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Opto Plus LED Corp.
0.56” Case Mold Type LED Display
OPD-D5630LE-BW

EDIT HISTORY

Version 1 : Jan. 16, 2015

New color data sheet.

Version 2(B) : Mar. 08, 2023

Modify Electrical Character & Curve (P5,P6)

Prepared by	Checked by	Approved by

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EDIT HISTORY

Version A : Jul.04, 2013

Preliminary Spec

Version B : May.11, 2022

Modify Electrical Character & Curve (P4,P5)

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FEATURES

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

DESCRIPTION

The OPD-D5630LE-BW is a 0.56 inch (14.20 mm) height dual digits display.
This device utilizes Super Bright Red LED chip which are made from AlGaInP on a transparent GaAs, substrate. The display has Black face, White segment.

DEVICE

PART NO Super Bright Red	DESCRIPTION
OPD-D5630LE-BW	Common Anode

RoHS Compliance **Pb free.**

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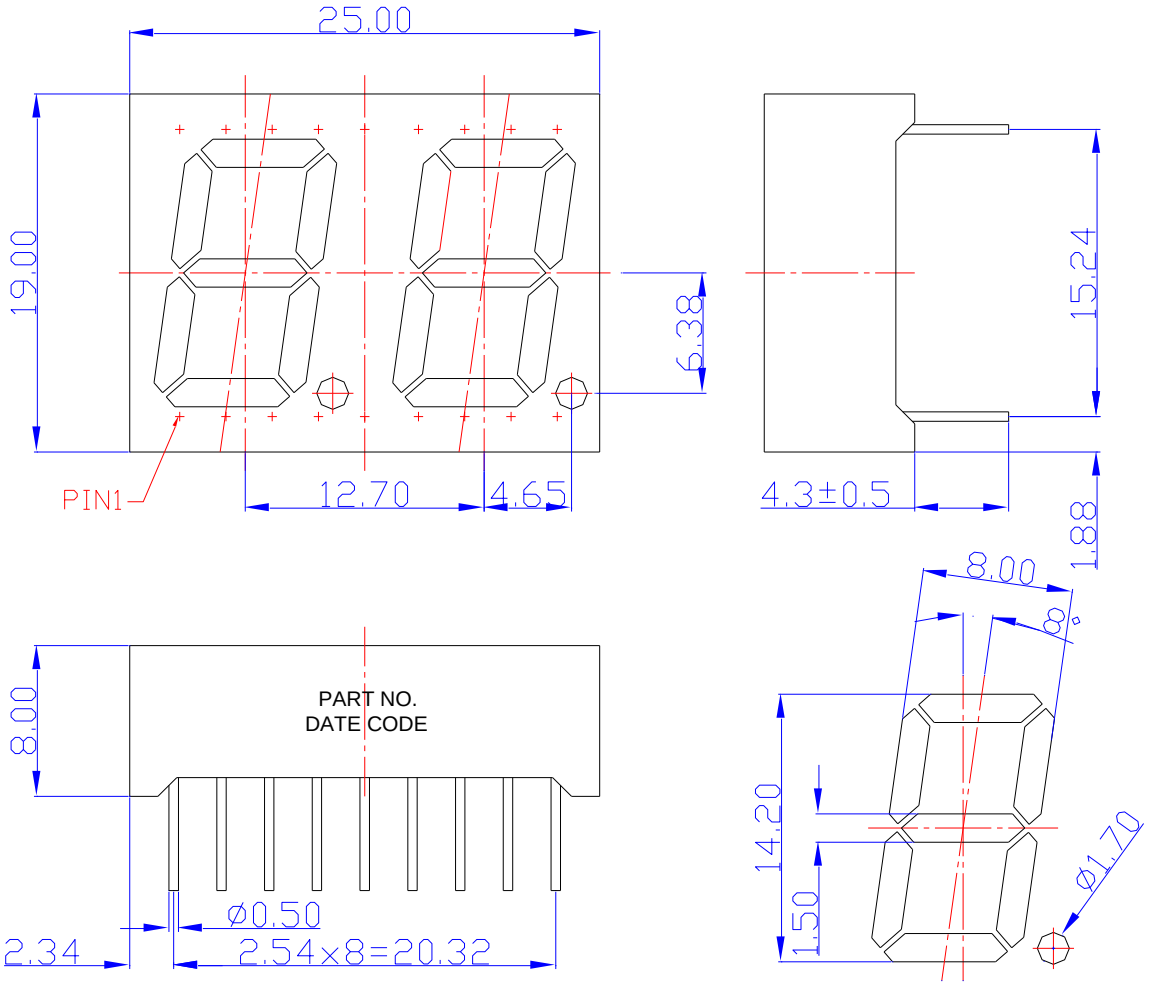
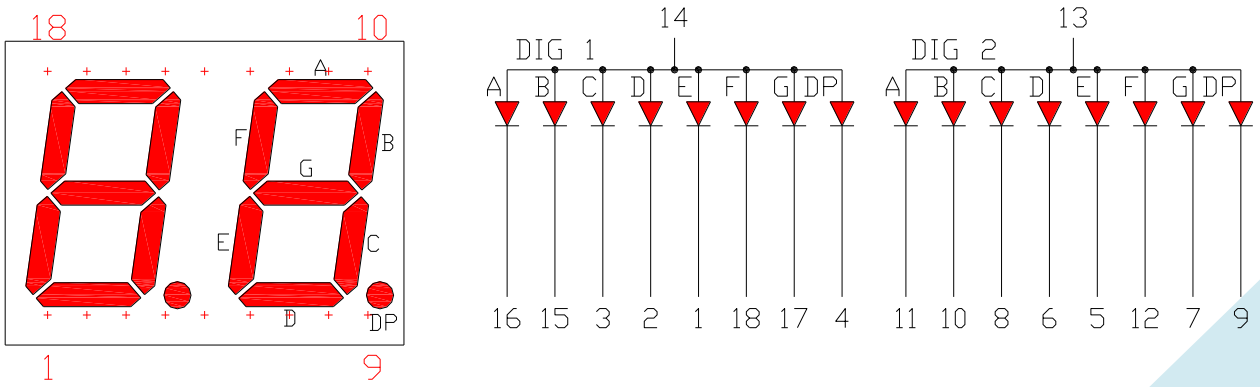
MECHANICAL DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are± 0.25 mm unless otherwise noted.

TYPICAL INTERNAL EQUIVALENT CIRCUIT



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LE: SUPER BRIGHT RED (AlGaInP/GaAs)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Maximum Rating	Unit
Power dissipation	P_{AD}	48	mW
Continuous forward current	I_{AF}	20	mA
Peak current (duty cycle 1/10, 1kHz)	I_{PF}	40	mA
Reverse voltage	V_R	5	V
Operating temperature	T_{OPR}	-40 to +85	°C
Storage temperature	T_{STG}	-40 to +85	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Type.	Max.	Unit
Forward Voltage	V_F	I_F =20mA	-	2.1	2.4	V
Reverse Current	I_R	V_R =5V	-	-	10	μA
Peak Wavelength	λ_P	I_F =20mA	-	632	-	nm
Dominant Wavelength	λ_D	I_F =20mA	619	624	629	nm
Luminous Intensity	I_V	I_F =20mA	-	60	-	mcd
Spectral Line Half-Bandwidth	$\Delta\lambda$	I_F =20mA	-	20	-	nm

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● LE: SUPER BRIGHT RED (AlGaInP/GaAs) CURVE

Typical Electro-optical Characteristic Curves

(25℃ Free Air Temperature Unless Otherwise Specified)

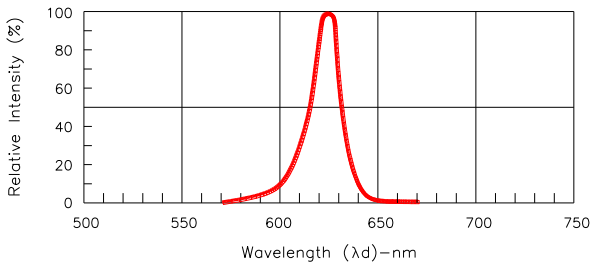

Fig.1—Relative Intensity VS. Wavelength

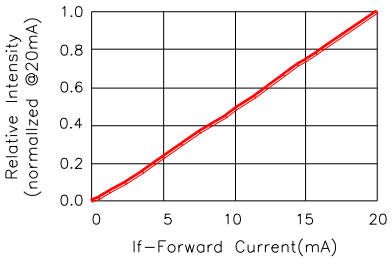

Fig.2—Relative Luminous Intensity vs. Forward Current

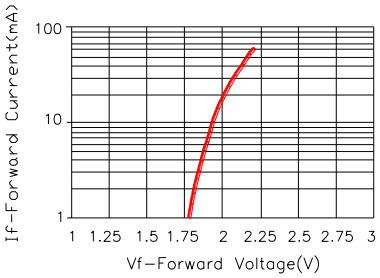

Fig.3—Forward Current vs. Forward Voltage

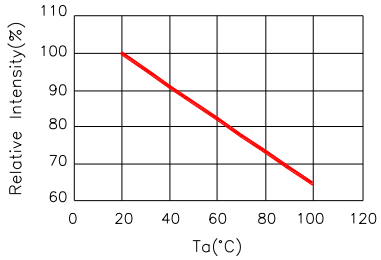

Fig.4—Relative Intensity(@20mA) vs. Ambient Temperature

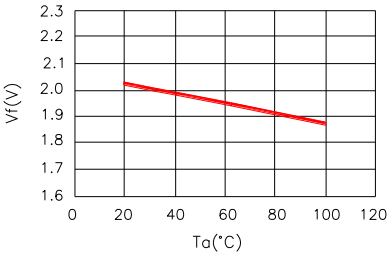

Fig.5—Forward Voltage(@20mA) vs. Ambient Temperature

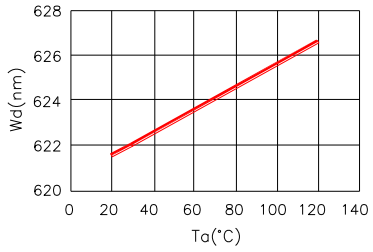

Fig.6—Dominant Wavelength(@20mA) VS. Ambient Temperature

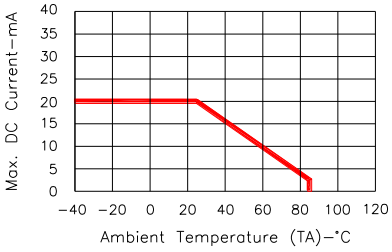

Fig.7—Max. Allowable DC Current VS. Ambient Temperature

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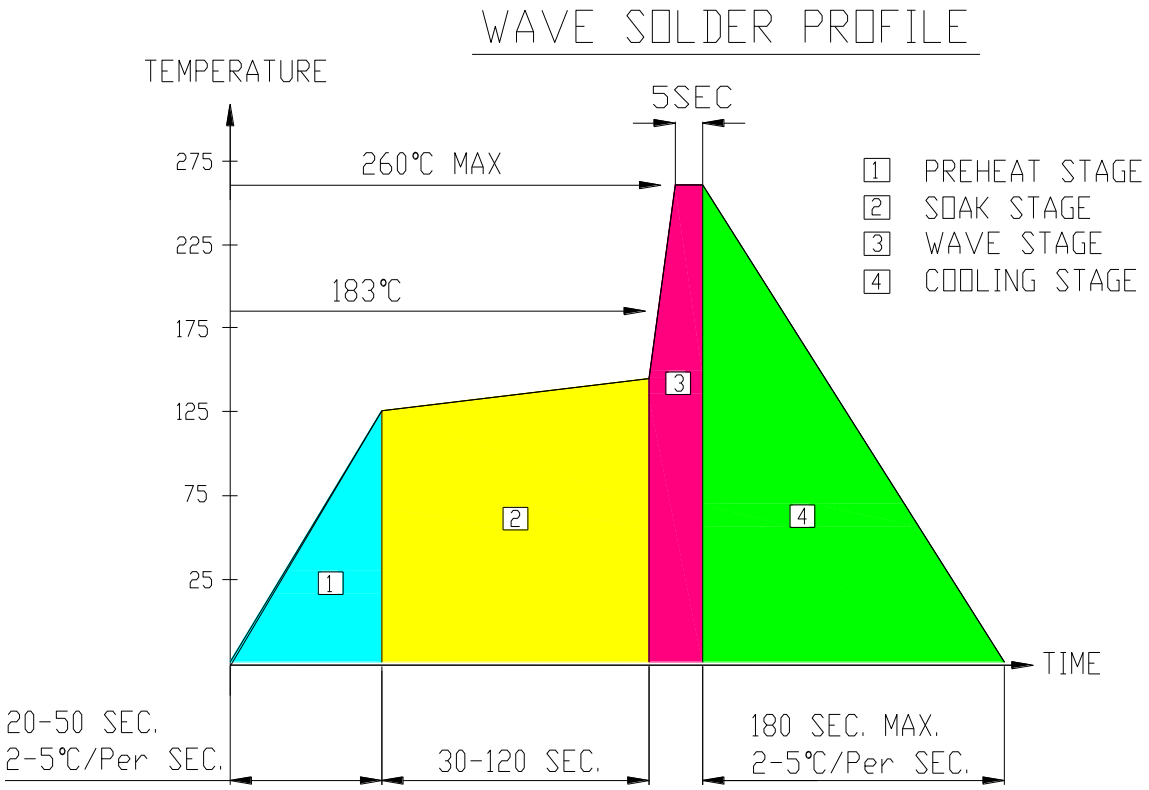
RECOMMEND SOLDERING PROFILE



Note:

- Recommend pre-heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C
- Peak wave soldering temperature between 245°C ~ 225°C for 3 sec (5 sec max)
- No more than one wave soldering pass

SOLDERING IRON

Basic spec is ≦4 sec when 260℃. If temperature is higher, time should be shorter (+10℃→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℃.

REWORK

Customer must finish rework within ≦3 sec under 350℃.
The head of soldering iron cannot touch copper foil.

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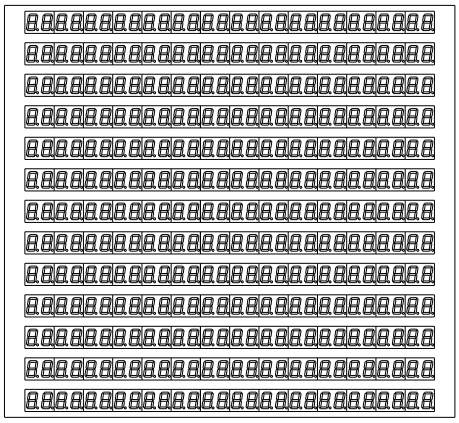
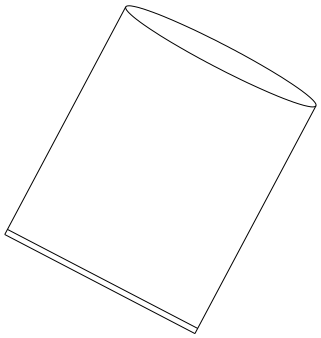
● ACKAGE DIMENSIONS

182 PCS (14X13) / 1 Polyform

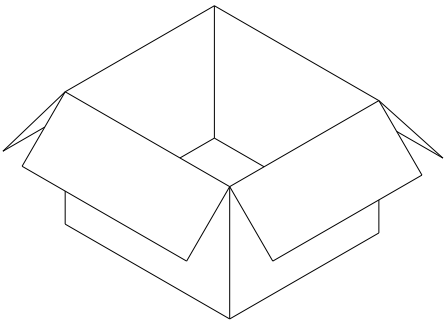


13 White Polyform / 1 BAG



BAG SIZE : 450X410X760

2366 PCS /1 OUTER CARTON



OUTER BOX SIZE : 430 x 390 x 300 mm

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