Features

- 0.3” (7.62mm) Matrix 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-SS30 series is a 0.3” single digit display. It is a SMD type LED display which can be used in various applications.

Internal Circuit Diagram

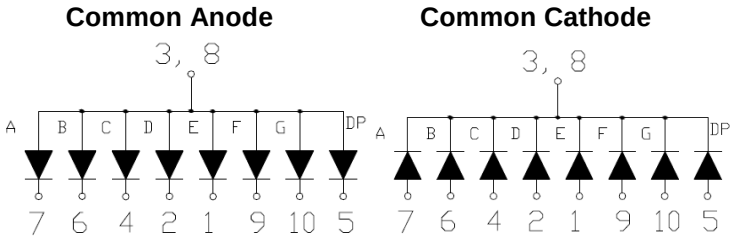


Figure 1. INND-SS30 series Internal Circuit Diagram

Package Dimensions

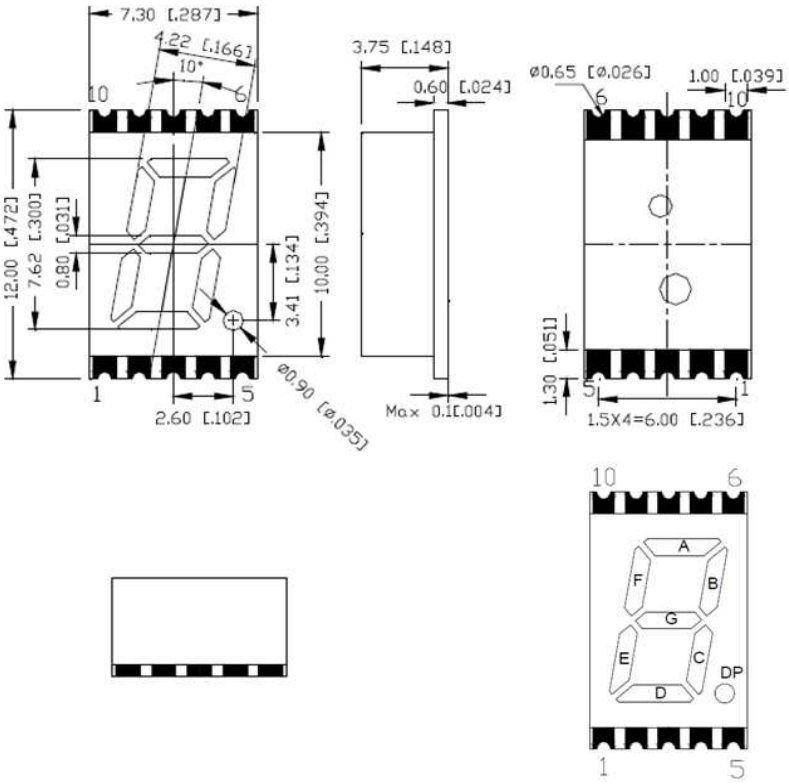


Figure 2. INND-SS30 series Package Dimensions

Absolute Maximum Rating at 25ºC (Note 1)

Product (Per Segment)	Emission Color	Technology	Pd (mW)	IF (mA)	IFP* (mA)	VR (V)	Derate From 25℃ (mA/℃)	T_{OP} (ºC)	T_{ST} (ºC)
INND-SS30YGXX	Yellow Green	AlGaInP	70	25	90	5	0.33	-40°C~+105°C	-40°C~+105°C
INND-SS30YXX	Yellow	AlGaInP	70	25	90	5	0.33	-40°C~+105°C	-40°C~+105°C
INND-SS30AXX	Amber	AlGaInP	70	25	90	5	0.33	-40°C~+105°C	-40°C~+105°C
INND-SS30RXX	Red	AlGaInP	70	25	90	5	0.33	-40°C~+105°C	-40°C~+105°C
INND-SS30DRXX	Deep Red	AlGaInP	70	25	90	5	0.33	-40°C~+105°C	-40°C~+105°C
INND-SS30GXX	Green	InGaN	114	30	100	5	0.4	-40°C~+105°C	-40°C~+105°C
INND-SS30BXX	Blue	InGaN	114	30	100	5	0.4	-40°C~+105°C	-40°C~+105°C
INND-SS30WXX	White	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℃ (Note 1)

Product (Per Segment)	Emission Color	V_F(V)@20mA			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-SS30YGXX	Yellow Green	-	2.0	2.8	570	572	-	2	-	100	2:1
INND-SS30YXX	Yellow	-	2.0	2.8	590	592	-	8	-	100	2:1
INND-SS30AXX	Amber	-	2.0	2.8	605	612	-	9	-	100	2:1
INND-SS30RXX	Red	-	2.0	2.8	630	644	-	5	-	100	2:1
INND-SS30DRXX	Deep Red	-	2.0	2.8	645	660	-	2	-	100	2:1
INND-SS30GXX	Green	-	3.2	3.8	525	-	-	37	-	100	2:1
INND-SS30BXX	Blue	-	3.2	3.8	465	-	-	7	-	50	2:1
INND-SS30WXX	White	-	3.2	3.8	X: 0.27 Y: 0.25	-	10.7	19.3	-	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

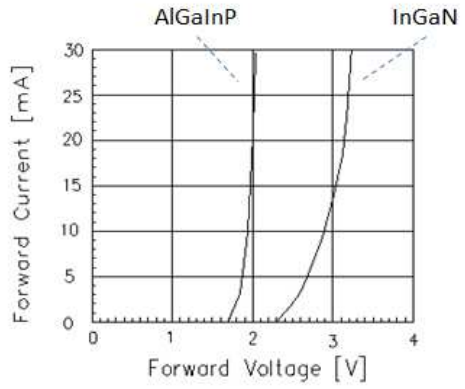


Fig 1. Forward Current vs. Forward Voltage

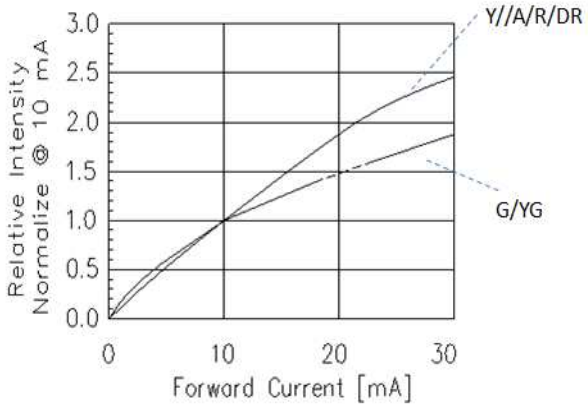


Fig 2. Relative Intensity vs. Forward Current

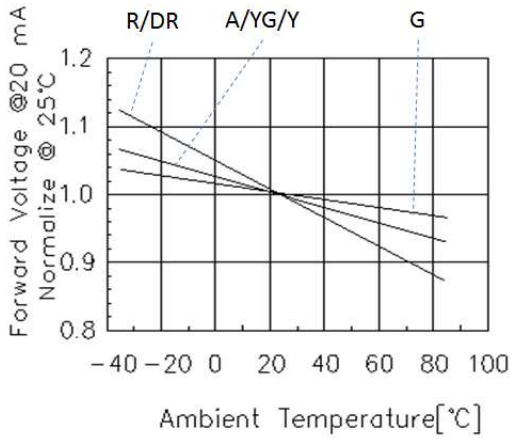


Fig 3. Forward Voltage vs. Temperature

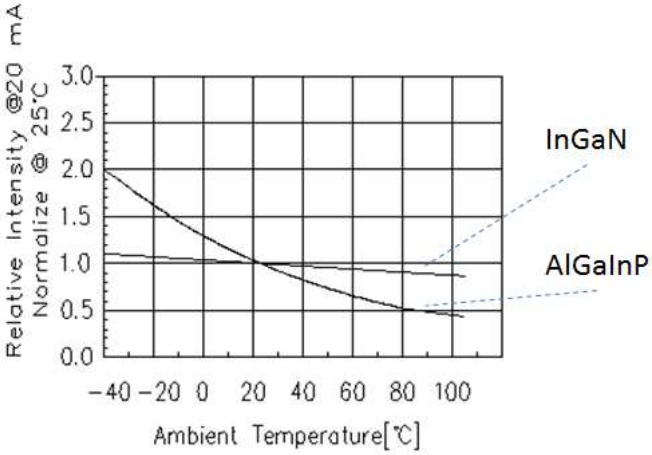


Fig 4. Relative Intensity vs. Temperature

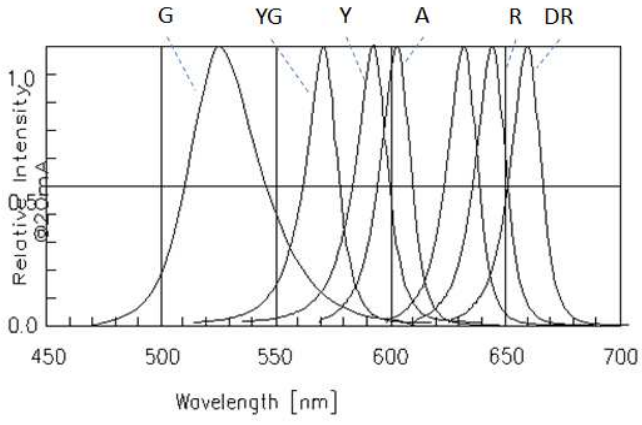


Fig 5. Relative Intensity vs. Wavelength

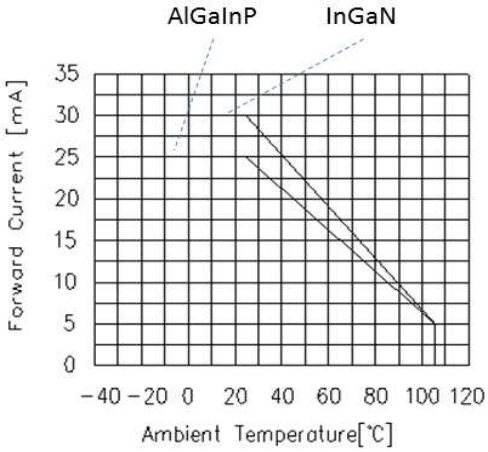


Fig 6. Forward current vs. Temperature

Characteristic Curves for B

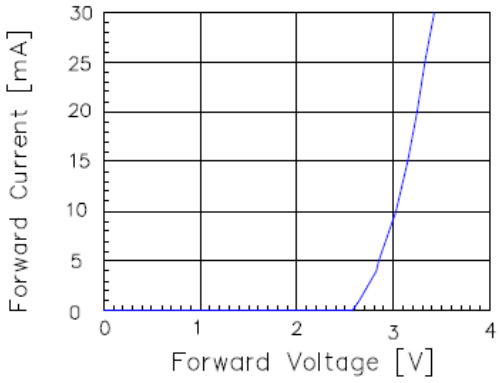


Fig 1. Forward Current vs. Forward Voltage

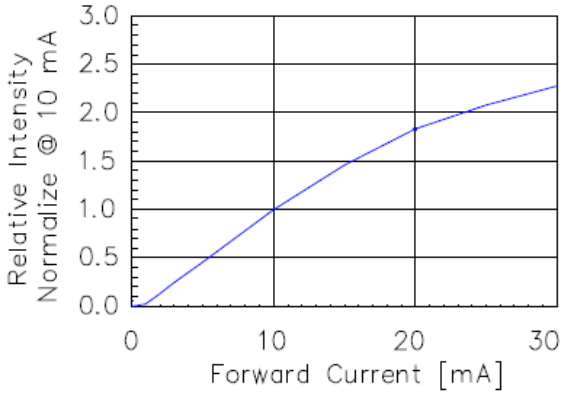


Fig 2. Relative Intensity vs. Forward Current

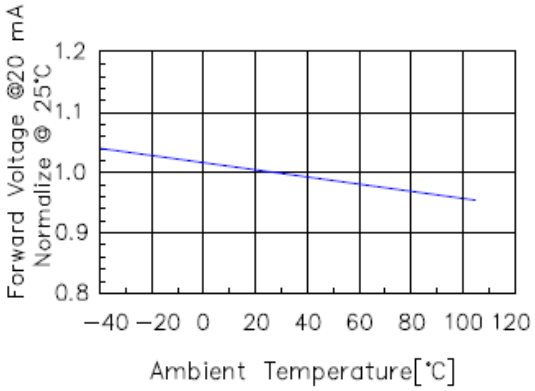


Fig 3. Forward Voltage vs. Temperature

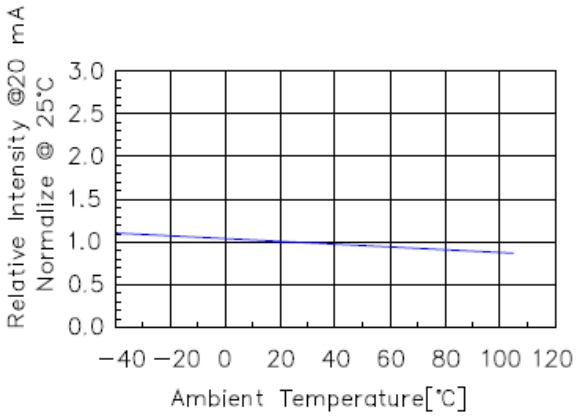


Fig 4. Relative Intensity vs. Temperature

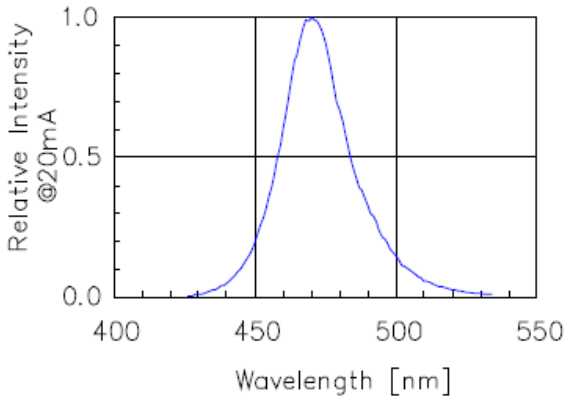


Fig 5. Relative Intensity vs. Wavelength

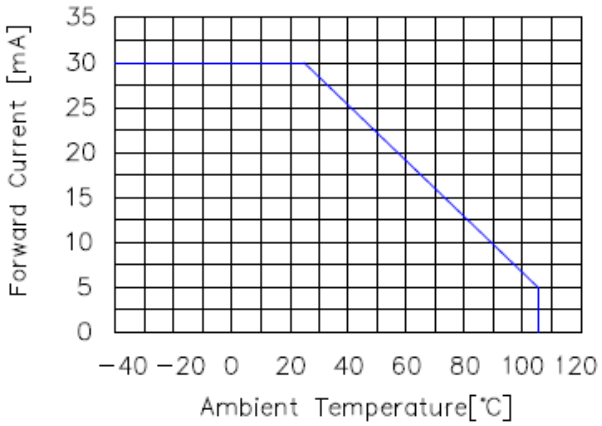


Fig 6. Forward current vs. Temperature

Characteristic Curves for W

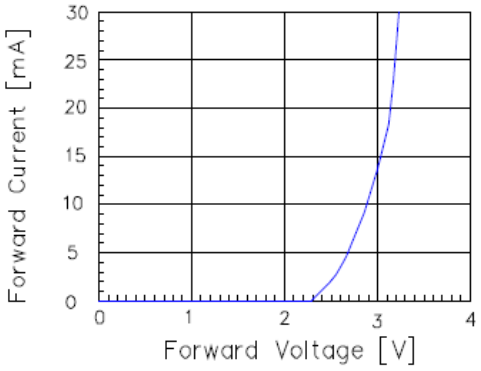


Fig 1. Forward Current vs. Forward Voltage

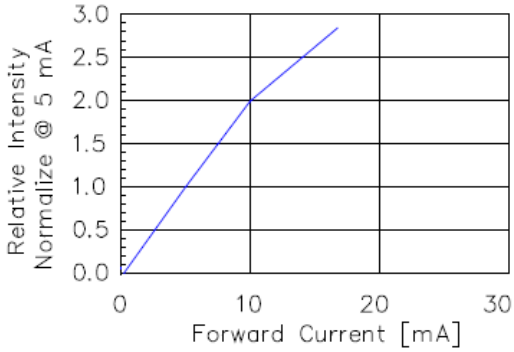


Fig 2. Relative Intensity vs. Forward Current

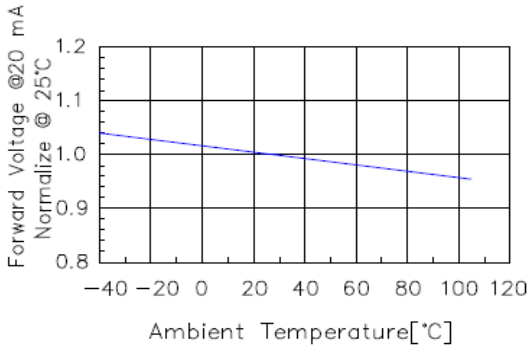


Fig 3. Forward Voltage vs. Temperature

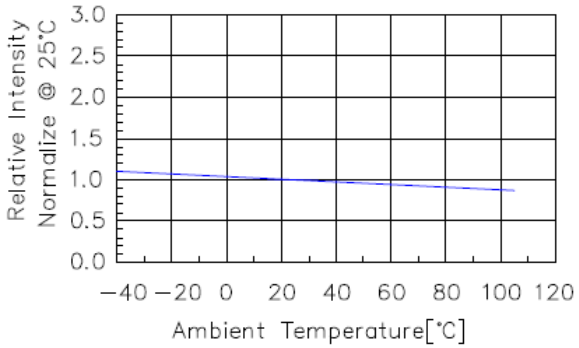


Fig 4. Relative Intensity vs. Temperature

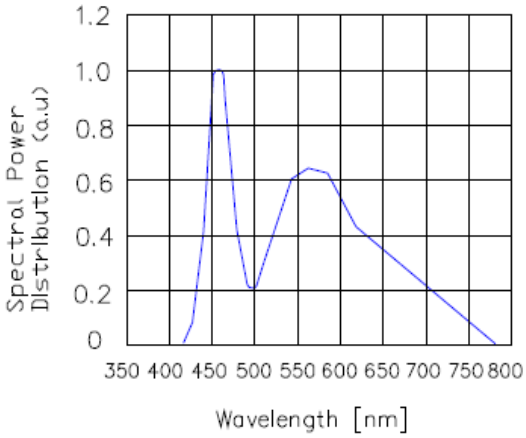


Fig 5. Spectral Power Distribution vs. Wavelength

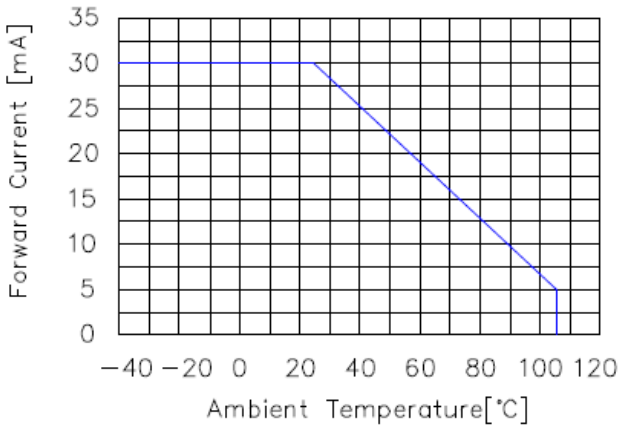
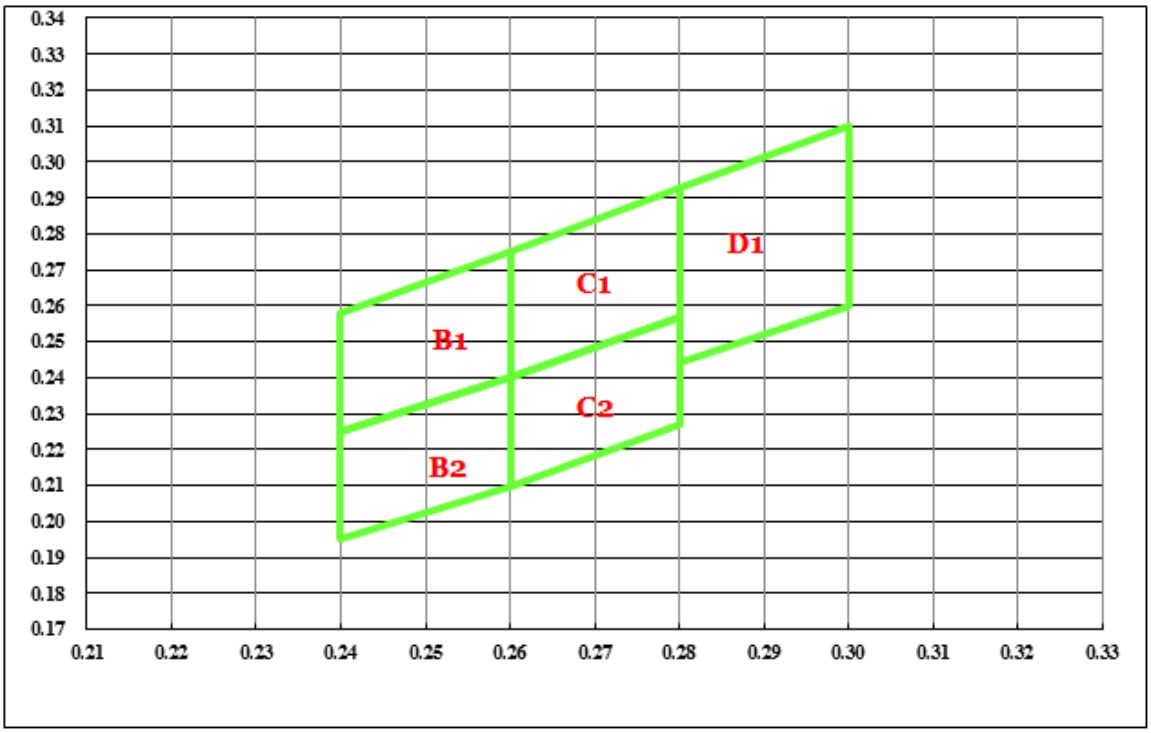


Fig 6. Forward current vs. Temperature

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

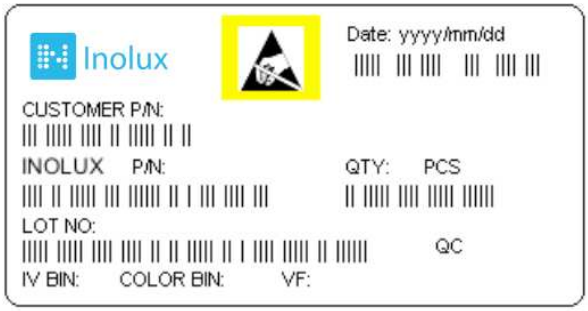
D1				
X	0.280	0.280	0.300	0.300
Y	0.244	0.293	0.310	0.260

Ordering Information

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-SS30YGXX	Yellow Green	AlGaInP	2	2.0	Common Anode	Black	INND-SS30YGAB
					Common Cathode	Black	INND-SS30YGCB
					Common Anode	Grey	INND-SS30YGAG
					Common Cathode	Grey	INND-SS30YGCG
INND-SS30YXX	Yellow	AlGaInP	8	2.0	Common Anode	Black	INND-SS30YAB
					Common Cathode	Black	INND-SS30YCB
					Common Anode	Grey	INND-SS30YAG
					Common Cathode	Grey	INND-SS30YCG
INND-SS30AXX	Amber	AlGaInP	9	2.0	Common Anode	Black	INND-SS30AAB
					Common Cathode	Black	INND-SS30ACB
					Common Anode	Grey	INND-SS30AAG
					Common Cathode	Grey	INND-SS30ACG
INND-SS30RXX	Red	AlGaInP	5	2.0	Common Anode	Black	INND-SS30RAB
					Common Cathode	Black	INND-SS30RCB
					Common Anode	Grey	INND-SS30RAG
					Common Cathode	Grey	INND-SS30RCG

Product	Emission Color	Technology	I*V(mcd) @10mA	VF(V) @20mA	Polarity	Face Color	Orderable Part Number
INND-SS30DRXX	Deep Red	AlGaInP	2	2.0	Common Anode	Black	INND-SS30DRAB
					Common Cathode	Black	INND-SS30DRCB
					Common Anode	Grey	INND-SS30DRAG
					Common Cathode	Grey	INND-SS30DRCG
INND-SS30GXX	Green	InGaN	37	3.2	Common Anode	Black	INND-SS30GAB
					Common Cathode	Black	INND-SS30GCB
					Common Anode	Grey	INND-SS30GAG
					Common Cathode	Grey	INND-SS30GCG
INND-SS30BXX	Blue	InGaN	7	3.2	Common Anode	Black	INND-SS30BAB
					Common Cathode	Black	INND-SS30BCB
					Common Anode	Grey	INND-SS30BAG
					Common Cathode	Grey	INND-SS30BCG
INND-SS30WXX	White	InGaN	19.3	3.2	Common Anode	Black	INND-SS30WAB
					Common Cathode	Black	INND-SS30WCB
					Common Anode	Grey	INND-SS30WAG
					Common Cathode	Grey	INND-SS30WCG

Label Specifications



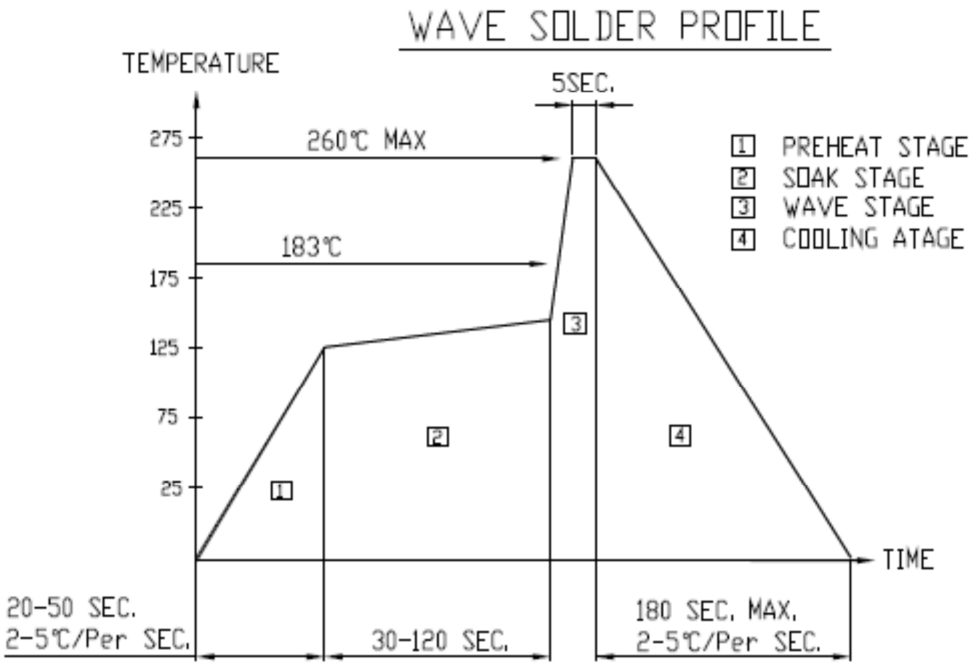
Inolux P/N:

I	N	N	D	-	S	S	3	0	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		30 = 0.30” Display Height		YG: 570 nm Y: 590 nm A: 605 nm R: 630 nm DR: 660 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	07-12-2017

DISCLAIMER

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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.