



Opto Plus LED Corp.
1.2” 5 x 7 Dot Matrix LED Display
OPD-M35722SRG-GW
OPD-M35723SRG-GW

● **FEATURES**

- 1.2 inch (30.42 mm) Matrix Height.
- Stackable vertically and horizontally.
- 5x7 array with X-Y select.
- Wide viewing angle.
- Gray face, White dot.
- Case mold type.
- RoHS compliant, Pb Free.

● **DESCRIPTION**

The OPD-M35722SRG-GW & OPD-M35723SRG-GW is a 1.2 inch (30.42 mm) 5x7 dot matrix display.

This device utilizes Super Red LED chip which are made from AlGaAs on a transparent GaAs,SH substrate, and Yellow Green LED chip which are made from GaP on a transparent GaP substrate. The display has Gray face, White dot.

● **DEVICE**

PART NO	DESCRIPTION
Super Red & Yellow Green	
OPD-M35722SRG-GW	Anode Column Cathode Row
OPD-M35723SRG-GW	Anode Row Cathode Column

RoHS Compliance

Pb free.





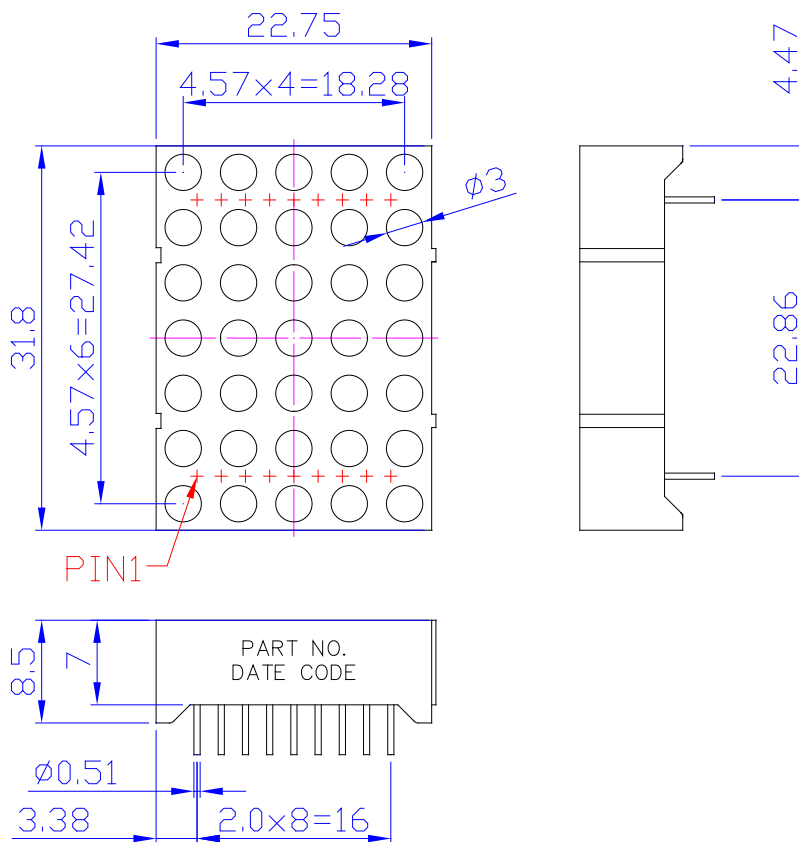
Opto Plus LED Corp.

1.2" 5 x 7 Dot Matrix LED Display

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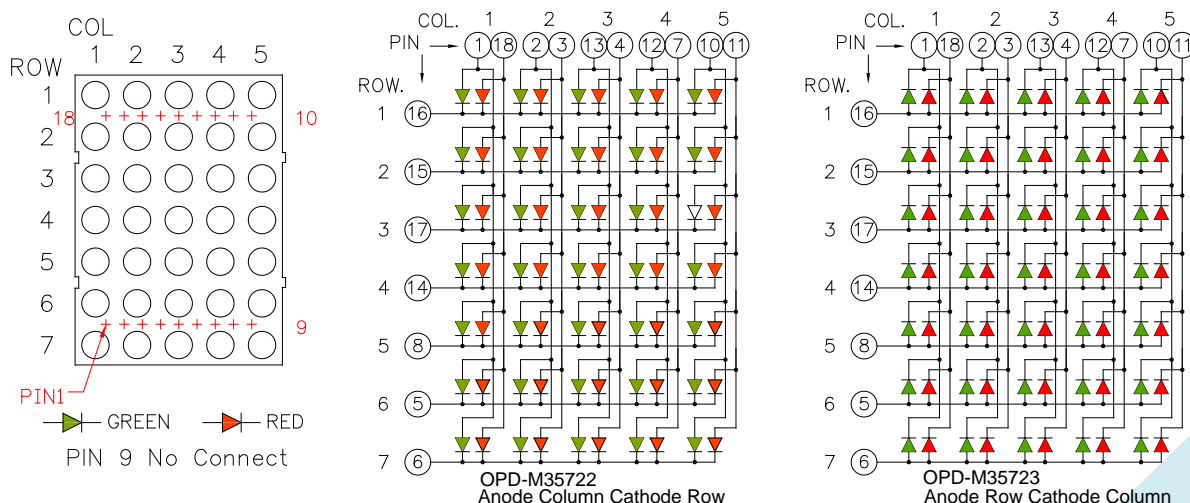
OPD-M35723SRG-GW

● MECHANICAL DIMENSIONS



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

● TYPICAL INTERNAL EQUIVALENT CIRCUIT





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● **SR: SUPER RED (AlGaAs/GaAs,SH)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Super Red	Unit
Power dissipation per dice	P_{AD}	75	mW
Derating Liner from 25°C per dice	-	0.42	mA/°C
Continuous forward current per dice	I_{AF}	30	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I_{PF}	200	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	$I_F = 20mA$	-	1.8	2.6	V
Reverse current	I_R	$V_R = 5V$	-	-	10	μA
Peak wavelength	λ_P	$I_F = 20mA$	-	655	-	nm
Dominant wavelength	λ_d	$I_F = 20mA$	-	644	-	nm
Luminous intensity	I_V	$I_F = 20mA$	-	15	-	mcd
Spectral radiation bandwidth	$\Delta\lambda$	$I_F = 20mA$	-	20	-	nm



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● **G: YELLOW GREEN (GaP/GaP)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Yellow Green	Unit
Power dissipation per dice	P _{AD}	70	mW
Derating Liner from 25°C per dice	-	0.33	mA/°C
Continuous forward current per dice	I _{AF}	25	mA
Peak current per dice (duty cycle 1/10, 1kHz)	I _{PF}	90	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	-	2.0	2.6	V
Reverse current	I _R	V _R =5V	-	-	10	μA
Peak wavelength	λ _P	I _F =20mA	-	568	-	nm
Dominant wavelength	λ _D	I _F =20mA	-	570	-	nm
Luminous intensity	I _V	I _F =20mA	-	8	-	mcd
Spectral radiation bandwidth	Δλ	I _F =20mA	-	30	-	nm



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● SR: SUPER RED (AlGaAs/GaAs, SH)

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

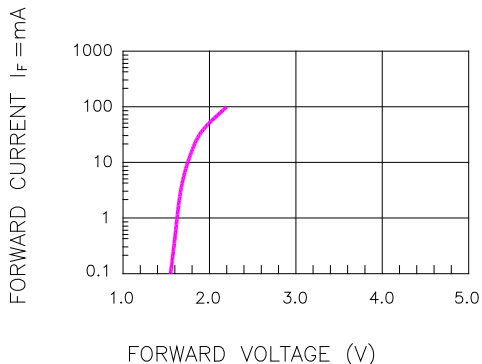


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

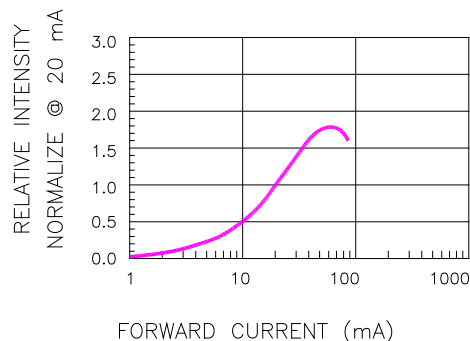


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

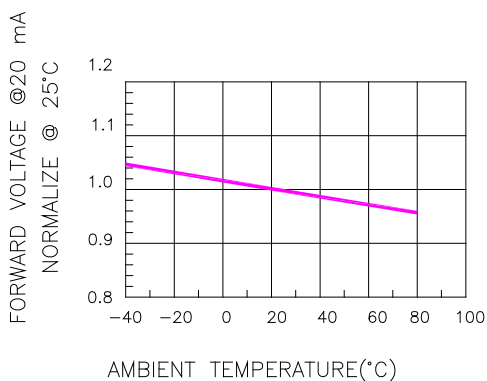


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

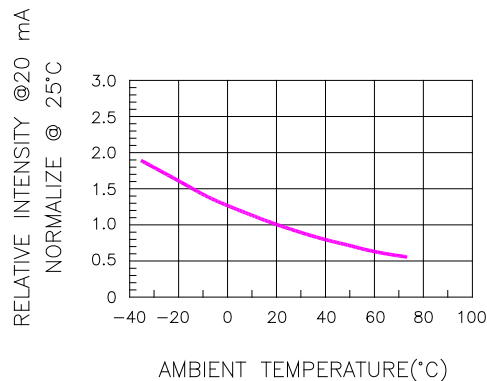


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

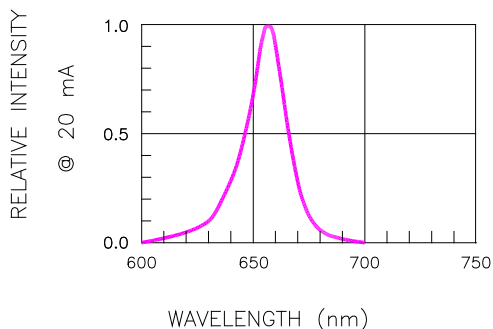


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

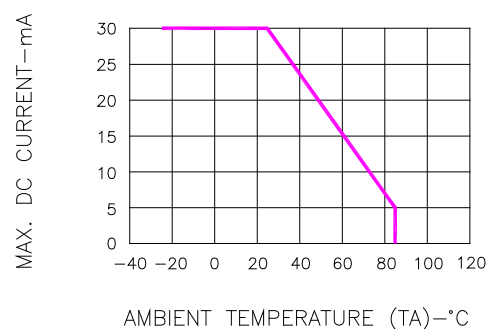


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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● G: YELLOW GREEN (GaP/GaP) CURVE

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

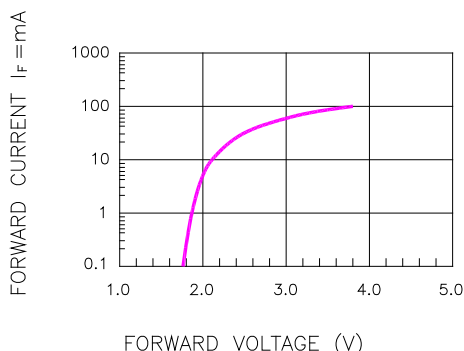


Fig.1 FORWARD CURRENT VS. FORWARD VOLTAGE

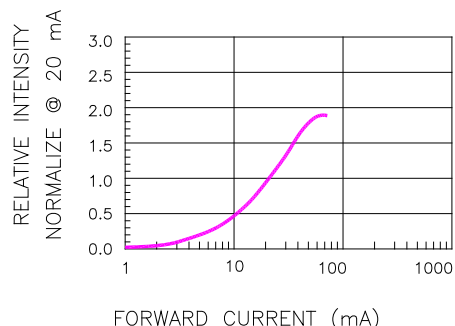


Fig.2 RELATIVE INTENSITY VS. FORWARD CURRENT

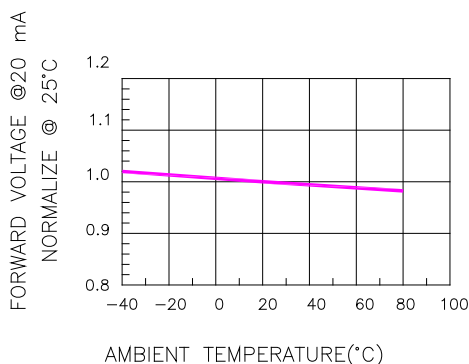


Fig.3 FORWARD VOLTAGE VS. TEMPERATURE

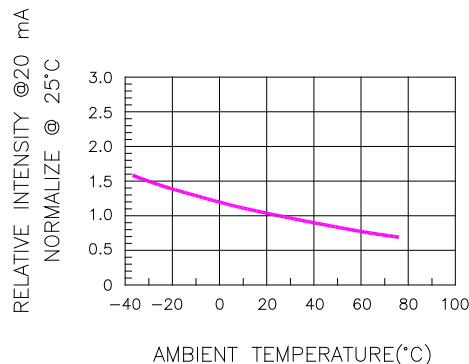


Fig.4 RELATIVE INTENSITY VS. TEMPERATURE

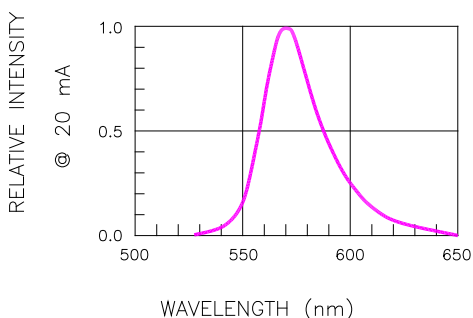


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

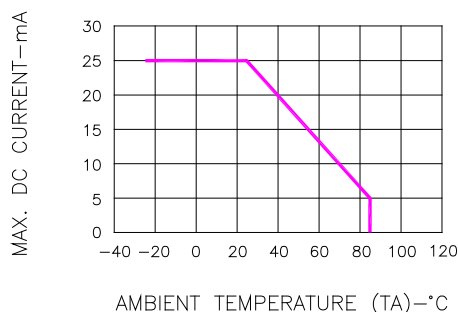


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



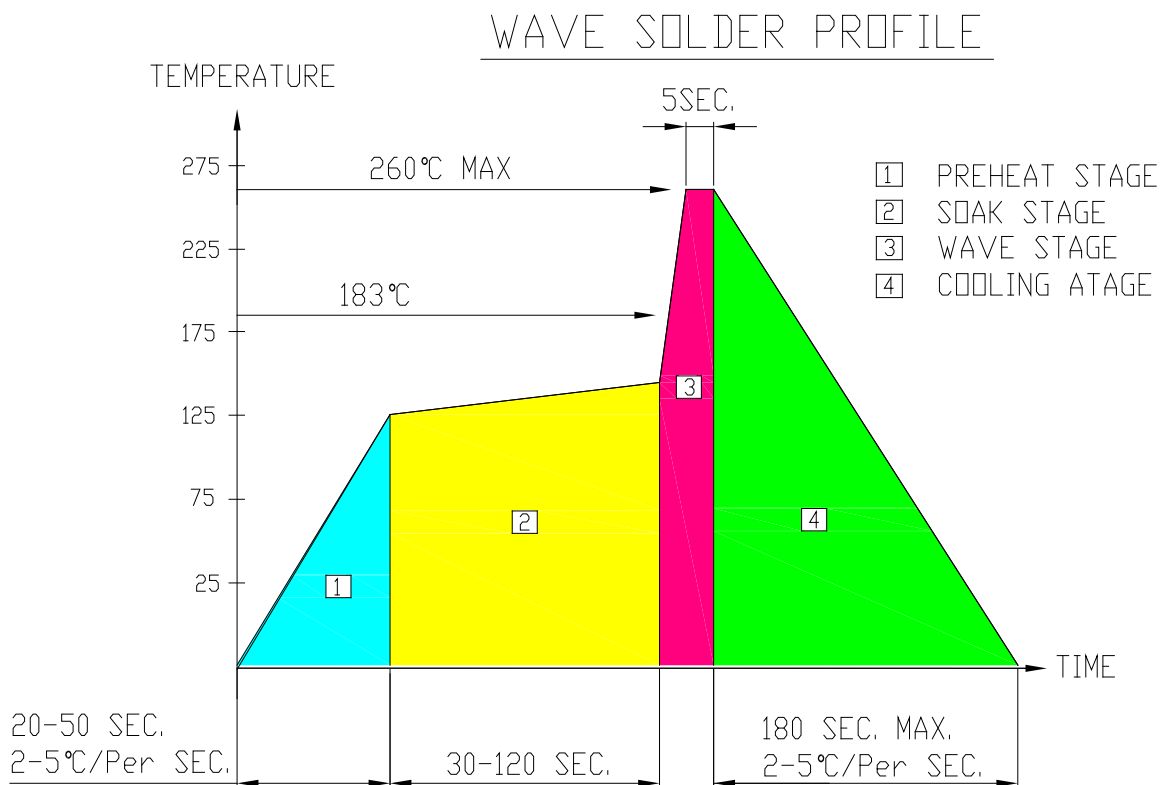
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● RECOMMEND SOLDERING PROFILE



● 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°C.