

Features

- 0.39" (9.9mm) Digit Height
- Single Digit Display
- Black/Grey Face , White Segment
- IC compatible, Easy assembly
- Dynamic drive connect
- RoHS Compliant, Pb Free

Applications

- Consumer Electronics
- Industrial Equipment

Description

The INND-SS39 series is a 0.39" single digit display. It is a SMD type LED display which can be used in various applications.

Internal Circuit Diagram

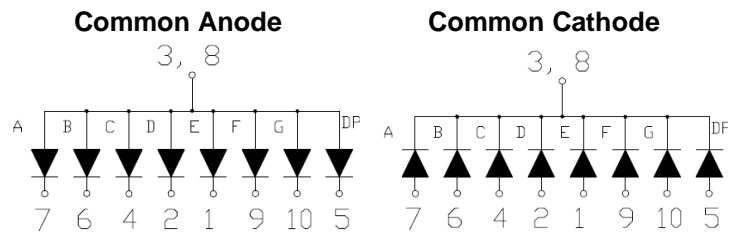


Figure 1. INND-SS39 series Internal Circuit Diagram

Package Dimensions

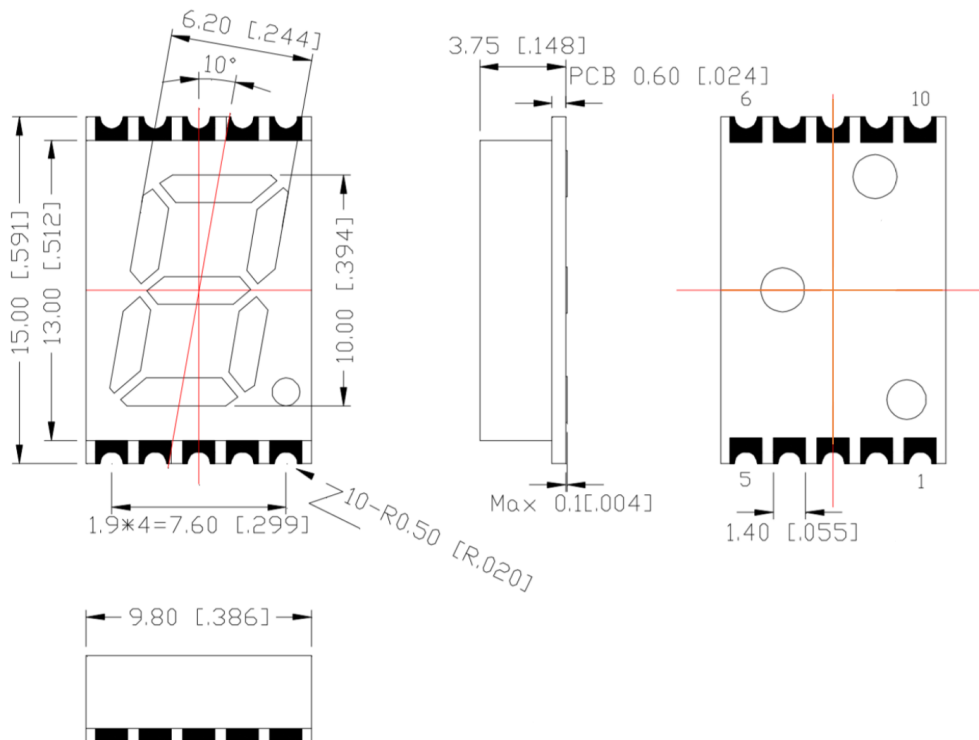
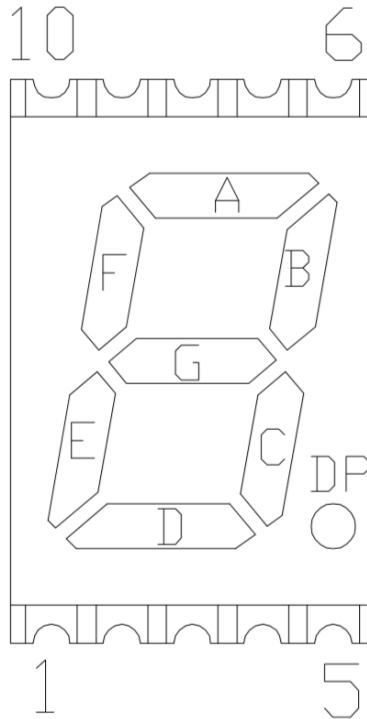
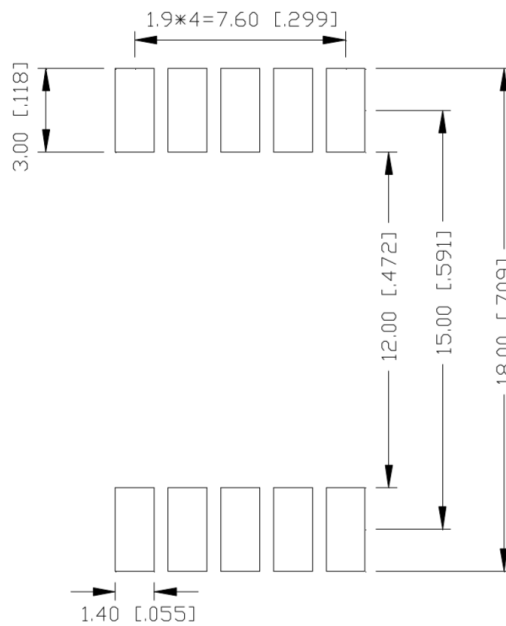


Figure 2. INND-SS39 series Package Dimensions

All Light On Segments Feature & Pin Position

Soldering Pad Size


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-SS39YGXX	Yellow Green	AlGaInP	70	25	90	5	0.33	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39YXX	Yellow	AlGaInP	70	25	90	5	0.33	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39AXX	Amber	AlGaInP	70	25	90	5	0.33	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39RXX	Red	AlGaInP	70	25	90	5	0.33	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39DRXX	Deep Red	AlGaInP	70	25	90	5	0.33	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39GXX	Green	InGaIn	114	30	100	5	0.4	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39BXX	Blue	InGaIn	114	30	100	5	0.4	-40 °C ~+105 °C	-40 °C ~+105 °C
INND-SS39WXX	White	InGaIn	114	30	100	5	0.4	-40 °C ~+105 °C	-40 °C ~+105 °C

Notes

1. Condition for I_{FP} 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	$V_F(\text{V})@20\text{mA}$			$\lambda(\text{nm})@10\text{mA}$		$I_V^*(\text{mcd})@10\text{mA}$			$I_R(\mu\text{A})@V_R=5\text{V}$	$I_{V-M}@I_F=10\text{mA}$
		min	typ.	max	λ_D	λ_P	min	typ.	max	max	max
INND-SS39YGXX	Yellow Green	-	2.0	2.8	570	572	-	3	-	100	2:1
INND-SS39YXX	Yellow	-	2.0	2.8	590	592	-	17	-	100	2:1
INND-SS39AXX	Amber	-	2.0	2.8	605	612	-	18	-	100	2:1
INND-SS39RXX	Red	-	2.0	2.8	630	644	-	7	-	100	2:1
INND-SS39DRXX	Deep Red	-	2.0	2.8	645	660	-	5	-	100	2:1
INND-SS39GXX	Green	-	3.2	3.8	525	-	-	93	-	100	2:1
INND-SS39BXX	Blue	-	3.2	3.8	-	465	-	9	-	50	2:1
INND-SS39WXX	White	-	3.2	3.8	X: 0.27 Y: 0.25	-	-	70	-	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).

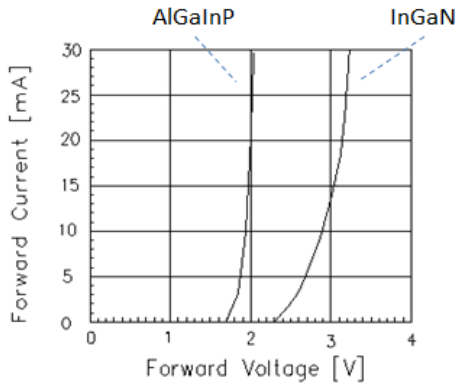
Characteristic Curves for YG, Y, A, R, DR, G


Fig 1. Forward Current vs. Forward Voltage

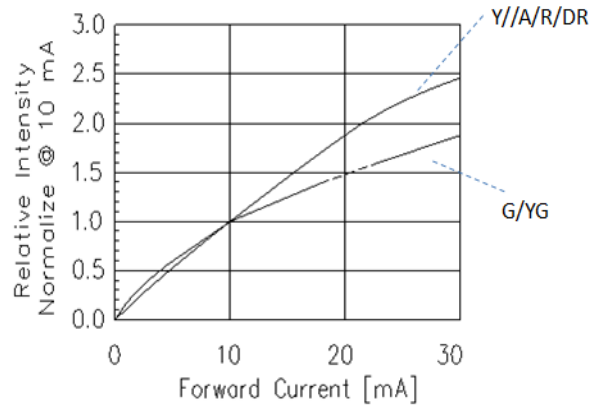


Fig 2. Relative Intensity vs. Forward Current

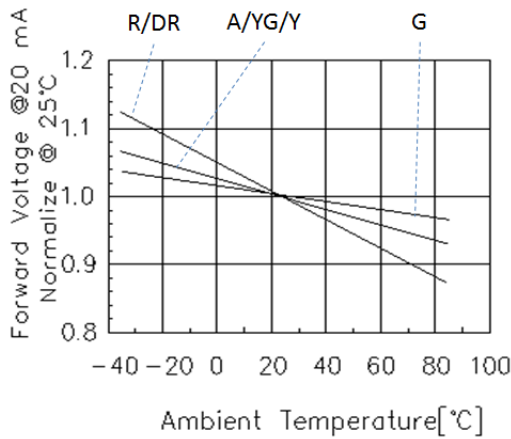


Fig 3. Forward Voltage vs. Temperature

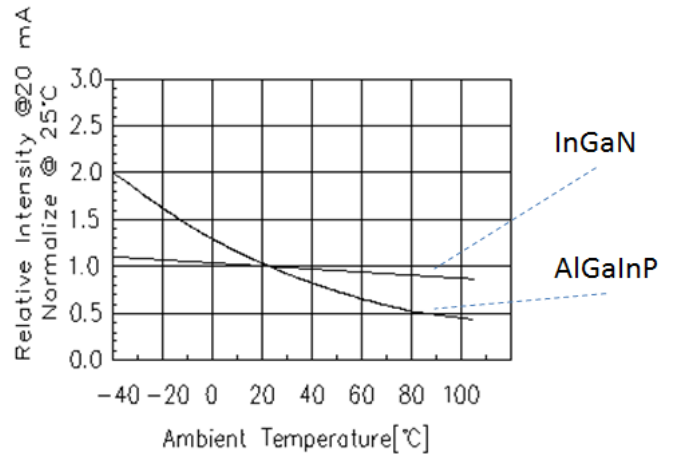


Fig 4. Relative Intensity vs. Temperature

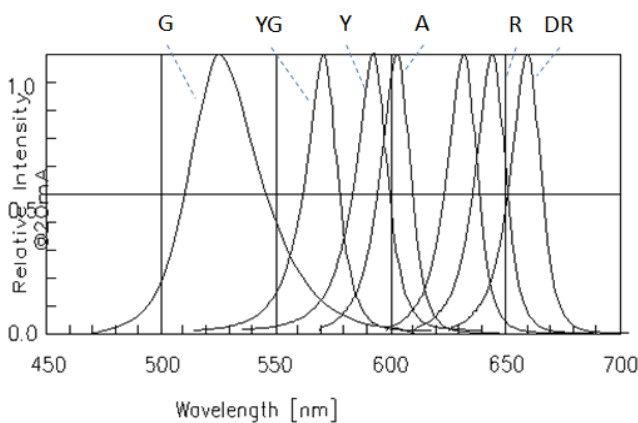


Fig 5. Relative Intensity vs. Wavelength

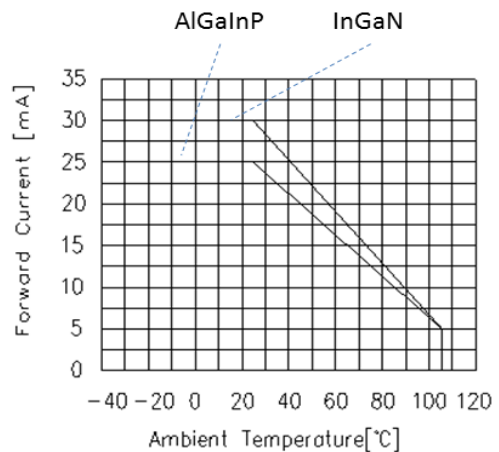


Fig 6. Forward current vs. Temperature

Characteristic Curves for B

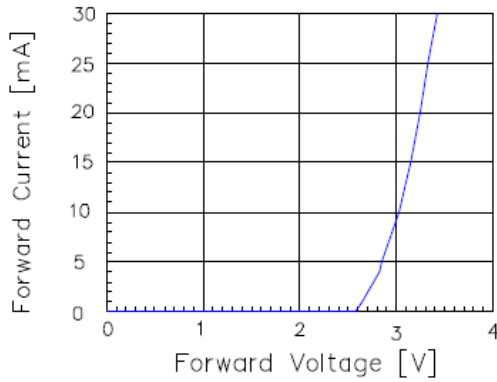


Fig 1. Forward Current vs. Forward Voltage

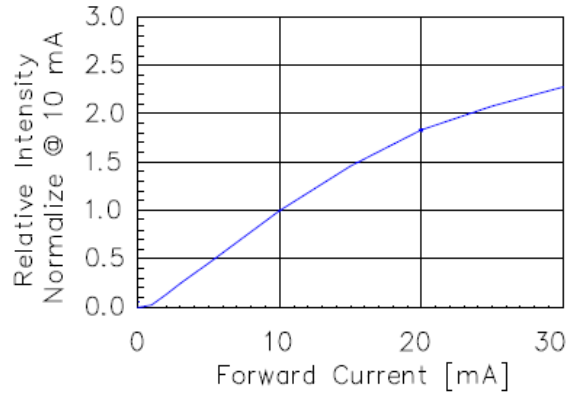


Fig 2. Relative Intensity vs. Forward Current

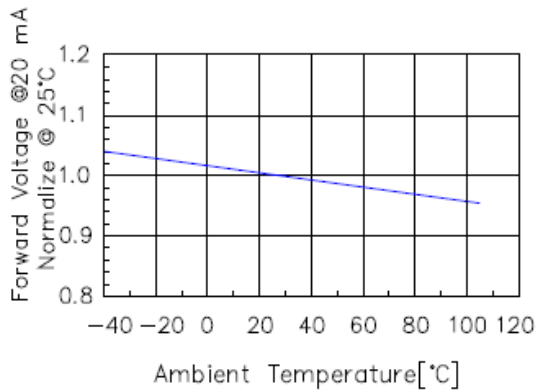


Fig 3. Forward Voltage vs. Temperature

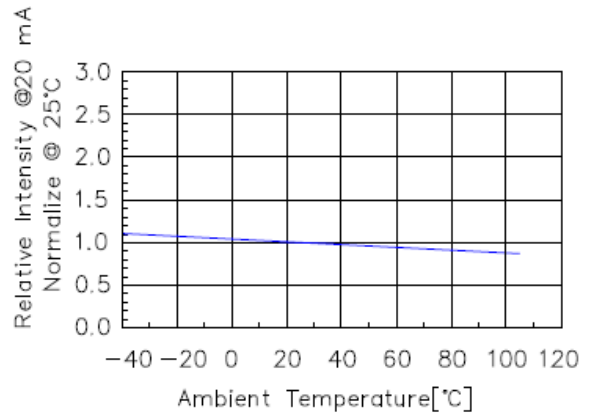


Fig 4. Relative Intensity vs. Temperature

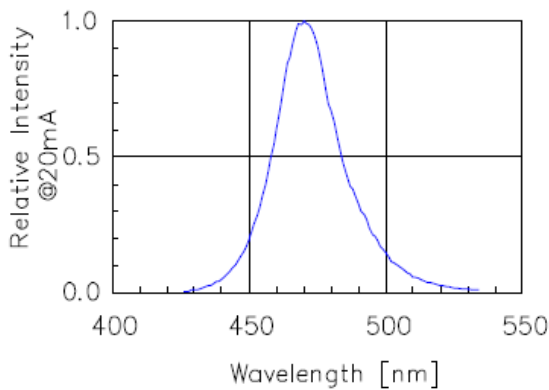


Fig 5. Relative Intensity vs. Wavelength

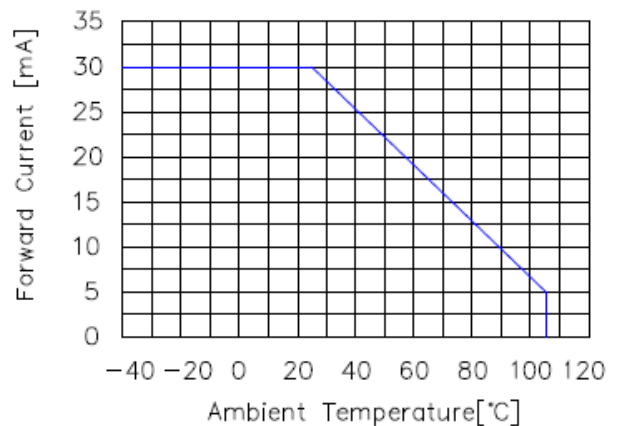


Fig 6. Forward current vs. Temperature

Characteristic Curves for W

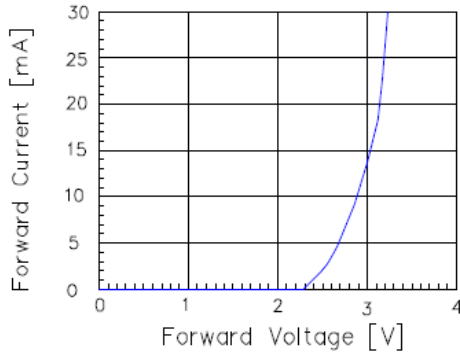


Fig 1. Forward Current vs. Forward Voltage

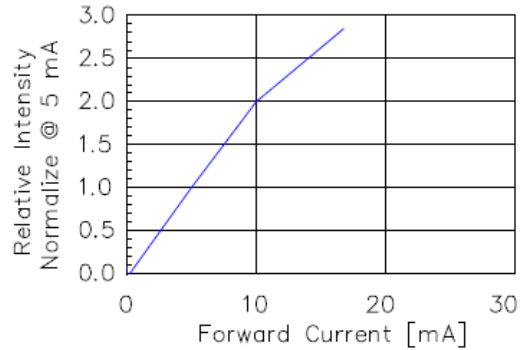


Fig 2. Relative Intensity vs. Forward Current

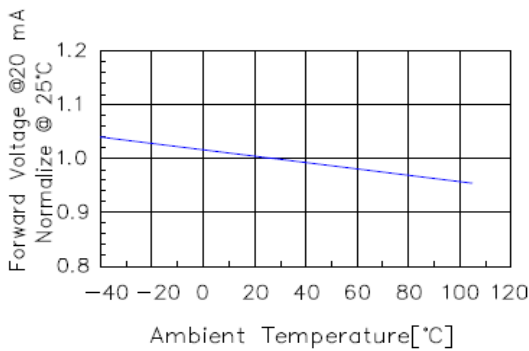


Fig 3. Forward Voltage vs. Temperature

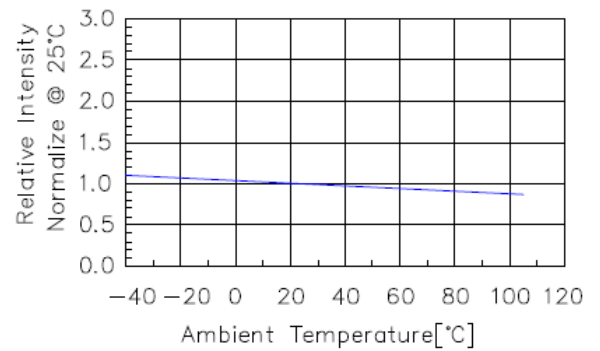


Fig 4. Relative Intensity vs. Temperature

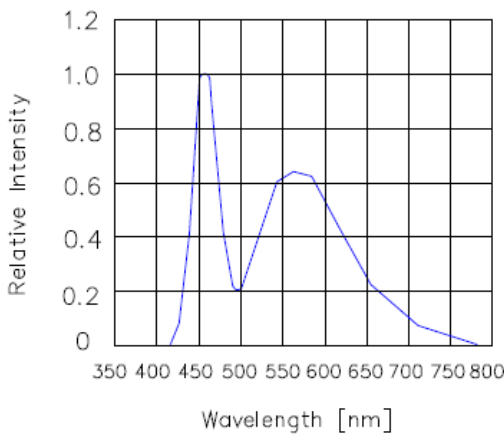


Fig 5. Relative Intensity vs. Wavelength

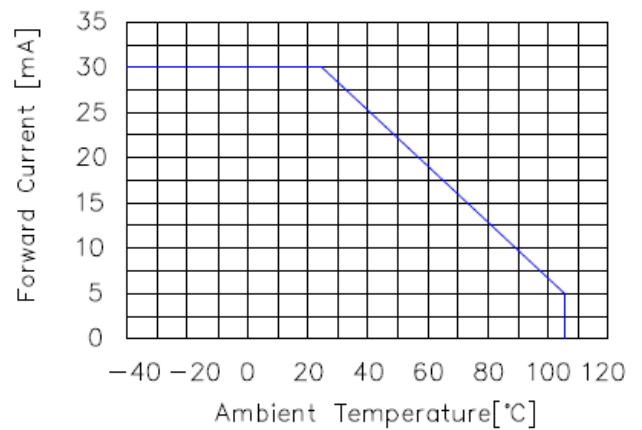
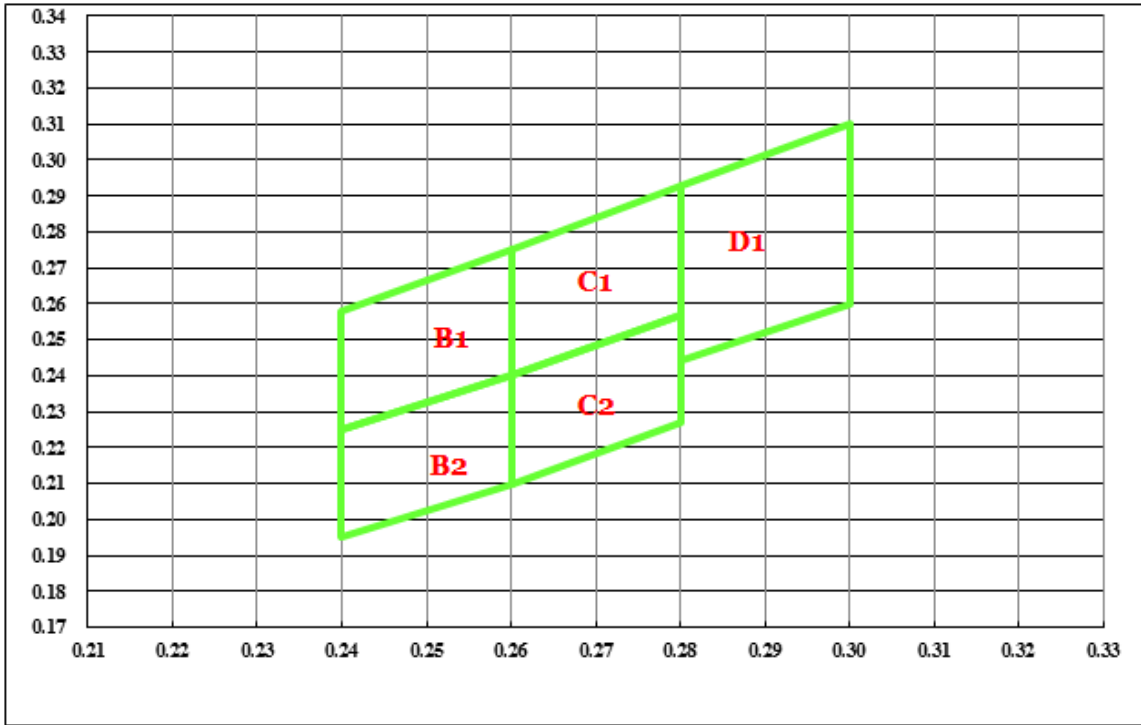


Fig 6. Forward current vs. Temperature

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

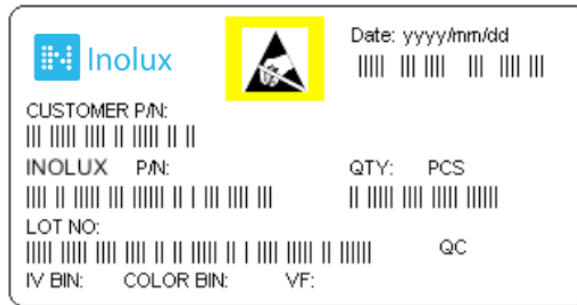
D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

Ordering Information

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-SS39YGXX	Yellow Green	AlGaInP	3	2.0	Common Anode	Black	INND-SS39YGAB
					Common Cathode	Black	INND-SS39YGCB
					Common Anode	Grey	INND-SS39YGAG
					Common Cathode	Grey	INND-SS39YGCG
INND-SS39YXX	Yellow	AlGaInP	17	2.0	Common Anode	Black	INND-SS39YAB
					Common Cathode	Black	INND-SS39YCB
					Common Anode	Grey	INND-SS39YAG
					Common Cathode	Grey	INND-SS39YCG
INND-SS39AXX	Amber	AlGaInP	18	2.0	Common Anode	Black	INND-SS39AAB
					Common Cathode	Black	INND-SS39ACB
					Common Anode	Grey	INND-SS39AAG
					Common Cathode	Grey	INND-SS39ACG
INND-SS39RXX	Red	AlGaInP	7	2.0	Common Anode	Black	INND-SS39RAB
					Common Cathode	Black	INND-SS39RCB
					Common Anode	Grey	INND-SS39RAG
					Common Cathode	Grey	INND-SS39RCG

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-SS39DRXX	Deep Red	AlGaInP	5	2.0	Common Anode	Black	INND-SS39DRAB
					Common Cathode	Black	INND-SS39DRCB
					Common Anode	Grey	INND-SS39DRAG
					Common Cathode	Grey	INND-SS39DRCG
INND-SS39GXX	Green	InGaN	93	3.2	Common Anode	Black	INND-SS39GAB
					Common Cathode	Black	INND-SS39GCB
					Common Anode	Grey	INND-SS39GAG
					Common Cathode	Grey	INND-SS39GCG
INND-SS39BXX	Blue	InGaN	9	3.2	Common Anode	Black	INND-SS39BAB
					Common Cathode	Black	INND-SS39BCB
					Common Anode	Grey	INND-SS39BAG
					Common Cathode	Grey	INND-SS39BCG
INND-SS39WXX	White	InGaN	70	3.2	Common Anode	Black	INND-SS39WAB
					Common Cathode	Black	INND-SS39WCB
					Common Anode	Grey	INND-SS39WAG
					Common Cathode	Grey	INND-SS39WCG

Label Specifications



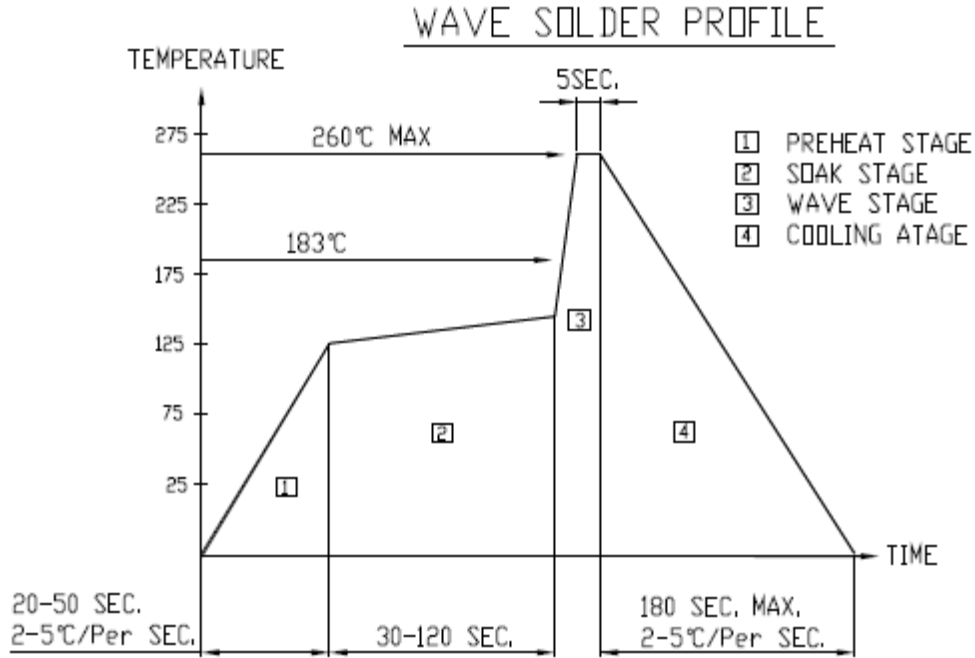
Inolux P/N:

I	N	N	D	-	S	S	3	9	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 Type S: Single		39 = 0.39" Display Height		YG: 570 nm Y: 590 nm A: 605 nm R: 630 nm DR: 645 nm G: 525 nm B: 465 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	11-07-2019

DISCLAIMER

INOLUX reserves the right to make changes without further notice to any products herein to improve reliability, function or design. INOLUX does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights, nor the rights of others.

LIFE SUPPORT POLICY

INOLUX's products are not authorized for use as critical components in life support devices or systems without the express written approval of the President of INOLUX or INOLUX CORPORATION. As used herein:

1. Life support devices or systems are devices or systems which, (a) are intended for surgical implant into the body, or (b) support or sustain life, and (c) whose failure to perform when properly used in accordance with instructions for use provided in the labeling, can be reasonably expected to result in a significant injury of the user.
2. A critical component in any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.