Opto Plus LED Corp.
1.8" Case Mold Type LED Display
OPD-S18012UPG-BW
OPD-S18013UPG-BW

FEATURES

- 1.8 inch (45.0mm) Digit Height.
- Low current operation.
- Case mold type.
- Black face, White segment.
- RoHS compliant, Pb Free.

DESCRIPTION

The OPD-S18012UPG-BW & OPD-S18013UPG-BW is a 1.8 inch (45.0 mm) height single 7-segment display.

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

DEVICE

PART NO Pure Green	DESCRIPTION
OPD-S18012UPG-BW	Common Anode
OPD-S18013UPG-BW	Common Cathode

RoHS Compliance **Pb free.**

Opto Plus LED Corp. 7F-3, No.496 , Bannan Road, Jhonghe Dist., New Taipei City 235, Taiwan (R.O.C)
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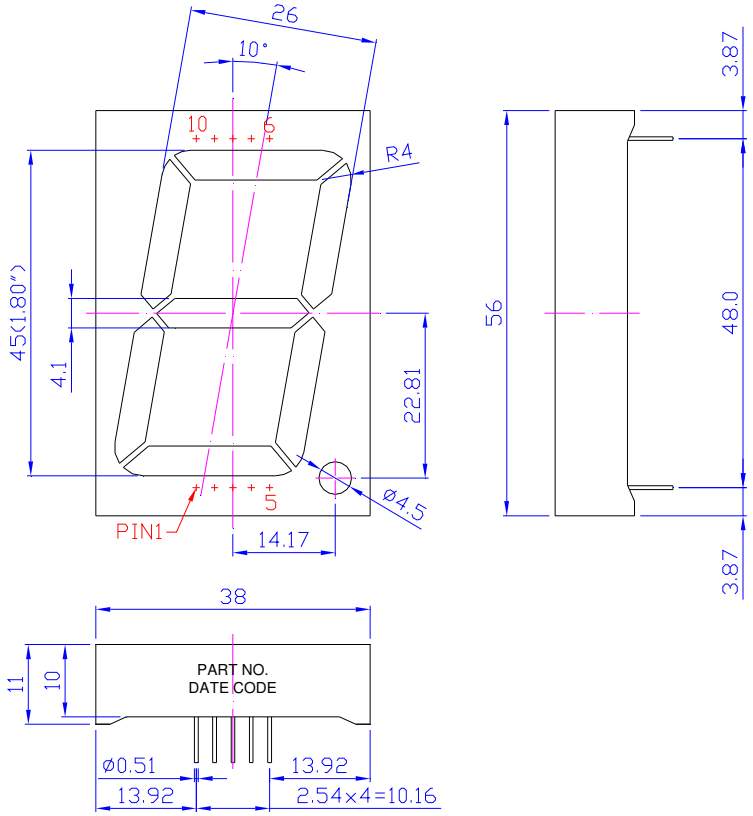
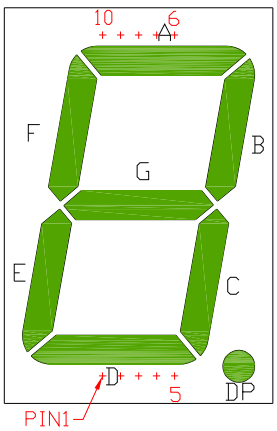
1.8” Case Mold Type LED Display
OPD-S18012UPG-BW
OPD-S18013UPG-BW

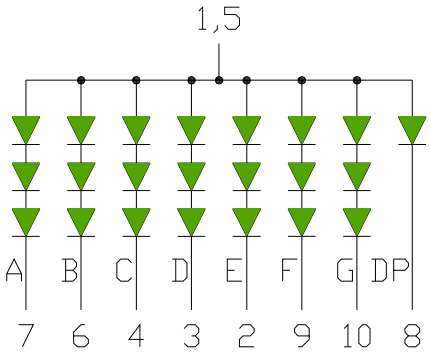
● MECHANICAL DIMENSIONS



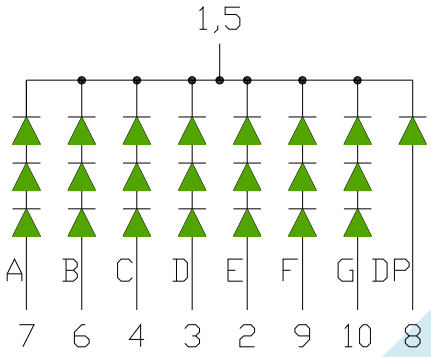
NOTES: All dimensions are in millimeters. Tolerances are± 0.25 mm unless otherwise noted.

● TYPICAL INTERNAL EQUIVALENT CIRCUIT





OPD-S18012



OPD-S18013

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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℃ per dice	-	0.3	mA / ℃
Continuous forward current per dice	I_{AF}	30	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I_{PF}	100	mA
Reverse voltage per dice	V_R	5	V
Operating temperature	T_{OPR}	-25 to +85	℃
Storage temperature	T_{STG}	-25 to +85	℃

ELECTRICAL - OPTICAL CHARACTERISTICS AT Ta=25°C

Characteristic	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward voltage per Segment (DP)	V_F	I_F =20mA	-	9.6 (3.2)	12.0 (4.0)	V
Reverse current per Segment (DP)	I_R	V_R =24V (V_R =8V)	-	-	10	μA
Dominant wavelength	λ_D	I_F =20mA	-	525	-	nm
Luminous intensity	I_V	I_F =20mA	-	250	-	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)

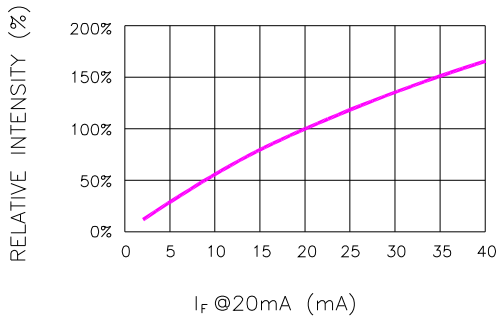

Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT

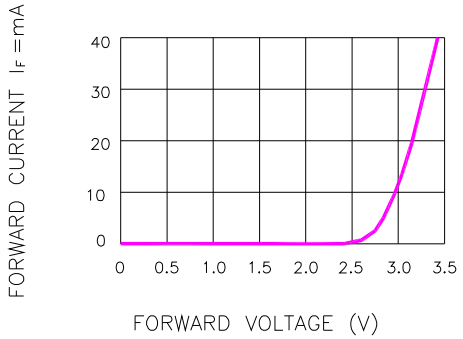

Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

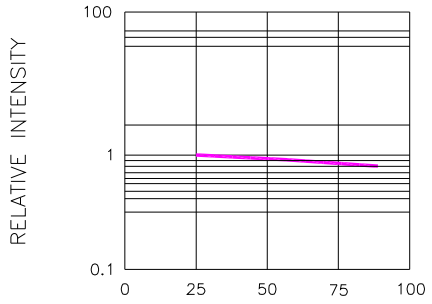

Fig.3 RELATIVE INTENSITY VS.LEAD TEMPERATURE
(PULSED 20 mA; 300us
PULSE,10ms PERIOD)

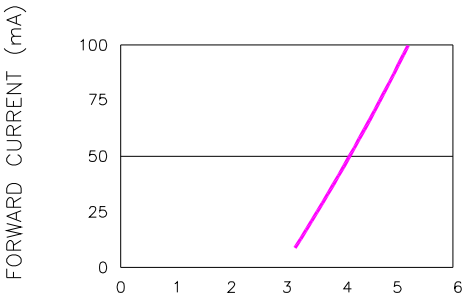

Fig.4 PEAK FORWARD VOLTAGE
VS.FORWARD(100us TEST PULSE,
1% DUTY CYCLE)

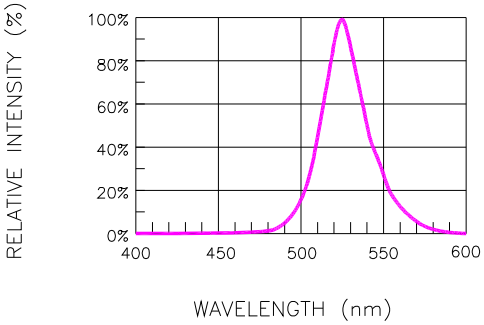

Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

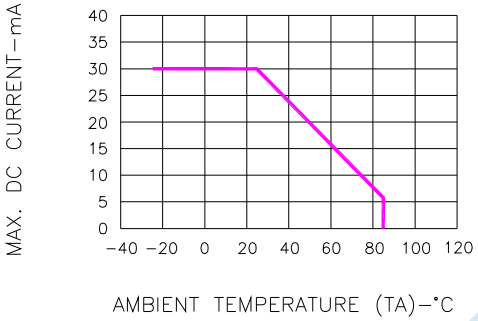

Fig.6 MAX. ALLOWABLE DC CURRENT
VS. AMBIENT TEMPERATURE

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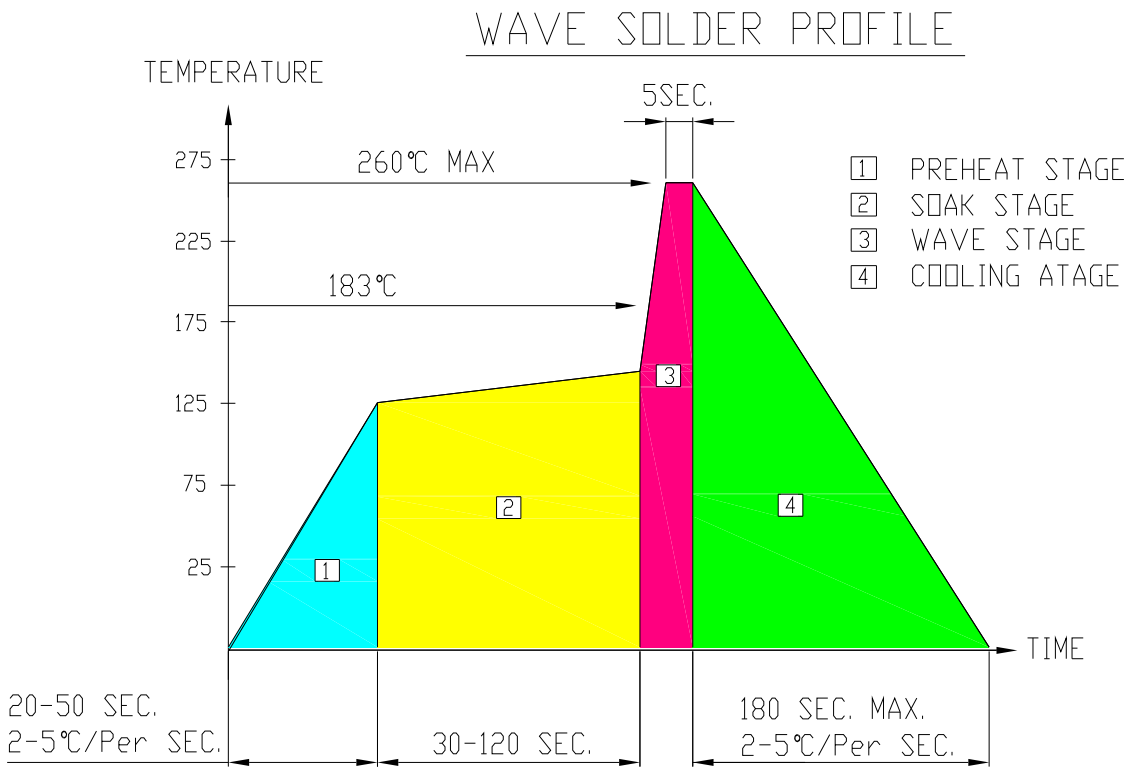
RECOMMEND SOLDERING PROFILE



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 ≦4 sec under 245℃.

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