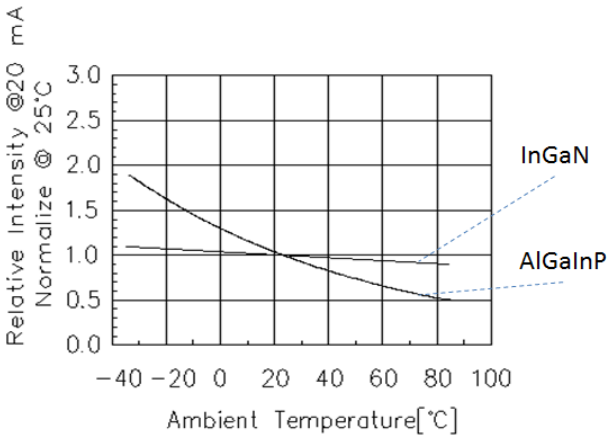


Fig 4. Relative Intensity vs. Temperature

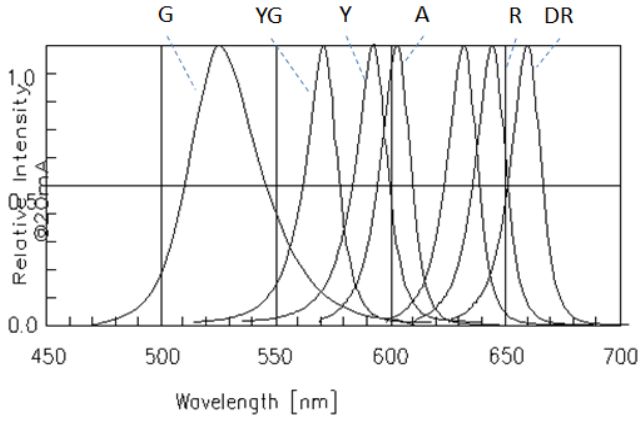


Fig 5. Relative Intensity vs. Wavelength

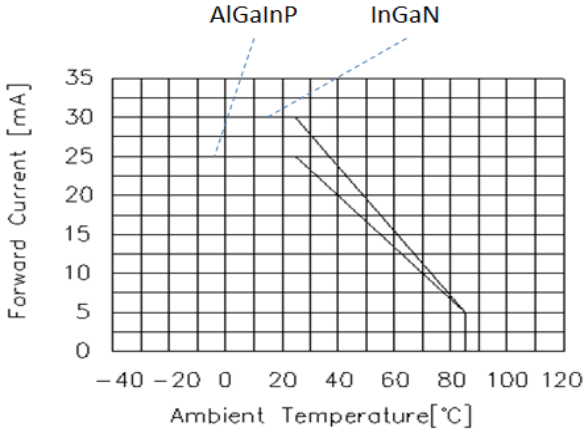


Fig 6. Forward current vs. Temperature

Characteristic Curves for B

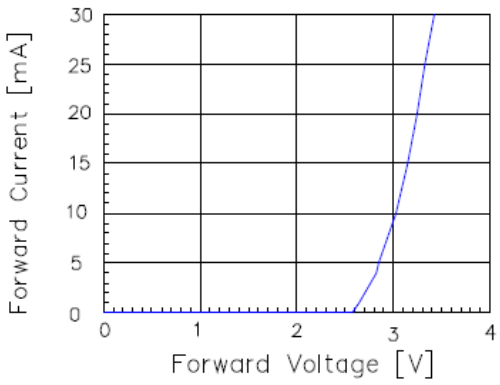


Fig 1. Forward Current vs. Forward Voltage

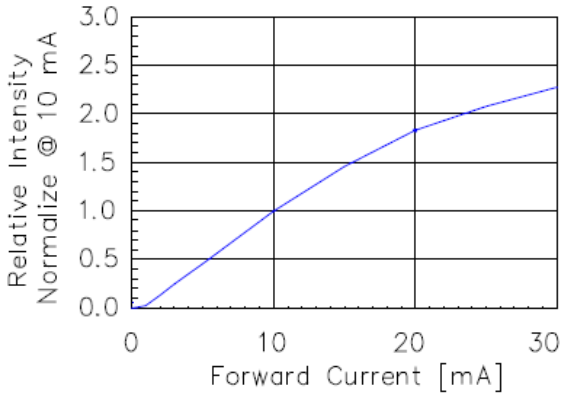


Fig 2. Relative Intensity vs. Forward Current

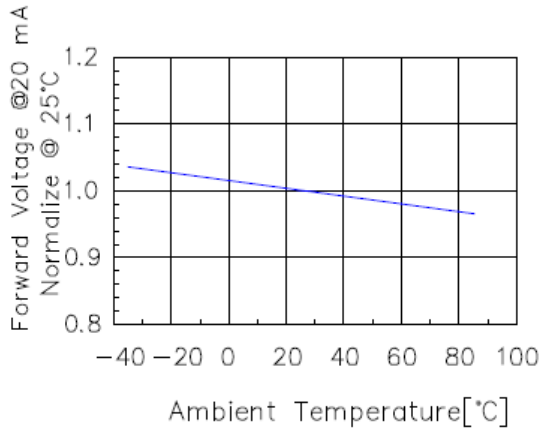


Fig 3. Forward Voltage vs. Temperature

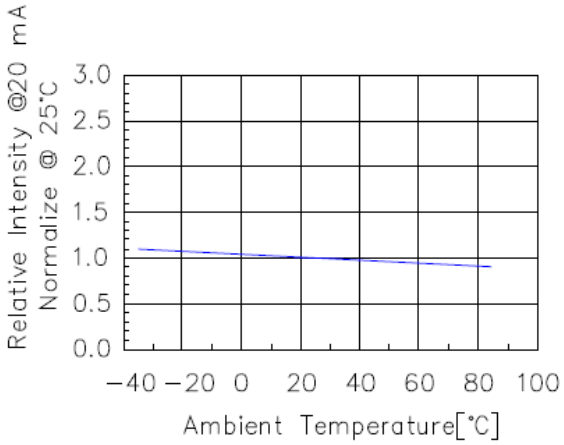


Fig 4. Relative Intensity vs. Temperature

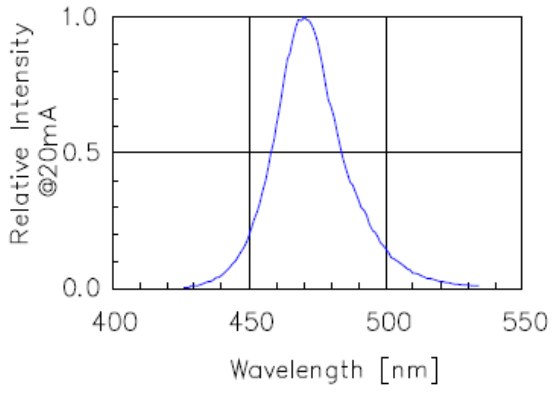


Fig 5. Relative Intensity vs. Wavelength

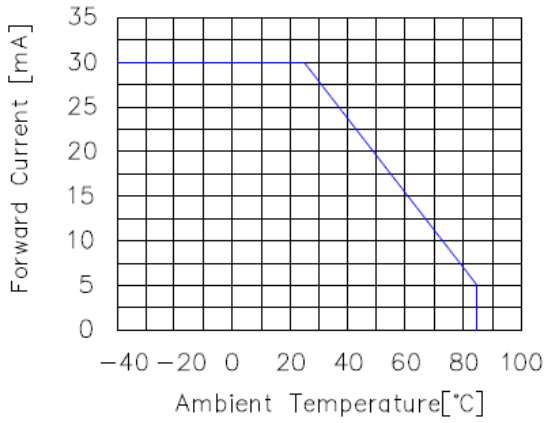


Fig 6. Forward current vs. Temperature

Characteristic Curves for W

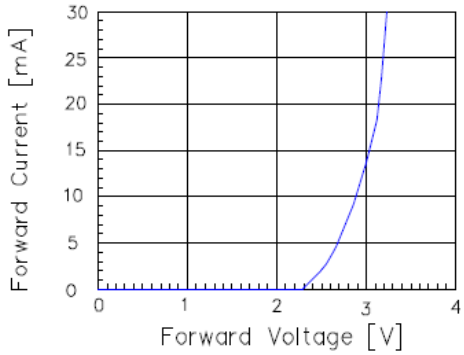


Fig 1. Forward Current vs. Forward Voltage

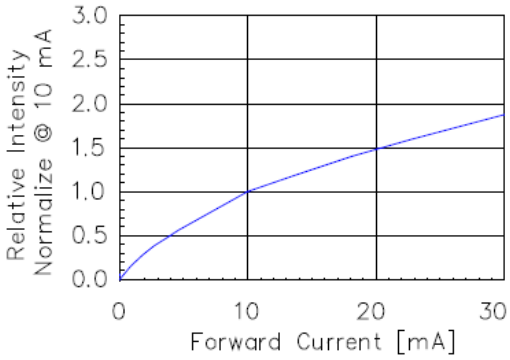


Fig 2. Relative Intensity vs. Forward Current

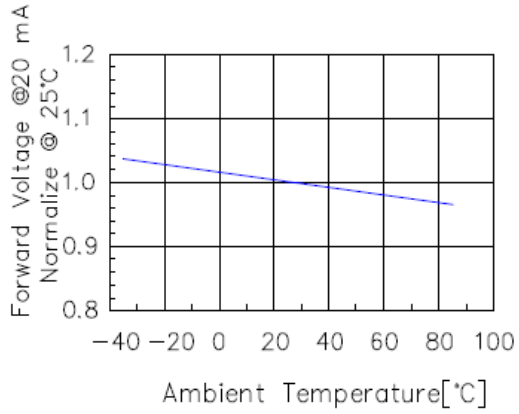


Fig 3. Forward Voltage vs. Temperature

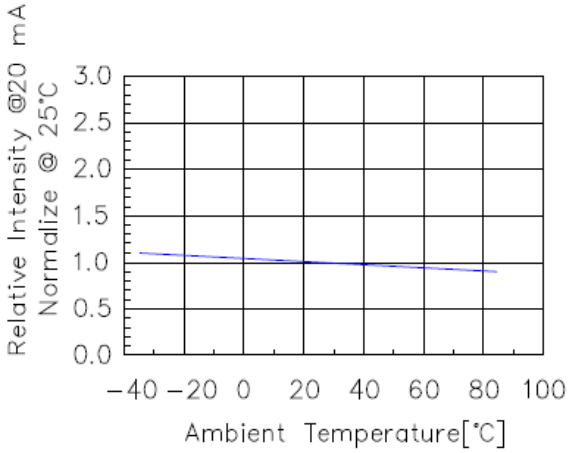


Fig 4. Relative Intensity vs. Temperature

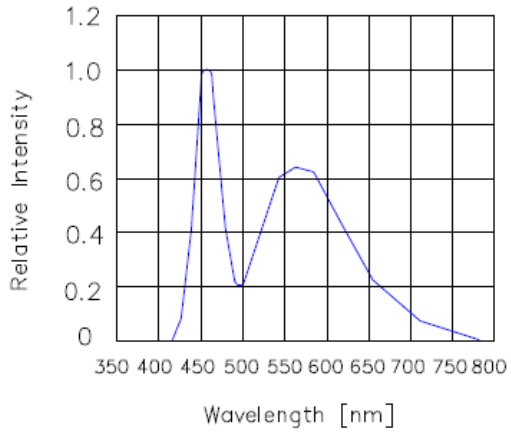


Fig 5. Relative Intensity vs. Wavelength

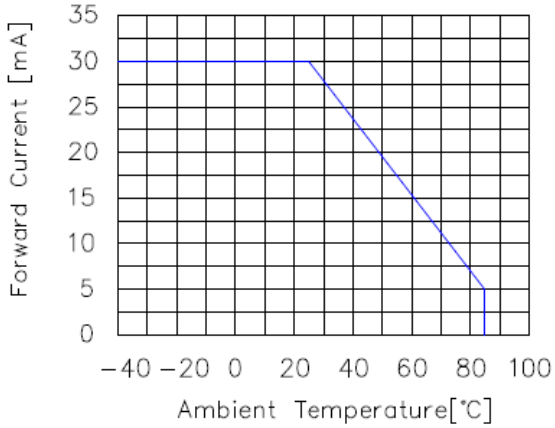
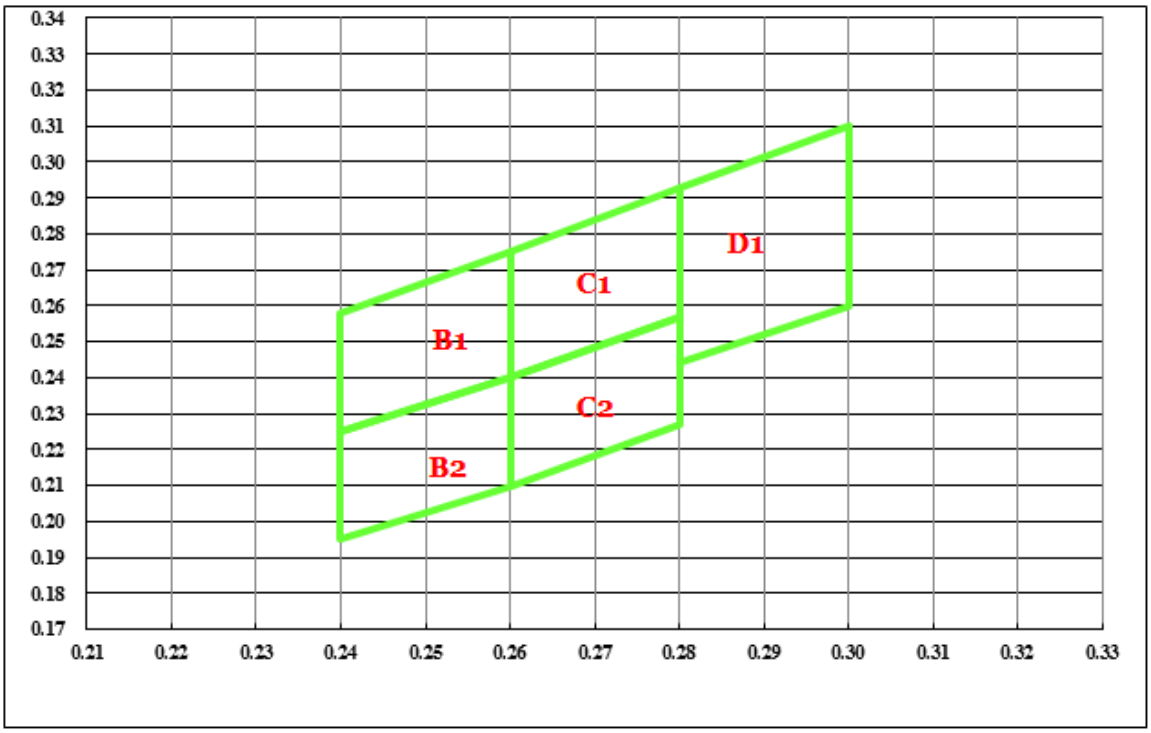


Fig 6. Forward current vs. Temperature

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

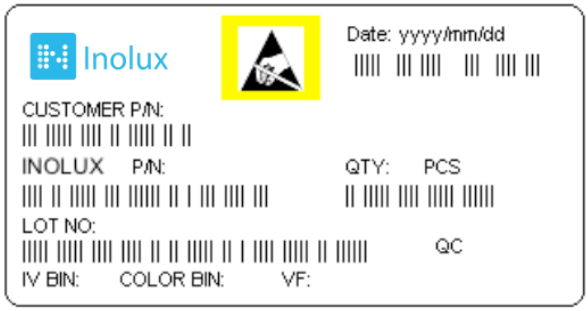
D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

Ordering Information

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-TS100YGXX	Yellow Green	AlGaInP	32	4(2)	Common Anode	Black	INND-TS100YGAB
					Common Cathode	Black	INND-TS100YGCB
					Common Anode	Grey	INND-TS100YGAG
					Common Cathode	Grey	INND-TS100YGCG
INND-TS100YXX	Yellow	AlGaInP	137	4(2)	Common Anode	Black	INND-TS100YAB
					Common Cathode	Black	INND-TS100YCB
					Common Anode	Grey	INND-TS100YAG
					Common Cathode	Grey	INND-TS100YCG
INND-TS100AXX	Amber	AlGaInP	181	4(2)	Common Anode	Black	INND-TS100AAB
					Common Cathode	Black	INND-TS100ACB
					Common Anode	Grey	INND-TS100AAG
					Common Cathode	Grey	INND-TS100ACG
INND-TS100RXX	Red	AlGaInP	60	4(2)	Common Anode	Black	INND-TS100RAB
					Common Cathode	Black	INND-TS100RCB
					Common Anode	Grey	INND-TS100RAG
					Common Cathode	Grey	INND-TS100RCG

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-TS100DRXX	Deep Red	AlGaInP	46	4(2)	Common Anode	Black	INND-TS100DRAB
					Common Cathode	Black	INND-TS100DRCB
					Common Anode	Grey	INND-TS100DRAG
					Common Cathode	Grey	INND-TS100DRCG
INND-TS100GXX	Green	InGaN	576	6.4(3.2)	Common Anode	Black	INND-TS100GAB
					Common Cathode	Black	INND-TS100GCB
					Common Anode	Grey	INND-TS100GAG
					Common Cathode	Grey	INND-TS100GCG
INND-TS100BXX	Blue	InGaN	60	6.4(3.2)	Common Anode	Black	INND-TS100BAB
					Common Cathode	Black	INND-TS100BCB
					Common Anode	Grey	INND-TS100BAG
					Common Cathode	Grey	INND-TS100BCG
INND-TS100WXX	White	InGaN	232	6.4(3.2)	Common Anode	Black	INND-TS100WAB
					Common Cathode	Black	INND-TS100WCB
					Common Anode	Grey	INND-TS100WAG
					Common Cathode	Grey	INND-TS100WCG

Label Specifications



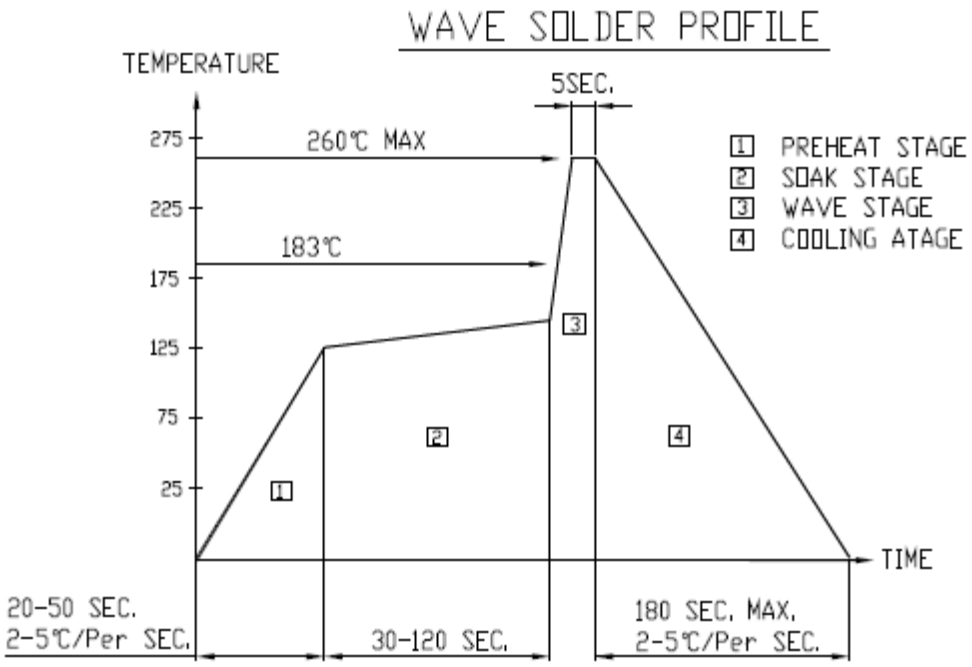
Inolux P/N:

I	N	N	D	-	T	S	1	0	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 S: Single		100 = 1.0” 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	12-26-2019

DISCLAIMER

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