Opto Plus LED Corp.
0.8” Case Mold Type LED Display
OPD-AS8020UPG-GW
OPD-AS8021UPG-GW

EDIT HISTORY

Version A: Sep. 03, 2015

Preliminary Spec.

nufacture	Examination	Approving

Opto Plus LED Corp. 7-3, No.496 , Bannan Road, Jhonghe City, Taipei County 235, Taiwan (R.O.C) Tel: 886-2-2222-5698 Fax: 886-2-2222-2566

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OPD-AS8021UPG-GW

FEATURES

- 0.8 inch (20.32 mm) Digit Height.
- Low current operation..
- Case mold type.
- Gray face, White segment.
- RoHS compliant, Pb Free.

DESCRIPTION

The OPD-AS8020UPG-GW & OPD-AS8021UPG-GW is a 0.8 inch (20.32 mm) height alphanumeric display.

This device utilizes Pure Green LED chip which are made from InGaN on a transparent GaN substrate. The display has Gray face and White segment.

DEVICE

PART NO Pure Green	DESCRIPTION
OPD-AS8020UPG-GW	Common Anode
OPD-AS8021UPG-GW	Common Cathnode

RoHS Compliance **Pb free.**

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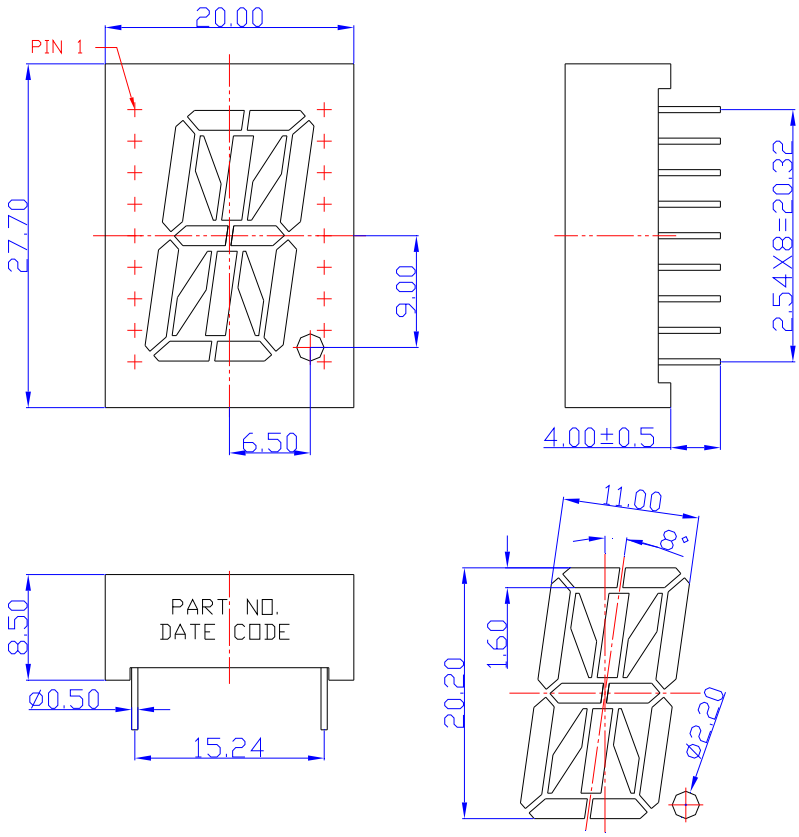
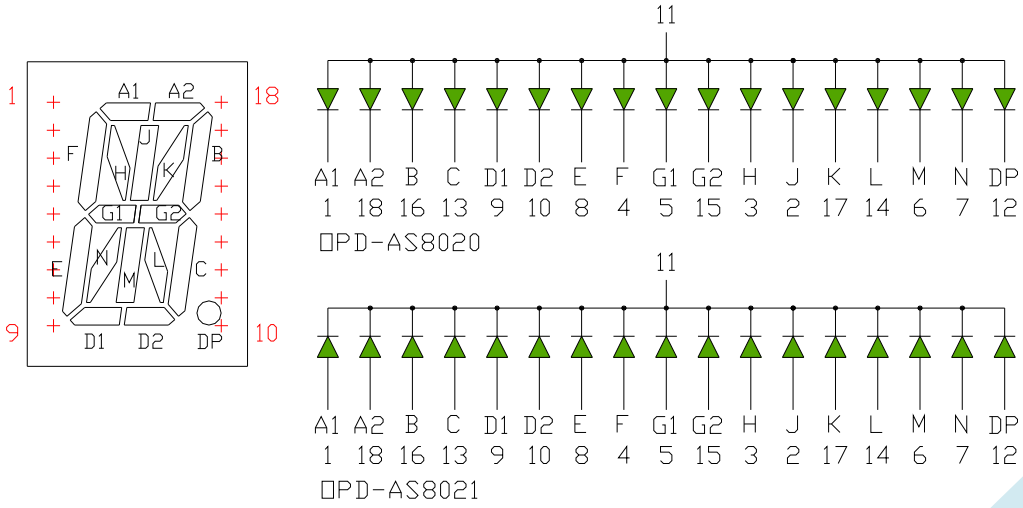
● MECHANICAL DIMENSIONS



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

● TYPICAL INTERNAL EQUIVALENT CIRCUIT



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● PG: PURE GREEN (InGaN/GaN)

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Pure Green	Unit
Power dissipation per dice	P_{AD}	120	mW
Derating liner from 25°C per dice	-	0.4	mA / °C
Continuous forward current per dice	I_{AF}	30	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I_{PF}	120	mA
Reverse voltage per dice	V_R	5	V
Operating temperature	T_{OPR}	-25 to +85	°C
Storage temperature	T_{STG}	-25 to +85	°C

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage	V_F	I_F =20mA	-	3.2	4.0	V
Reverse current	I_R	V_R =8V	-	-	10	μA
Dominant wavelength	λ_D	I_F =20mA	500	525	535	nm
Luminous intensity	I_V	I_F =20mA	-	200	-	mcd
Spectral radiation bandwidth	$\Delta\lambda$	I_F =20mA	-	30	-	nm

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● PG: PURE GREEN (InGaN/GaN) CURVE

Typical Electro-optical Characteristic Curves

(25℃ Free Air Temperature Unless Otherwise Specified)

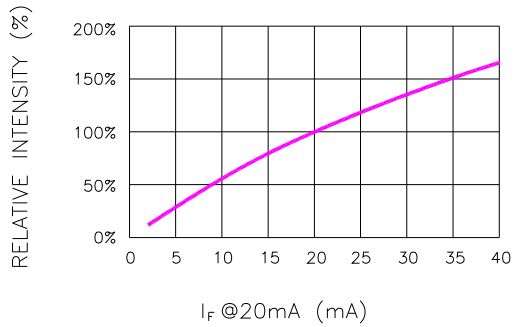

Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

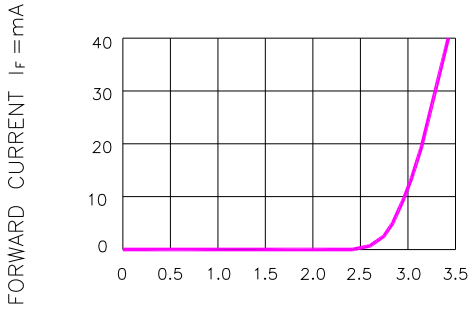

Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

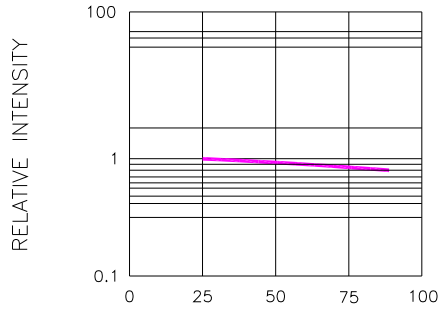

Fig.3 RELATIVE INTENSITY VS.LEAD TEMPERATURE
(PULSED 20 mA; 300us
PULSE,10ms PERIOD)

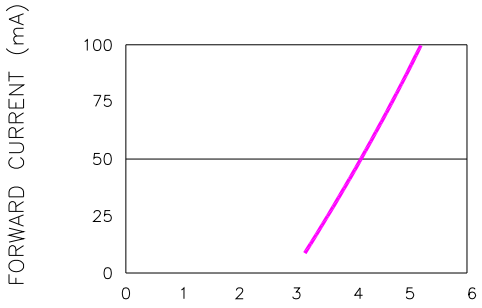

Fig.4 PEAK FORWARD VOLTAGE
VS.FORWARD(100us TEST PULSE,
1% DUTY CYCLE)

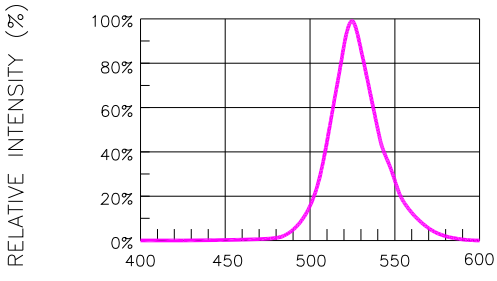

Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

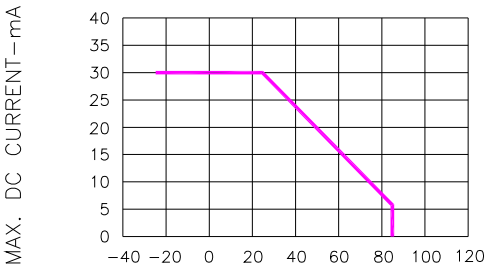

Fig.6 MAX. ALLOWABLE DC CURRENT
VS. AMBIENT TEMPERATURE

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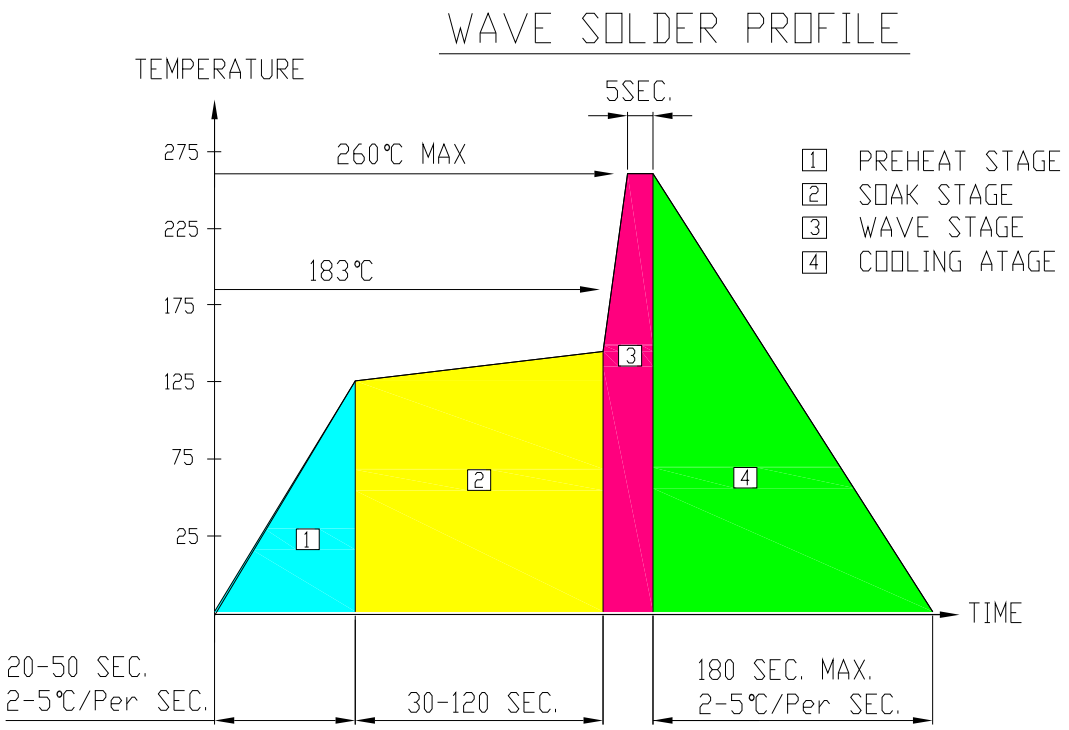
RECOMMEND SOLDERING PROFILE



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°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℃.
The head of soldering iron cannot touch copper foil.

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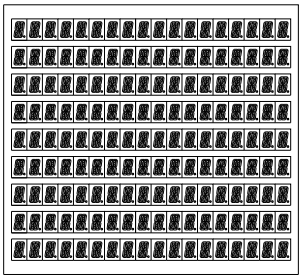
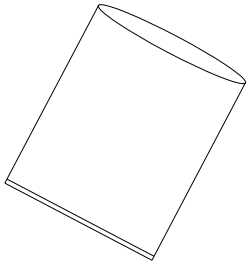
● PACKAGE DIMENSIONS

162 PCS **/** 1 Pink ESD Polyform (18 X 9 PCS)



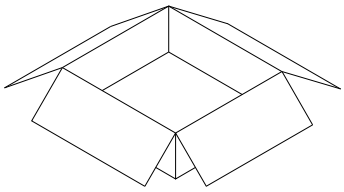
5 Pink ESD Polyform / 1 Pink BAG
810 PCS /1Inner Carton

A reference for packing within bag.

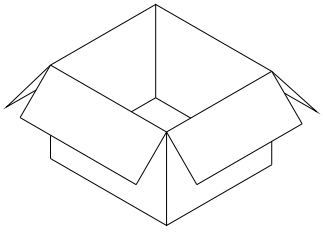


ESD BAG SIZE : 650 x 550 mm

810 PCS / 1 INNER CARTON & 1620 PCS / 2 INNER CARTON / 1 OUTER CARTON



INNER BOX SIZE : 394 x 370 x 138 mm



OUTER BOX SIZE : 430 x 390 x 300 mm

● Note:

LED DISPLAY STANDARD STORAGED CONDITION

Product in the original packaging material state is the recommended storage conditions.

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

If the storage conditions do not meet specification standards, the component pins may become oxidized requiring re-plating and re-sorting before use. Suggest customers consume LEDs as soon as possible, and avoid long-term storage of large inventories.

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