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**Opto Plus LED Corp.**  
**0.56" SMD Type LED Display**  
**OPS-S5620SPG-GW**  
**OPS-S5621SPG-GW**

● **EDIT HISTORY**

Version A: Dec. 24, 2018

Preliminary spec.

Prepared by	Checked by	Approved by



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**Opto Plus LED Corp.**  
**0.56" SMD Type LED Display**  
**OPS-S5620SPG-GW**  
**OPS-S5621SPG-GW**

● **FEATURES**

- 0.56 inch (14.20 mm) Digit Height.
- SMD type.
- Low current operation.
- Gray face, White segment.
- RoHS compliant, Pb Free.

● **DESCRIPTION**

The OPS-S5620SPG-GW & OPS-S5621SPG-GW are 0.56 inch (14.20 mm) height Single digit 7-segment displays.

This device utilizes Pure Green LED chip which are made from InGaN on a Transparent GaN substrate.

The display has Gray face, White segment.

● **DEVICE**

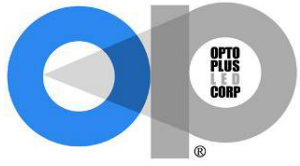
PART NO	DESCRIPTION
OPS-S5620SPG-GW	Common Anode
OPS-S5621SPG-GW	Common Cathode

**RoHS Compliance**



**Pb free.**





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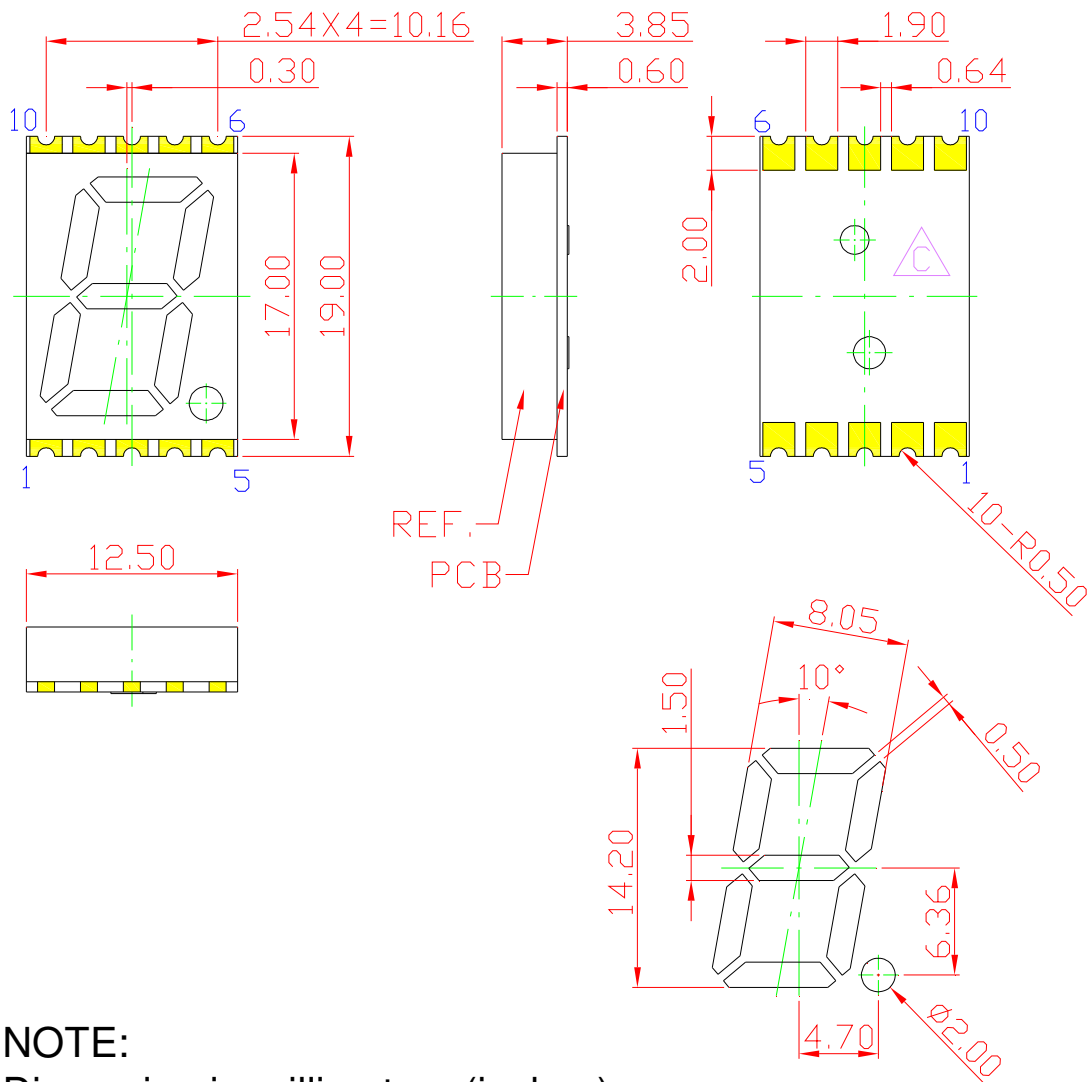
# Opto Plus LED Corp.

## 0.56" SMD Type LED Display

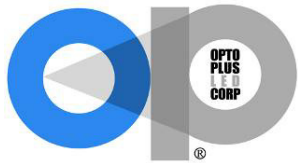
### OPS-S5620SPG-GW

### OPS-S5621SPG-GW

### ● MECHANICAL DIMENSIONS



**NOTE:**  
Dimension in millimeters (inches),  
and tolerances are  $\pm 0.25\text{mm}$  (.01") specified.



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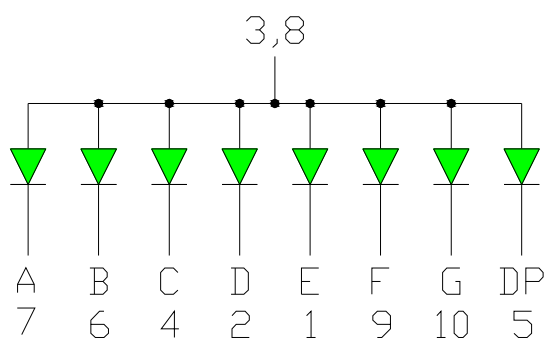
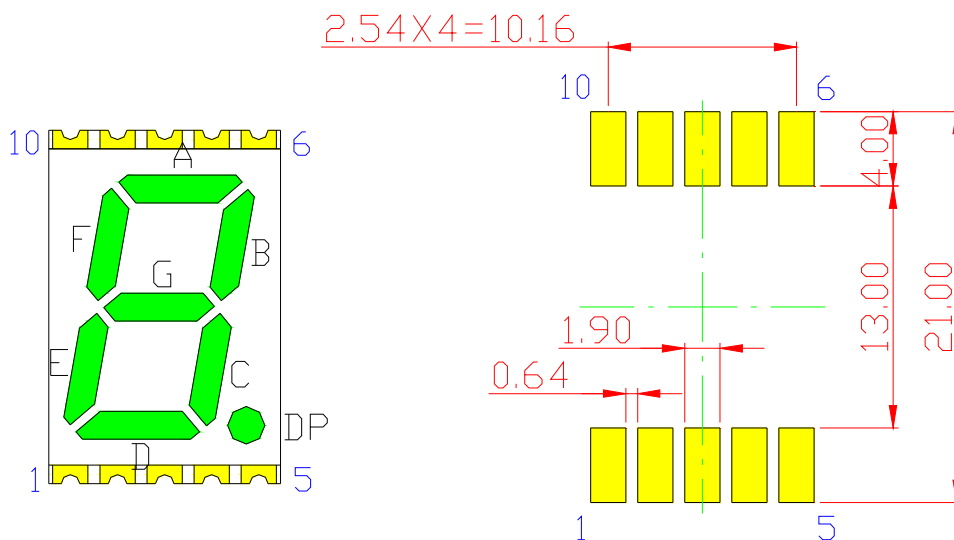
## 0.56" SMD Type LED Display

### OPS-S5620SPG-GW

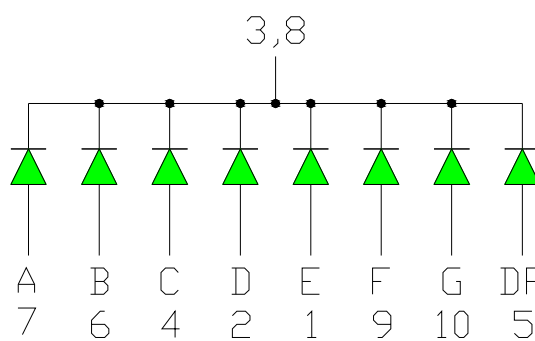
### OPS-S5621SPG-GW

#### ● TYPICAL INTERNAL EQUIVALENT CIRCUIT

#### Recommended Soldering Pattern



**OPS-S5620SPG-GW**  
( Common Anode )



**OPS-S5621SPG-GW**  
( Common Cathode )



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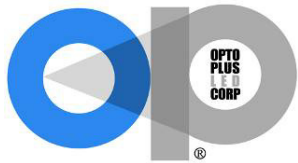
● **SPG: PURE GREEN (InGaN/GaN)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P <sub>AD</sub>	68	mW
Continuous forward current	I <sub>AF</sub>	20	mA
Peak current (duty cycle 1/10, 1kHz)	I <sub>PF</sub>	60	mA
Reverse voltage	V <sub>R</sub>	5	V
Operating temperature	T <sub>OPR</sub>	-40 to +85	°C
Storage temperature	T <sub>STG</sub>	-40 to +85	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Type.	Max.	Unit
Forward Voltage, (Per Dice)	V <sub>F</sub>	I <sub>F</sub> =20mA	-	3.0	3.4	V
Reverse Current, (Per Dice)	I <sub>R</sub>	V <sub>R</sub> =5V	-	-	10	μA
Dominant Wavelength	λ <sub>D</sub>	I <sub>F</sub> =20mA	515	-	530	nm
Luminous Intensity	I <sub>v</sub>	I <sub>F</sub> =20mA	350	-	650	mcd
Spectral Line Half-Bandwidth	Δλ	I <sub>F</sub> =20mA	-	30	-	nm



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## 0.56" SMD Type LED Display

### OPS-S5620SPG-GW

### OPS-S5621SPG-GW

#### ● SPG: PURE GREEN (InGaN/GaN) CURVE

Typical Electro-optical Characteristic Curves  
(25 °C Free Air Temperature Unless Otherwise Specified)

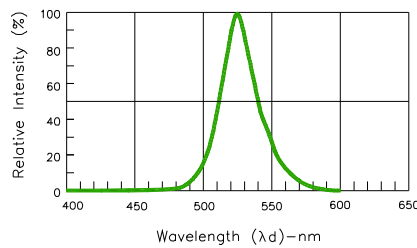


Fig.-1 Relative Intensity VS. Wavelength

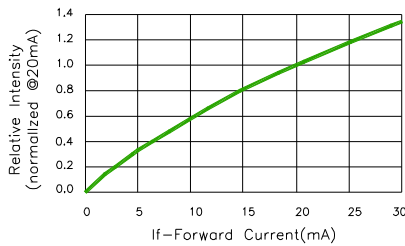


Fig.2-Relative Luminous Intensity vs. Forward Current

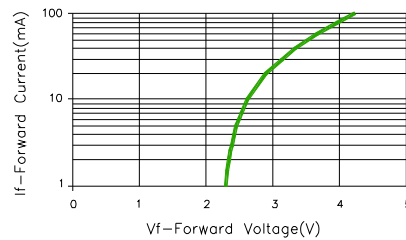


Fig.3-Forward Current vs. Forward Voltage

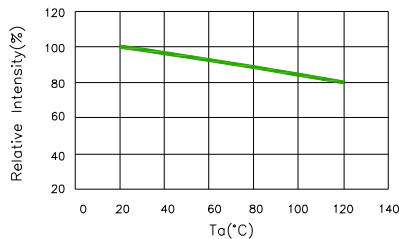


Fig.4-Relative Intensity(@20mA)VS. Ambient Temperature

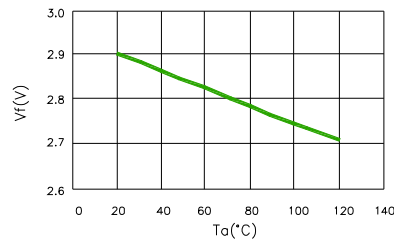


Fig.5-Forward Voltage(@20mA)VS. Ambient Temperature

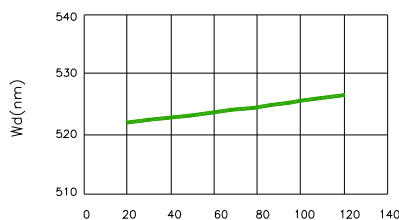


Fig.6-Dominant Wavelength(@20mA)  
VS. Ambient Temperature

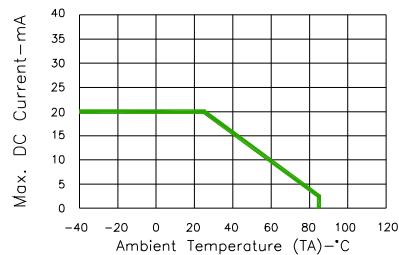


Fig.7-Max. Allowable DC Current  
VS. Ambient Temperature



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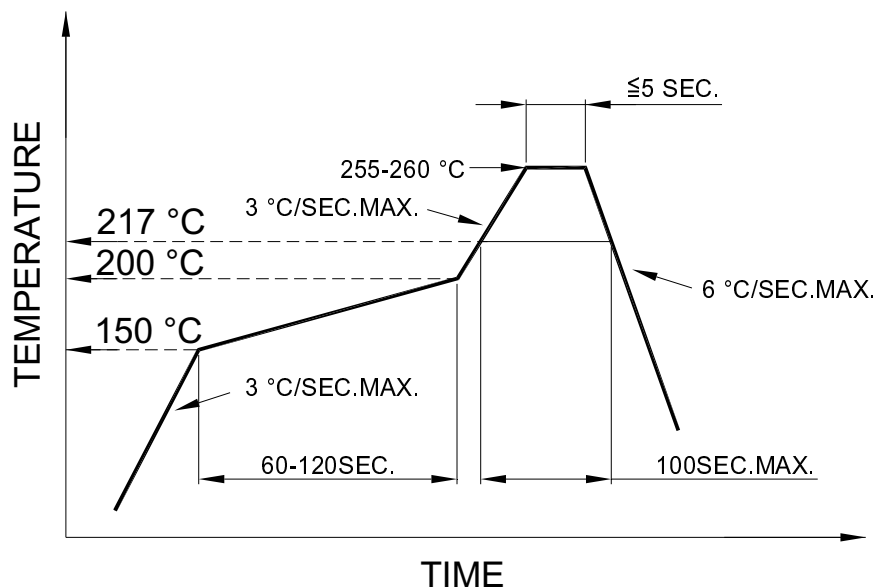
### OPS-S5620SPG-GW

### OPS-S5621SPG-GW

## ● SMT REFLOW SOLDERING INSTRUCTIONS

SMT Soldering Profile

Pb free reflow soldering Profile



- We recommend the reflow temperature 245°C (+/- 5°C).  
The maximum soldering temperature should be limited to 260°C.
- Number of reflow process shall be 2 times or less.

## ● SOLDERING IRON

Basic spec is  $\leq 4$  sec when 260°C. If temperature is higher, time should be shorter (+10°C → 1 sec). Power dissipation of Iron should be smaller than 15W, and temperature should be controllable. Surface temperature of the device should be under 230°C.

## ● REWORK

- Customer must finish rework within 3 sec. under 350°C.
- The head of soldering iron cannot touch copper foil.



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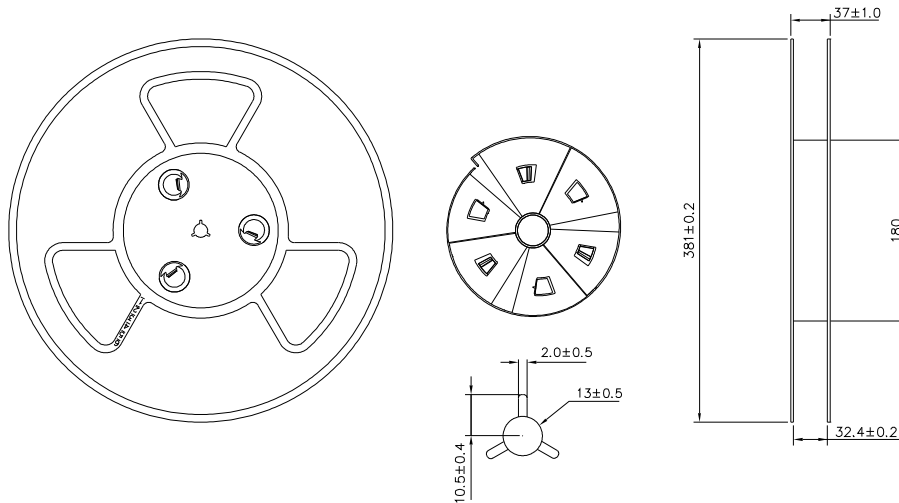
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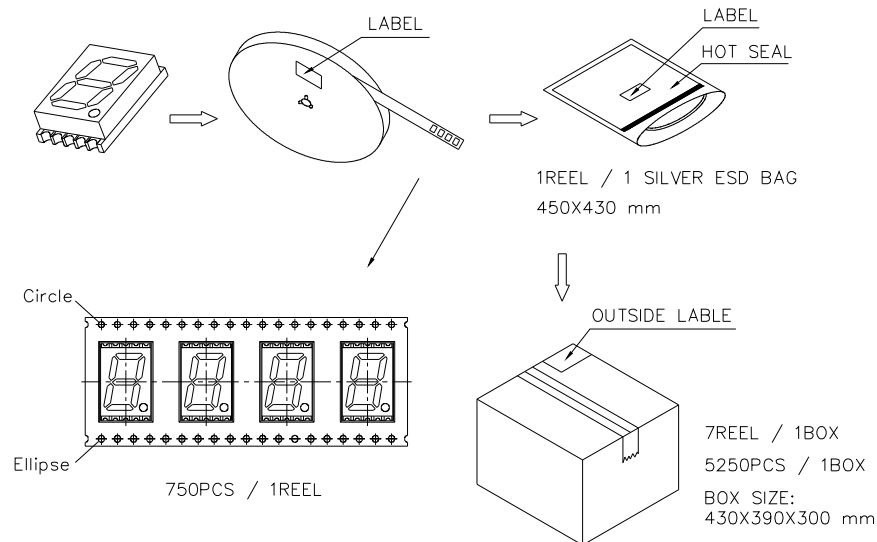
### OPS-S5620SPG-GW

### OPS-S5621SPG-GW

### ● REEL DIMENSIONS



### ● PACKING & LABEL SPECIFICATIONS



### ● STORAGED CONDITION

In factory original sealed bag package

TEMPERATURE CONDITION	HUMIDITY CONDITION
5°C ~ 30°C	Below 60%RH

After opened and not in factory original sealed bag package

TEMPERATURE CONDITION	HUMIDITY CONDITION	STORAGE TIME
5°C ~ 30°C	Below 60%RH	Within 4 weeks (MSL as level 2a)