

Features

- 0.3" (7.62mm) Digit Height
- Triple Digit Display
- Black/Grey Face , White Segment
- IC compatible, Easy assembly
- Dynamic drive connect
- RoHS Compliant, Pb Free

Description

The INND-ST30 series is a 0.3" triple digit display. It is a SMD type LED display which can be used in various applications.

Applications

- Consumer Electronics
- Industrial Equipment

Internal Circuit Diagram

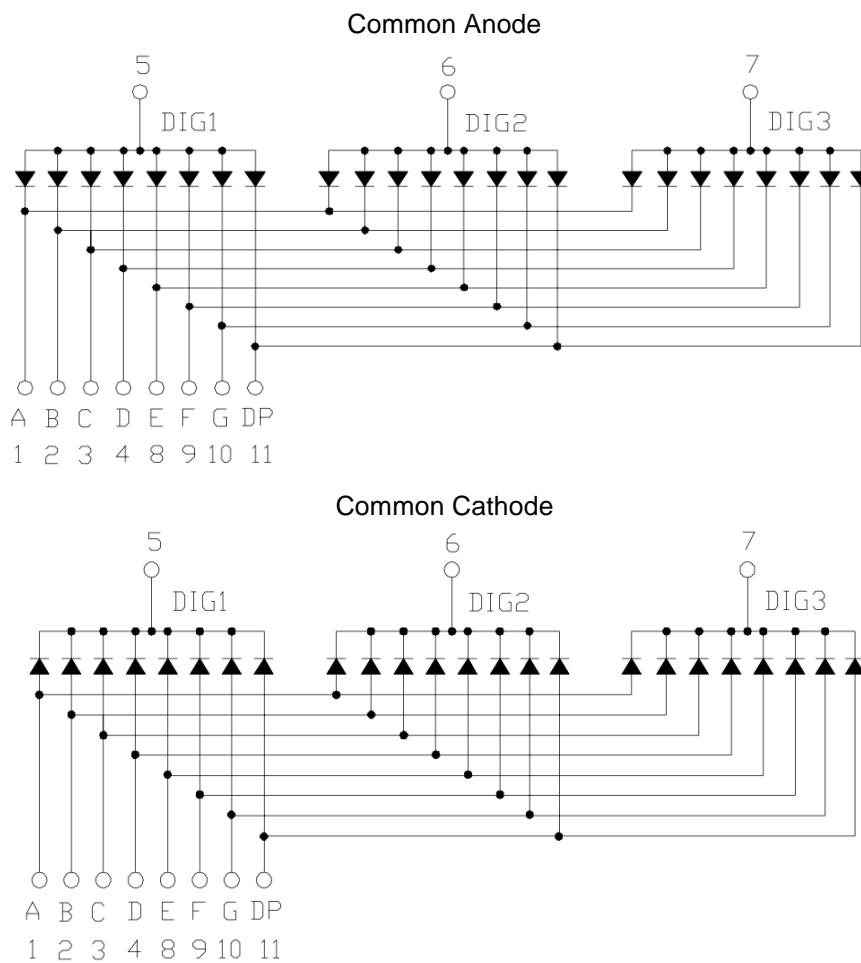


Figure 1. INND-ST30 series Internal Circuit Diagram

Package Dimensions

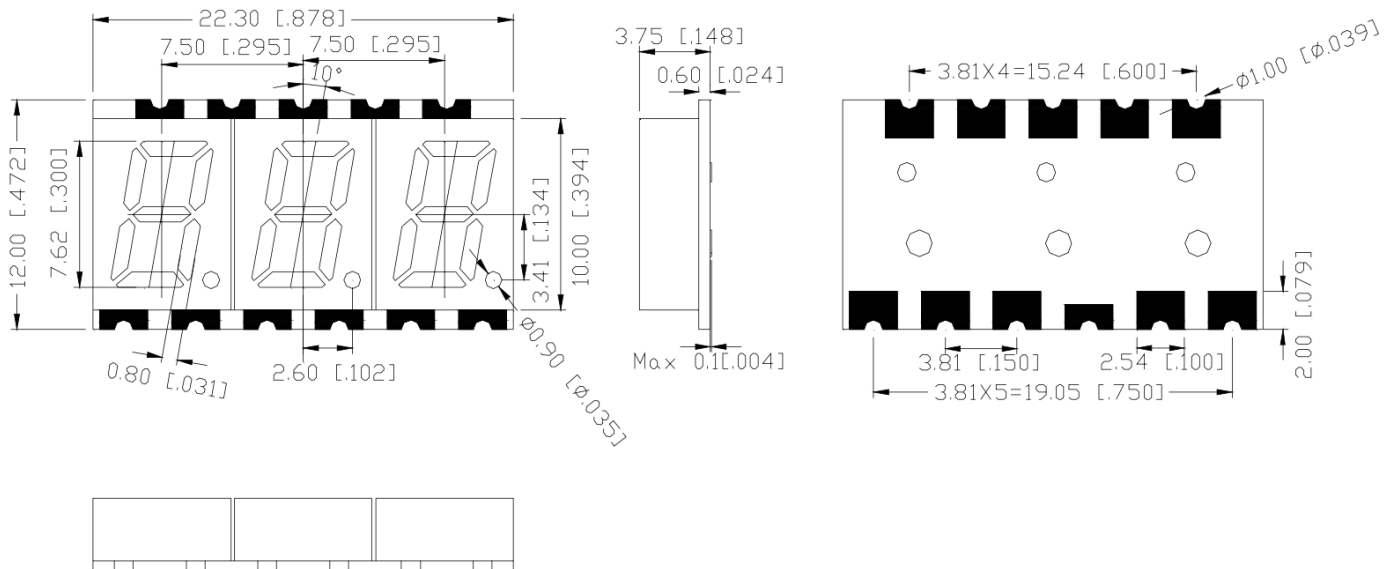


Figure 2. INND-ST30 series Package Dimensions

Notes

1. Dimension in millimeter [inch], tolerance is ± 0.25 [0.010] and angle is $\pm 1^\circ$ unless otherwise noted.
2. Bending \leq Length * 1%.

All Light On Segments Feature & Pin Position

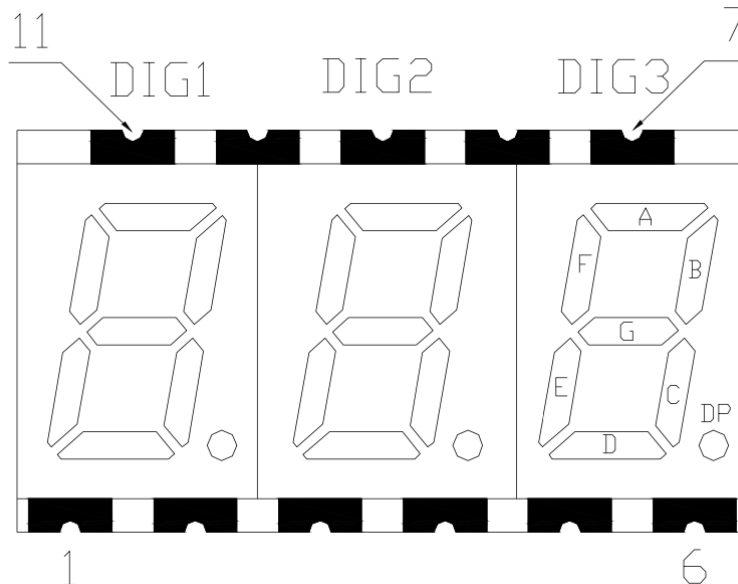


Figure 3. All Light On Segments Feature & Pin Position

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-ST30YGXX	Yellow Green	AlGaInP	70	25	90	5	0.33	-40 °C~+105 °C	-40 °C~+105 °C
INND-ST30YXX	Yellow	AlGaInP	70	25	90	5	0.33	-40 °C~+105 °C	-40 °C~+105 °C
INND-ST30AXX	Amber	AlGaInP	70	25	90	5	0.33	-40 °C~+105 °C	-40 °C~+105 °C
INND-ST30RXX	Red	AlGaInP	70	25	90	5	0.33	-40 °C~+105 °C	-40 °C~+105 °C
INND-ST30DRXX	Deep Red	AlGaInP	70	25	90	5	0.33	-40 °C~+105 °C	-40 °C~+105 °C
INND-ST30GXX	Green	InGaN	114	30	100	5	0.4	-40 °C~+105 °C	-40 °C~+105 °C
INND-ST30BXX	Blue	InGaN	114	30	100	5	0.4	-40 °C~+105 °C	-40 °C~+105 °C

Notes

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

Electrical Characteristics $T_A = 25^\circ\text{C}$ (Note 1)

Product (Per Segment)	Emission Color	VF(V)@20mA			λ (nm)@10mA		I*V(mcd)@10mA			IR(μ A)@VR=5V	IV-M @IF =10mA
		min	typ.	max	λ D	λ P	min	typ.	max	max	max
INND-ST30YGXX	Yellow Green	-	2.0	2.8	570	572	-	2	-	100	2:1
INND-ST30YXX	Yellow	-	2.0	2.8	590	592	-	8	-	100	2:1
INND-ST30AXX	Amber	-	2.0	2.8	605	612	-	9	-	100	2:1
INND-ST30RXX	Red	-	2.0	2.8	630	644	-	4	-	100	2:1
INND-ST30DRXX	Deep Red	-	2.0	2.8	645	660	-	2	-	100	2:1
INND-ST30GXX	Green	-	3.2	3.8	525	-	-	37	-	100	2:1
INND-ST30BXX	Blue	-	3.2	3.8	465	-	-	7	-	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).

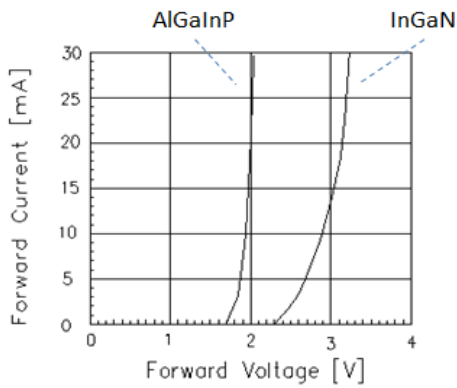
Characteristic Curves for YG, Y, A, R, DR, G


Fig 1. Forward Current vs. Forward Voltage

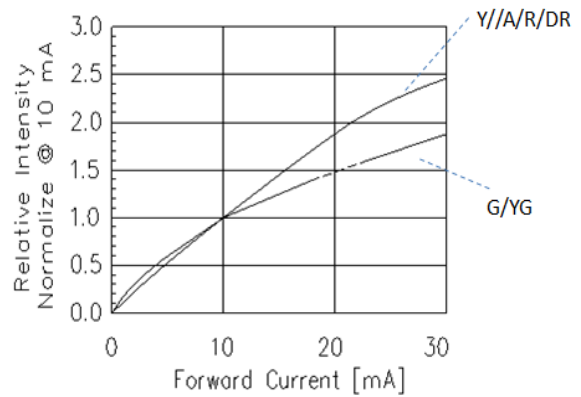


Fig 2. Relative Intensity vs. Forward Current

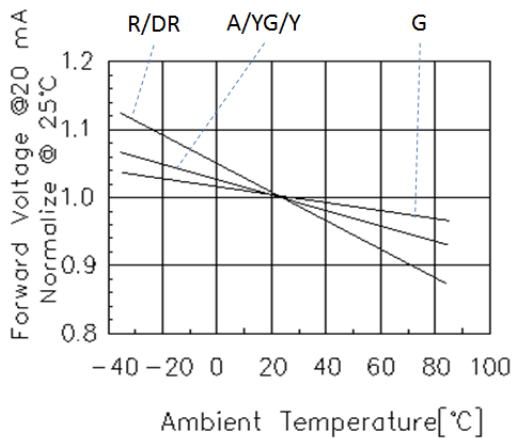


Fig 3. Forward Voltage vs. Temperature

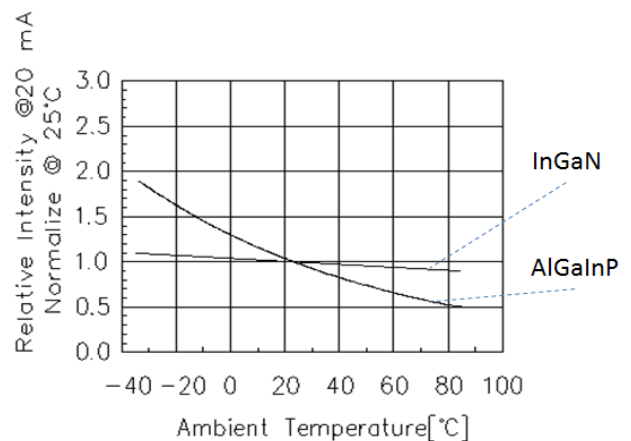


Fig 4. Relative Intensity vs. Temperature

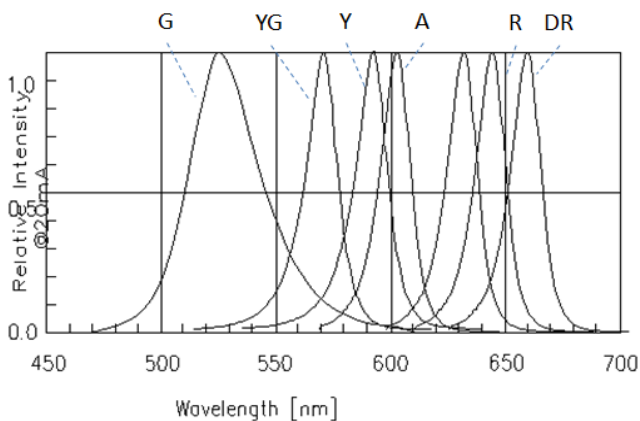


Fig 5. Relative Intensity vs. Wavelength

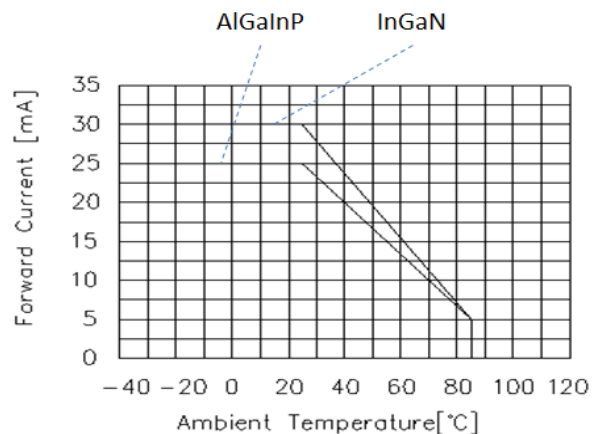


Fig 6. Forward current vs. Temperature

Characteristic Curves for B

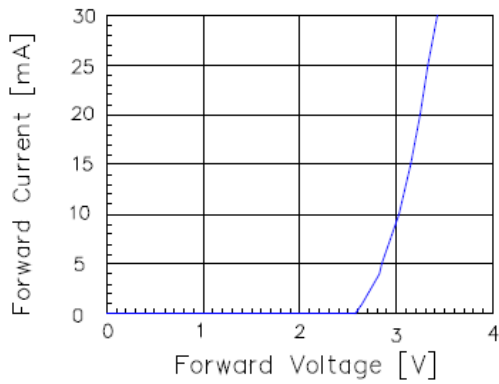


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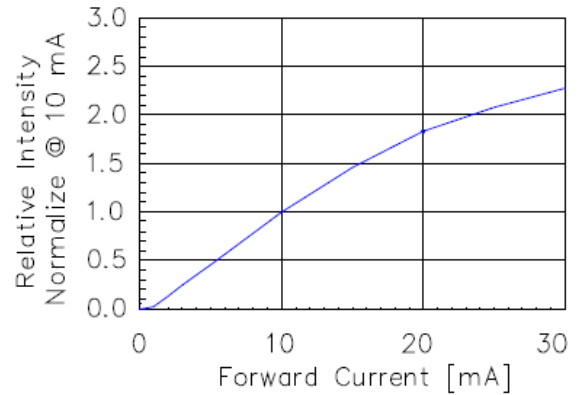


Fig 2. Relative Intensity vs. Forward Current

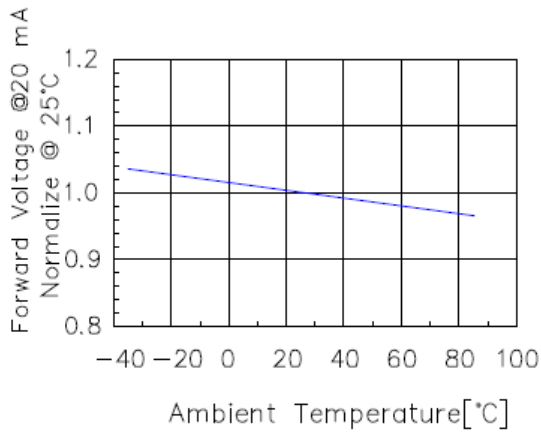


Fig 3. Forward Voltage vs. Temperature

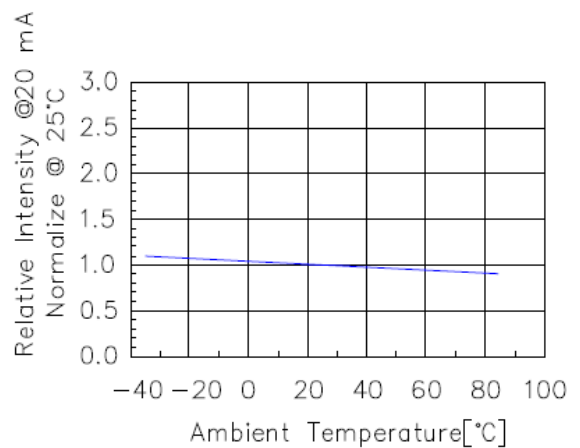


Fig 4. Relative Intensity vs. Temperature

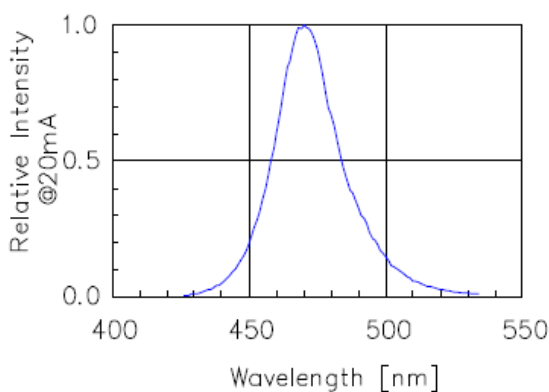


Fig 5. Relative Intensity vs. Wavelength

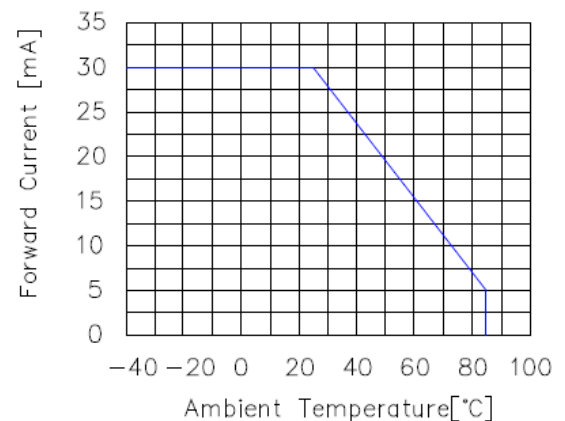


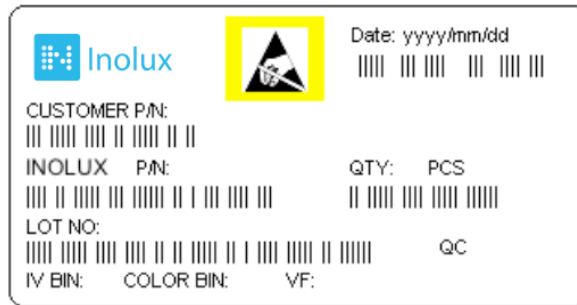
Fig 6. Forward current vs. Temperature

Ordering Information

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-ST30YGXX	Yellow Green	AlGaInP	2	2.0	Common Anode	Black	INND-ST30YGAB
					Common Cathode	Black	INND-ST30YGCB
					Common Anode	Grey	INND-ST30YGAG
					Common Cathode	Grey	INND-ST30YGCG
INND-ST30YXX	Yellow	AlGaInP	8	2.0	Common Anode	Black	INND-ST30YAB
					Common Cathode	Black	INND-ST30YCB
					Common Anode	Grey	INND-ST30YAG
					Common Cathode	Grey	INND-ST30YCG
INND-ST30AXX	Amber	AlGaInP	9	2.0	Common Anode	Black	INND-ST30AAB
					Common Cathode	Black	INND-ST30ACB
					Common Anode	Grey	INND-ST30AAG
					Common Cathode	Grey	INND-ST30ACG
INND-ST30RXX	Red	AlGaInP	4	2.0	Common Anode	Black	INND-ST30RAB
					Common Cathode	Black	INND-ST30RCB
					Common Anode	Grey	INND-ST30RAG
					Common Cathode	Grey	INND-ST30RCG
INND-ST30DRXX	Deep Red	AlGaInP	2	2.0	Common Anode	Black	INND-ST30DRAB
					Common Cathode	Black	INND-ST30DRCB
					Common Anode	Grey	INND-ST30DRAG
					Common Cathode	Grey	INND-ST30DRCG

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-ST30GXX	Green	InGaN	37	3.2	Common Anode	Black	INND-ST30GAB
					Common Cathode	Black	INND-ST30GCB
					Common Anode	Grey	INND-ST30GAG
					Common Cathode	Grey	INND-ST30GCC
INND-ST30BXX	Blue	InGaN	7	3.2	Common Anode	Black	INND-ST30BAB
					Common Cathode	Black	INND-ST30BCB
					Common Anode	Grey	INND-ST30BAG
					Common Cathode	Grey	INND-ST30BCG

Label Specifications



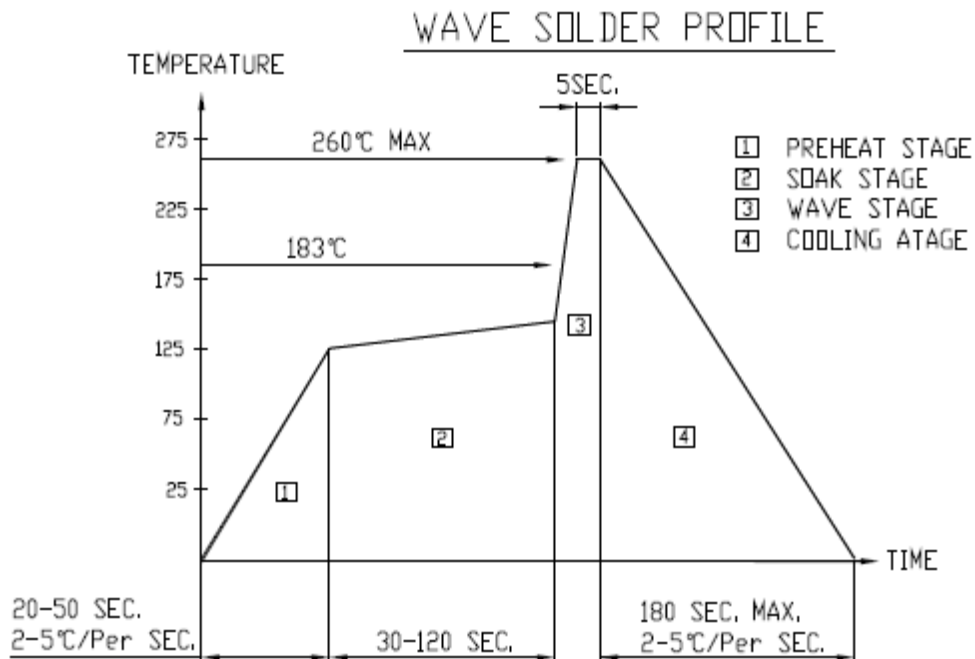
Inolux P/N:

I	N	N	D	-	S	T	3	0	X	X	X	X	X	X	X	X
Inolux		Display Type			Display Type		Dimension		Color	Polarity	Face Color		Customized Stamp-off			
		ND = Numeric Display			S: SMD T: Triple		30 = 0.3” Display Height		YG: 570 nm Y: 590 nm A: 605 nm R: 624 nm DR: 660 nm G: 520 nm B: 470 nm	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	12-25-2019

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