



Opto Plus LED Corp.
0.56" SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-GW

● **EDIT HISTORY**

Version A: Jan. 08, 2013

Preliminary Spec.

Version B: Mar. 29, 2013

Add package spec.

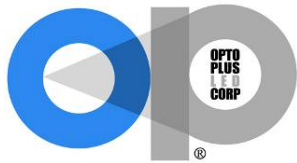
Version C: Oct. 09, 2014

Add bin & hue data.

Version D: Apr. 10, 2015

Modify bin & hue data.

Manufacture	Examination	Approving



Opto Plus LED Corp.
0.56" SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-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-S5620LR-GW & OPS-S5621LR-GW are 0.56 inch (14.20 mm) height Single digit 7-segment displays.

This device utilizes Super Red LED chip which are made from AlGaInP

On a transparent GaAs, substrate.

The display has Gray face, White segment.

● **DEVICE**

PART NO	DESCRIPTION
OPS-S5620LR-GW	Common Anode
OPS-S5621LR-GW	Common Cathode

RoHS Compliance



Pb free.





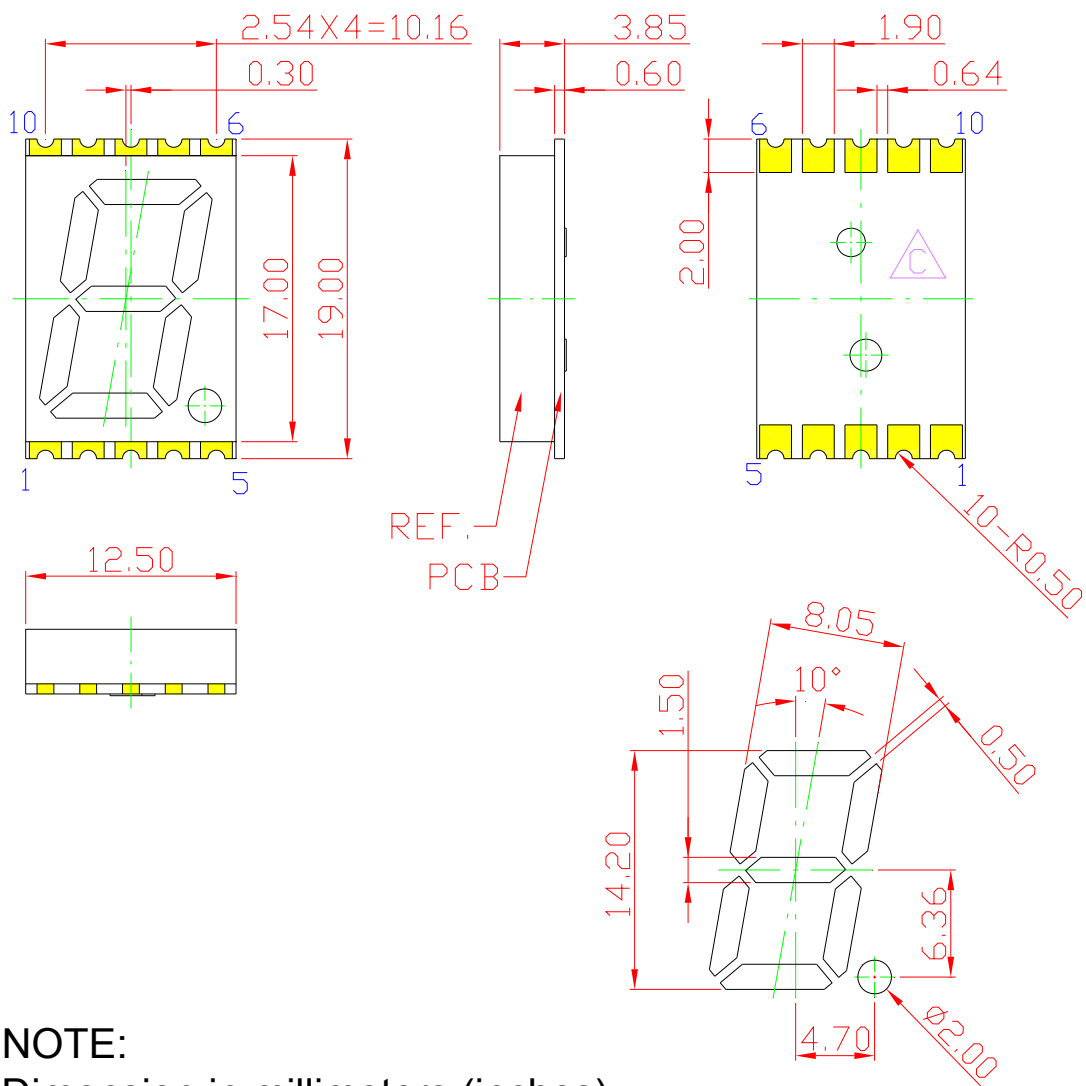
Opto Plus LED Corp.

0.56" SMD Type LED Display

OPS-S5620LR-GW

OPS-S5621LR-GW

● MECHANICAL DIMENSIONS



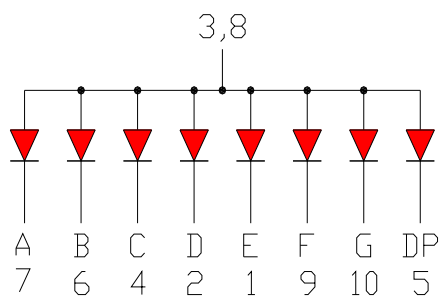
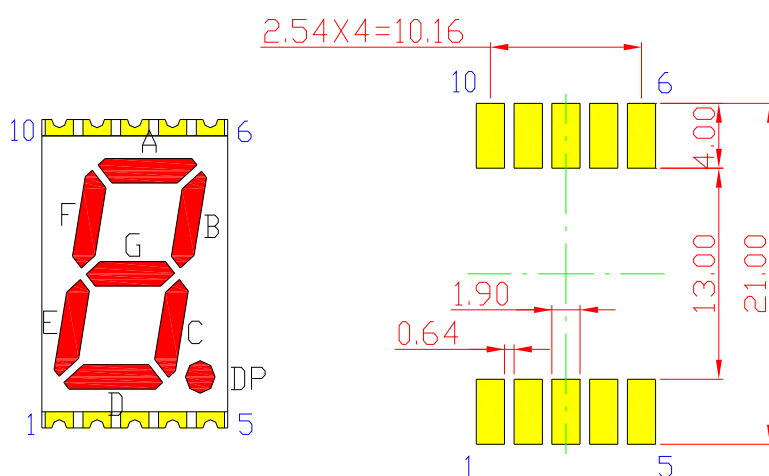
NOTE:
Dimension in millimeters (inches),
and tolerances are $\pm 0.25\text{mm}$ (.01") specified.



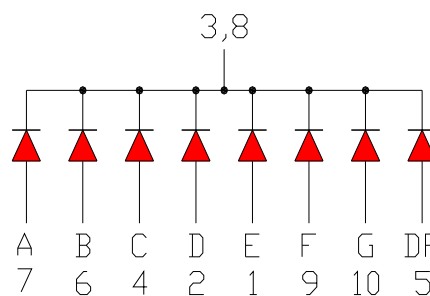
Opto Plus LED Corp.
0.56" SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-GW

● **TYPICAL INTERNAL EQUIVALENT CIRCUIT**

Recommended
Soldering Pattern



OPS-S5620LR-GW
 (Common Anode)



OPS-S5621LR-GW
 (Common Cathode)



Opto Plus LED Corp.
0.56'' SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-GW

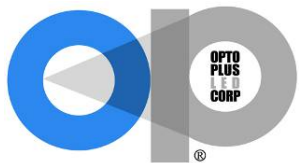
● **LR: SUPER RED (AlGaInP/GaAs)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P_{AD}	75	mW
Derating liner from 25°C	-	0.3	mA / °C
Continuous forward current	I_{AF}	30	mA
Peak current (duty cycle 1/10, 1kHz)	I_{PF}	100	mA
Reverse voltage	V_R	5	V
Operating temperature	T_{OPR}	-40 to +105	°C
Storage temperature	T_{STG}	-40 to +105	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Type.	Max.	Unit
Forward Voltage, (Per Dice)	V_F	$I_F = 20\text{mA}$	-	2.0	2.6	V
Reverse Current, (Per Dice)	I_R	$V_R = 5\text{V}$	-	-	10	μA
Peak Wavelength	λ_P	$I_F = 20\text{mA}$	-	650	-	nm
Dominant Wavelength	λ_D	$I_F = 20\text{mA}$	636	-	646	nm
Luminous Intensity	I_v	$I_F = 20\text{mA}$	2	-	20	mcd
Spectral radiation bandwidth	$\Delta\lambda$	$I_F = 20\text{mA}$	-	20	-	nm



Opto Plus LED Corp.
0.56" SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-GW

- LR: BIN GRADE (Unit : mcd) Test Condition: 5V / 20mA

Super Red	H	I	J
	2.0 - 6.0	6.1 - 10.0	10.1 - 20.0

- LR: HUE GRADE (λ_D : nm)

1	2	3
636 - 640	640.1 - 643	643.1 - 646

- AVAILABLE BIN / HUE TABLE

H1	I1	J1
H2	I2	J2
H3	I3	J3



Opto Plus LED Corp.

0.56" SMD Type LED Display

OPS-S5620LR-GW

OPS-S5621LR-GW

● LR: SUPER RED (AlGaInP/GaAs) CURVE

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

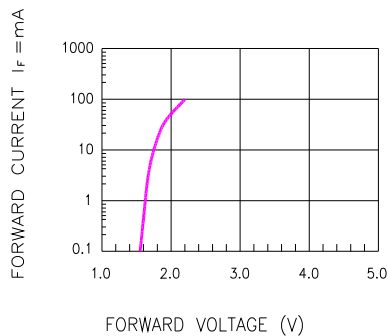


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

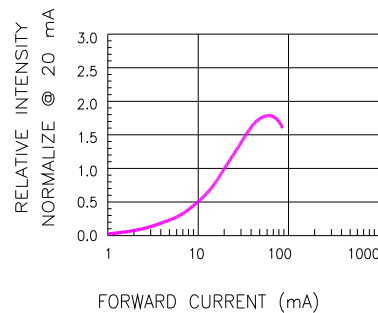


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

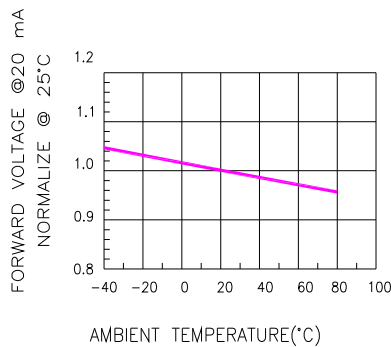


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

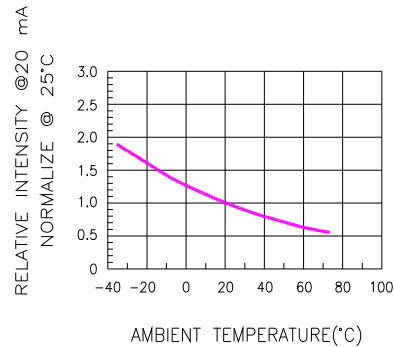


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

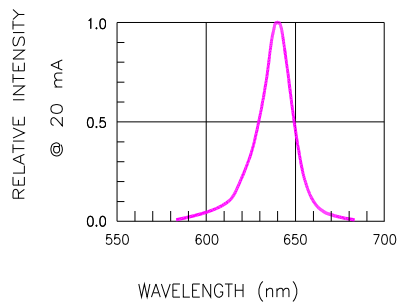


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

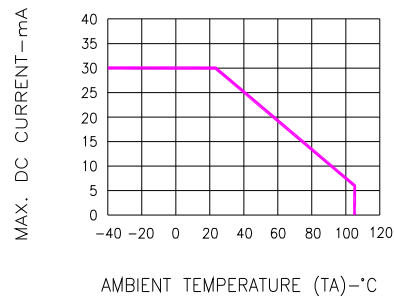
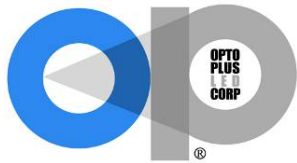


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE

Version: D Date: 04/10/2015

Opto Plus LED Corp. 7F-3, No.496, Bannan Road, Zhonghe Dist., New Taipei City 235, Taiwan (R.O.C)

Website: www.opled.com.tw E-mail: sales@opled.com.tw Tel: 886-2-2222-5698 Fax: 886-2-2222-2566

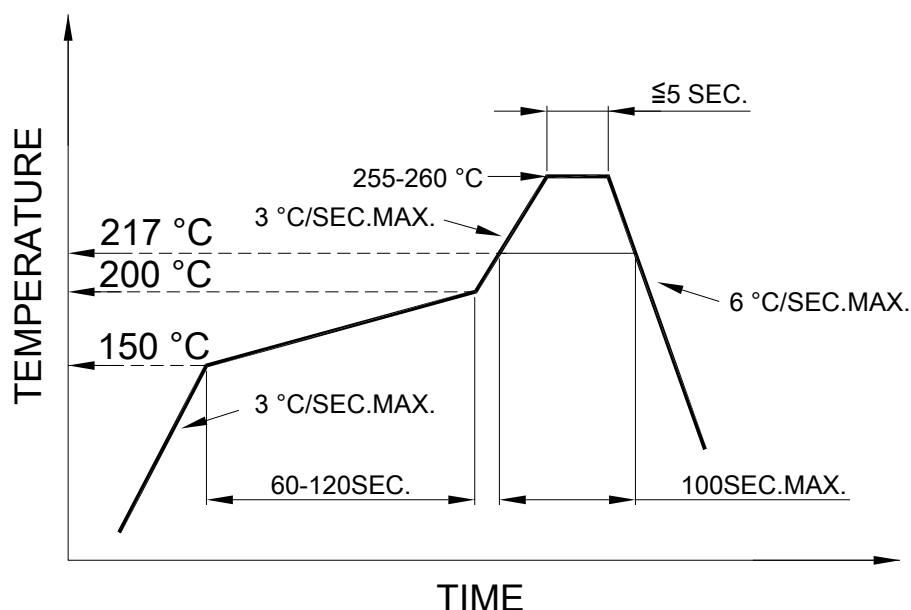


Opto Plus LED Corp.
0.56" SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-GW

● **RECOMMEND SOLDERING PROFILE**

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 $\le 4\text{ sec}$ 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.

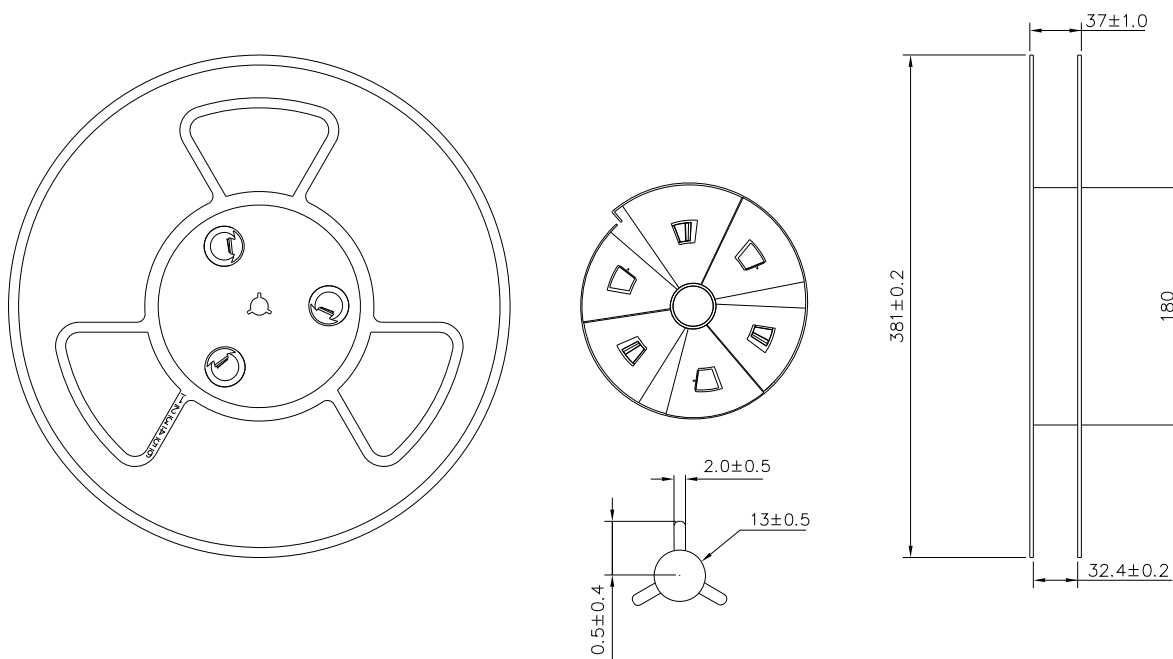
● **REWORK**

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



Opto Plus LED Corp.
0.56" SMD Type LED Display
OPS-S5620LR-GW
OPS-S5621LR-GW

● **REEL DIMENSIONS**



● **PACKING & LABEL SPECIFICATIONS**

