Features

- 0.28” (7.00mm) 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-SS28 series is a 0.28” single digit display. It is a SMD type LED display which can be used in various applications.

Internal Circuit Diagram

Common Anode **Common Cathode**

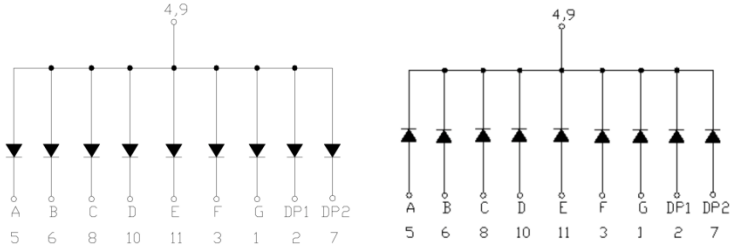


Figure 1. INND-SS28 series Internal Circuit Diagram

Package Dimensions

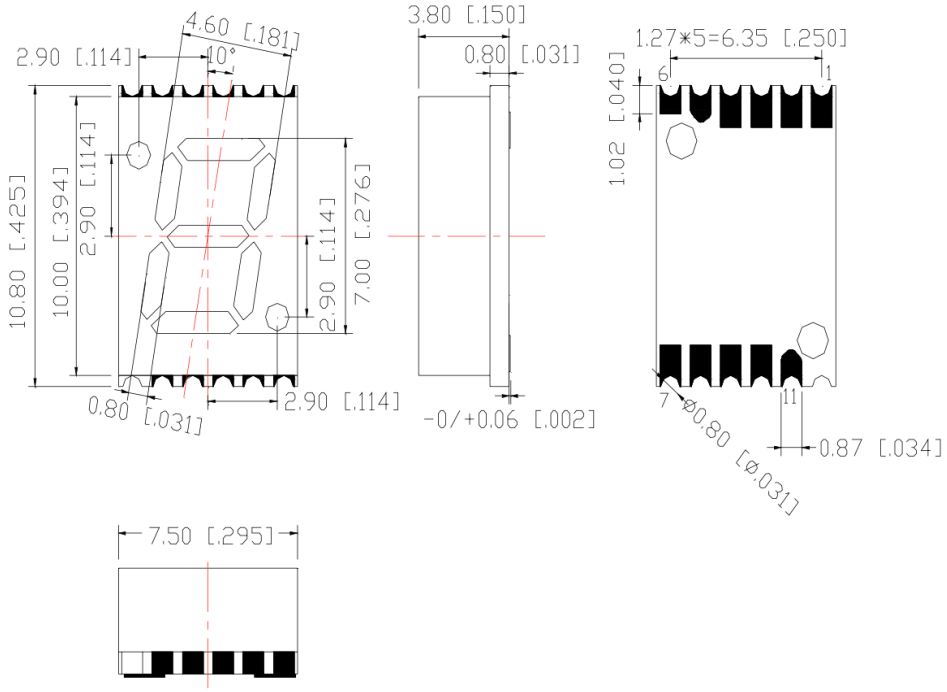
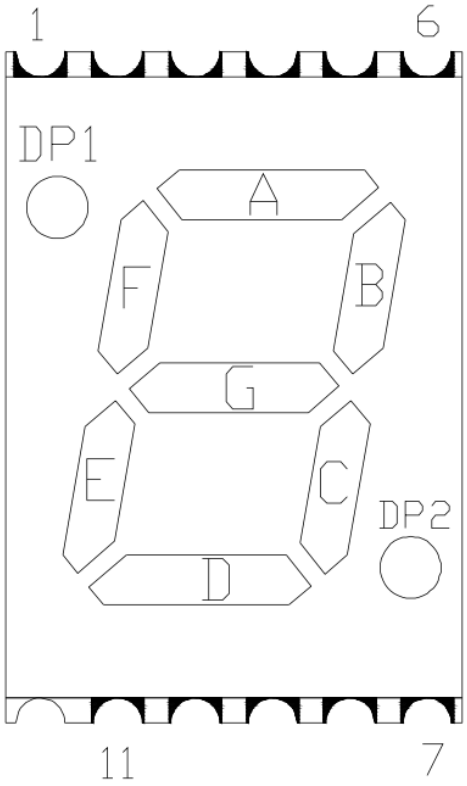


Figure 2. INND-SS28 series Package Dimensions

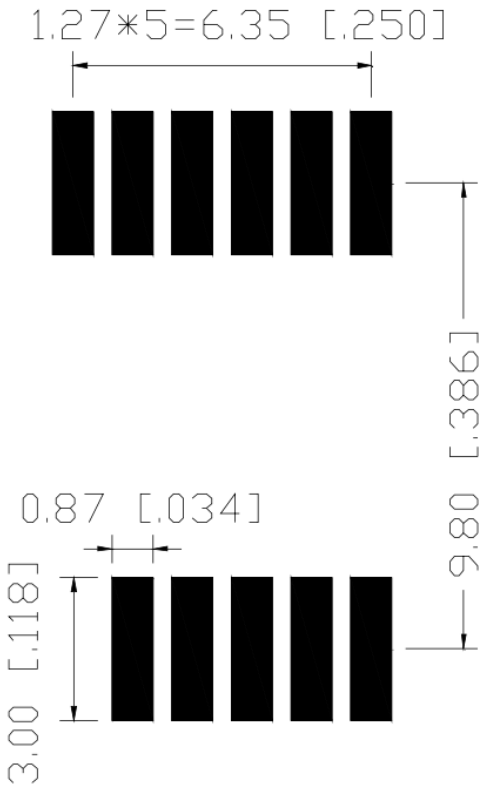
Notes

1. Dimension in millimeter [inch], tolerance is ±0.25 [.010] and angle is ±1° unless otherwise noted.
2. Bending≤Length*1%.

All Light On Segments Feature & Pin Position



Soldering Pad Size



Absolute Maximum Rating at 25ºC (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} (ºC)	T_{ST} (ºC)
INND-SS28YGXX	Yellow Green	AlGaInP	70	25	90	5	0.33	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC
INND-SS28YXX	Yellow	AlGaInP	70	25	90	5	0.33	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC
INND-SS28AXX	Amber	AlGaInP	70	25	90	5	0.33	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC
INND-SS28RXX	Red	AlGaInP	70	25	90	5	0.33	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC
INND-SS28DRXX	Deep Red	AlGaInP	70	25	90	5	0.33	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC
INND-SS28GXX	Green	InGaN	114	30	100	5	0.4	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC
INND-SS28BXX	Blue	InGaN	114	30	100	5	0.4	-40 ºC ~+105 ºC	-40 ºC ~+105 ºC

Notes

1. Condition for I_{FP} 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			λ(nm)@10mA		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-SS28YGXX	Yellow Green	-	2.0	2.8	570	572	-	1.1	-	100	2:1
INND-SS28YXX	Yellow	-	2.0	2.8	590	592	-	7	-	100	2:1
INND-SS28AXX	Amber	-	2.0	2.8	605	612	-	7.6	-	100	2:1
INND-SS28RXX	Red	-	2.0	2.8	630	644	-	5.4	-	100	2:1
INND-SS28DRXX	Deep Red	-	2.0	2.8	645	660	-	2.1	-	100	2:1
INND-SS28GXX	Green	-	3.2	3.8	525	-	-	40	-	100	2:1
INND-SS28BXX	Blue	-	3.2	3.8	470	-	4.2	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

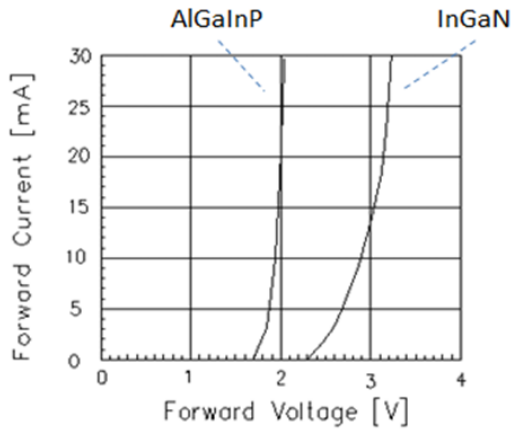


Fig 1. Forward Current vs. Forward Voltage

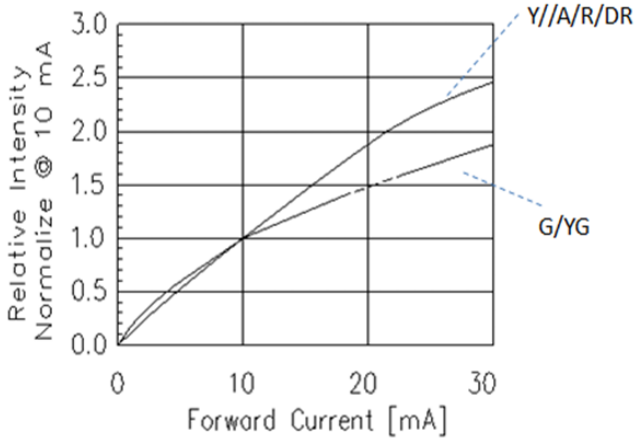


Fig 2. Relative Intensity vs. Forward Current

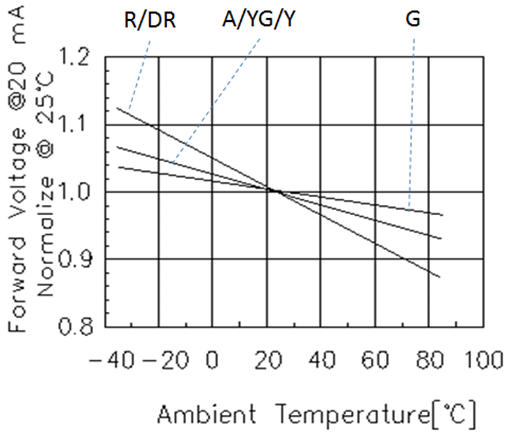


Fig 3. Forward Voltage vs. Temperature

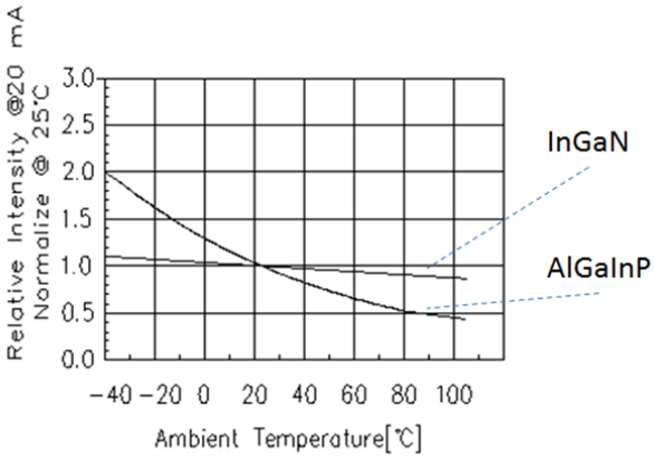


Fig 4. Relative Intensity vs. Temperature

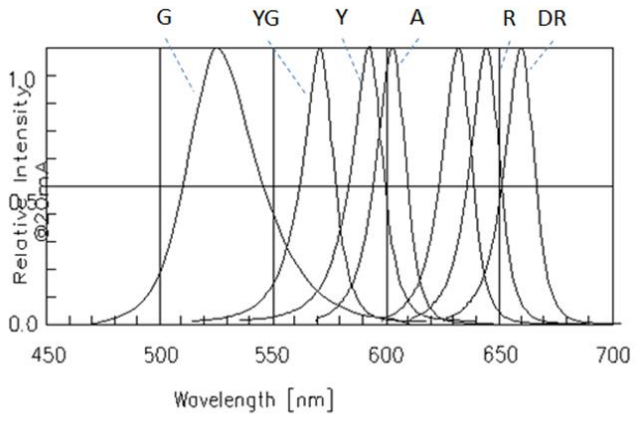


Fig 5. Relative Intensity vs. Wavelength

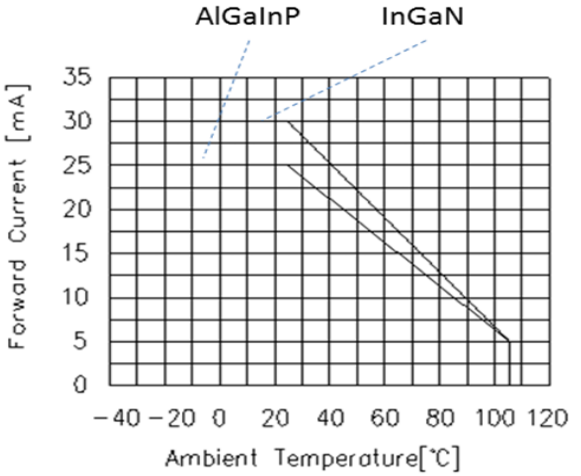


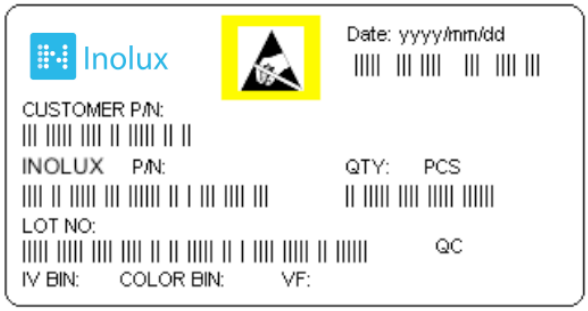
Fig 6. Forward current vs. Temperature

Ordering Information

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-SS28YGXX	Yellow Green	AlGaInP	1.1	2.0	Common Anode	Black	INND-SS28YGAB
					Common Cathode	Black	INND-SS28YGCB
					Common Anode	Grey	INND-SS28YGAG
					Common Cathode	Grey	INND-SS28YGCG
INND-SS28YXX	Yellow	AlGaInP	7	2.0	Common Anode	Black	INND-SS28YAB
					Common Cathode	Black	INND-SS28YCB
					Common Anode	Grey	INND-SS28YAG
					Common Cathode	Grey	INND-SS28YCG
INND-SS28AXX	Amber	AlGaInP	7.6	2.0	Common Anode	Black	INND-SS28AAB
					Common Cathode	Black	INND-SS28ACB
					Common Anode	Grey	INND-SS28AAG
					Common Cathode	Grey	INND-SS28ACG
INND-SS28RXX	Red	AlGaInP	5.4	2.0	Common Anode	Black	INND-SS28RAB
					Common Cathode	Black	INND-SS28RCB
					Common Anode	Grey	INND-SS28RAG
					Common Cathode	Grey	INND-SS28RCG

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-SS28DRXX	Deep Red	AlGaInP	2.1	2.0	Common Anode	Black	INND-SS28DRAB
					Common Cathode	Black	INND-SS28DRCB
					Common Anode	Grey	INND-SS28DRAG
					Common Cathode	Grey	INND-SS28DRCG
INND-SS28GXX	Green	InGaN	40	3.2	Common Anode	Black	INND-SS28GAB
					Common Cathode	Black	INND-SS28GCB
					Common Anode	Grey	INND-SS28GAG
					Common Cathode	Grey	INND-SS28GCG
INND-SS28BXX	Blue	InGaN	7	3.2	Common Anode	Black	INND-SS28BAB
					Common Cathode	Black	INND-SS28BCB
					Common Anode	Grey	INND-SS28BAG
					Common Cathode	Grey	INND-SS28BCG

Label Specifications



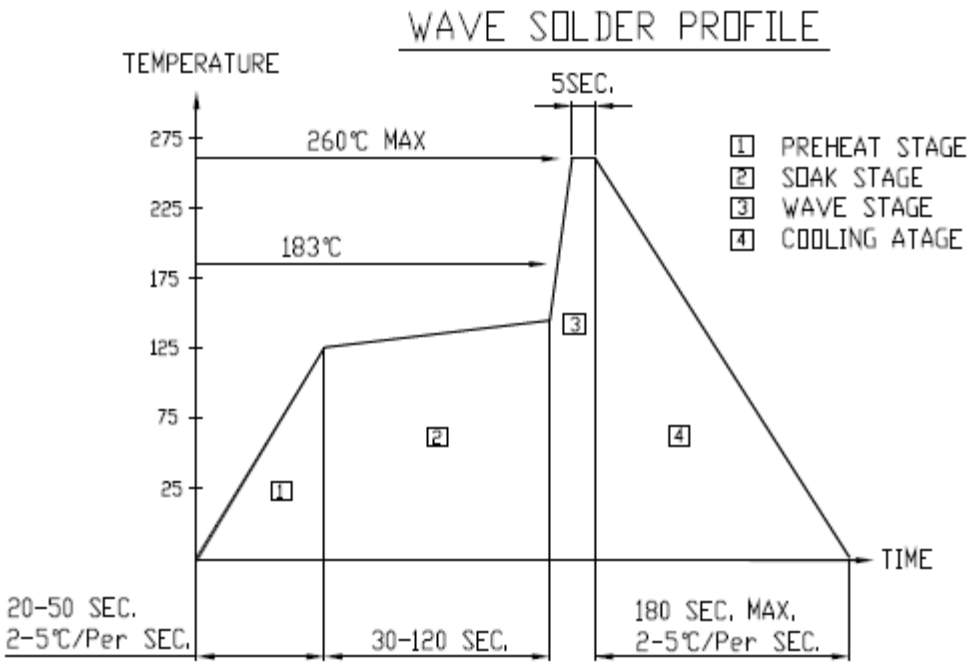
Inolux P/N:

I	N	N	D	-	S	S	2	8	X	X	X	-	X	X	X	X
		Display Type			Display Type		Dimension		Color	Polarity	Face Color		Customized Stamp-off			
Inolux		ND = Numeric Display			S: SMD Type S: Single		28 = 0.28” 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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