



Opto Plus LED Corp.
1.2” 5 x 7 Dot Matrix LED Display
OPD-M35720LB-GW
OPD-M35721LB-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-M35720LB-GW & OPD-M35721LB-GW is a 1.2 inch (30.42 mm) 5x7 dot matrix display.

This device utilizes Super Bright Blue LED chip which are made from InGaN on a transparent GaN. The display has Gray face, White dot.

● **DEVICE**

PART NO Super Bright Blue	DESCRIPTION
OPD-M35720LB-GW	Anode Column Cathode Row
OPD-M35721LB-GW	Anode Row Cathode Column

RoHS Compliance



Pb free.





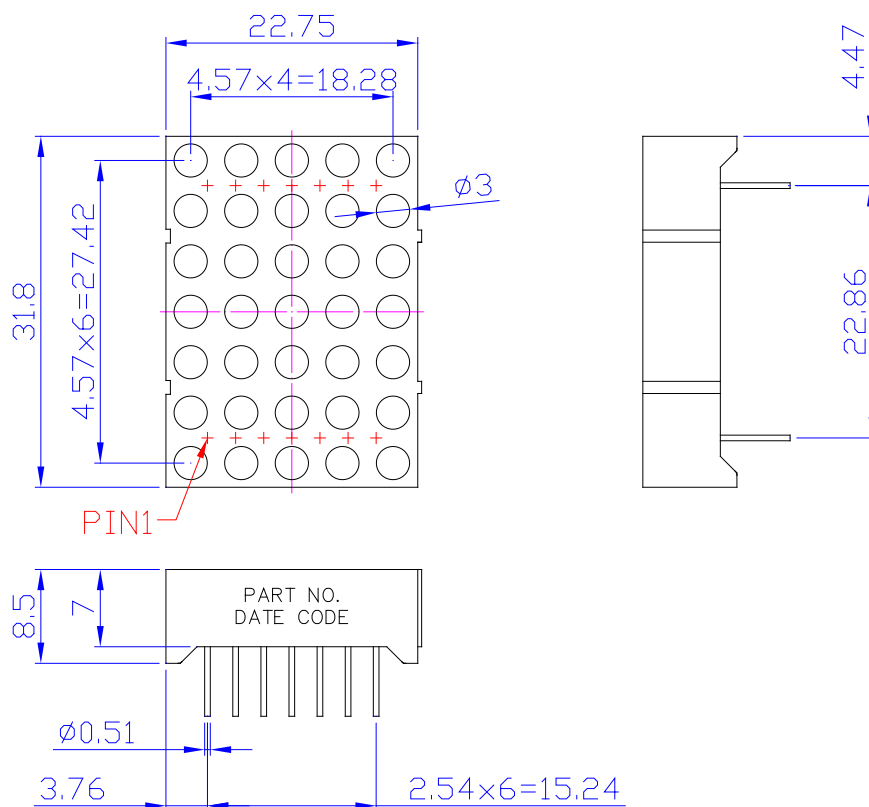
Opto Plus LED Corp.

1.2" 5 x 7 Dot Matrix LED Display

OPD-M35720LB-GW

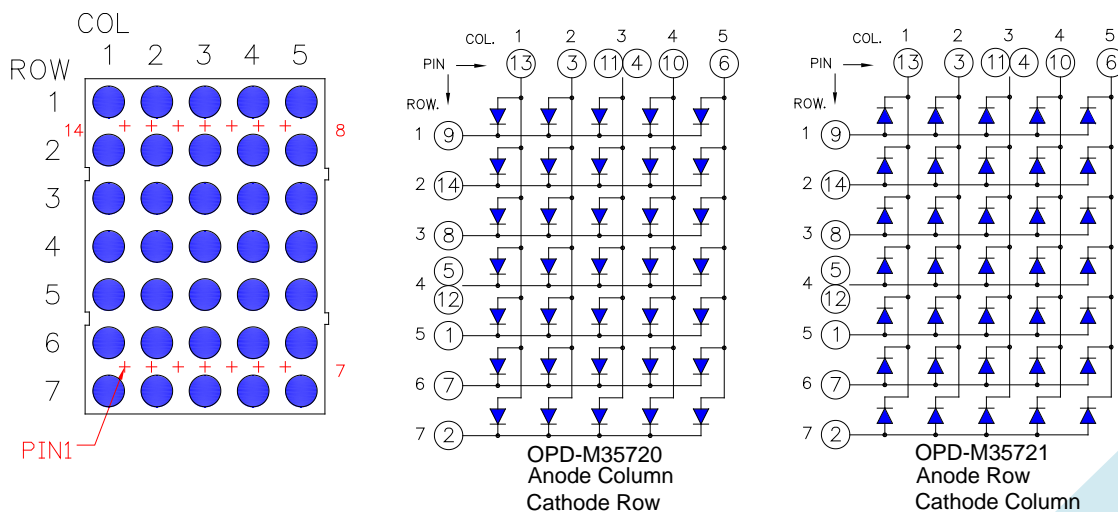
OPD-M35721LB-GW

● MECHANICAL DIMENSIONS



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

● TYPICAL INTERNAL EQUIVALENT CIRCUIT





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● **LB: SUPER BRIGHT BLUE (InGaN/GaN)**

ABSOLUTE MAXIMUM RATING AT Ta=25°C

Parameter	Symbol	Super Bright Blue	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}	100	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	-	470	-	nm
Luminous intensity	I _v	I _F =20mA	-	80	-	mcd
Spectral radiation bandwidth	Δλ	I _F =20mA	-	30	-	nm



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● LB: SUPER BRIGHT BLUE (InGaN/GaN) CURVE

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

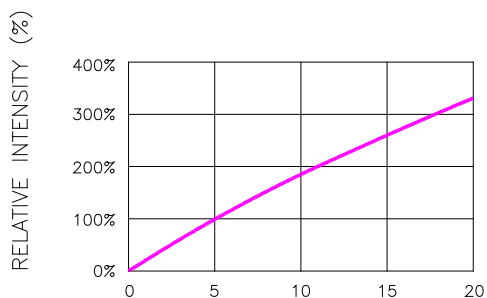


Fig.1 RELATIVE INTENSITY VS. FORWARD CURRENT
 $I_F @ 20mA$ (mA)

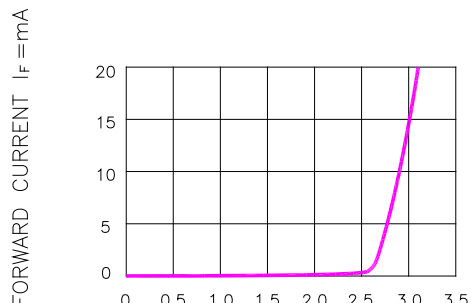


Fig.2 FORWARD CURRENT VS. FORWARD VOLTAGE

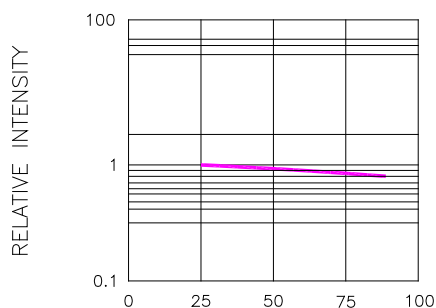


Fig.3 RELATIVE INTENSITY VS. LEAD TEMPERATURE
(PULSED 20 mA; 300us PULSE, 10ms PERIOD)

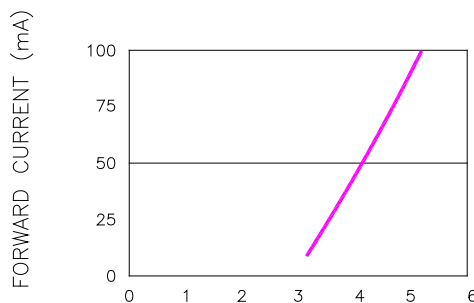


Fig.4 PEAK FORWARD VOLTAGE VS. FORWARD (100us TEST PULSE, 1% DUTY CYCLE)

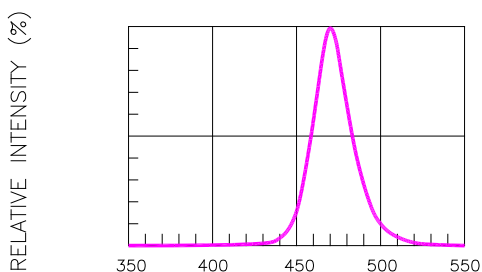


Fig.5 RELATIVE INTENSITY VS. WAVELENGTH

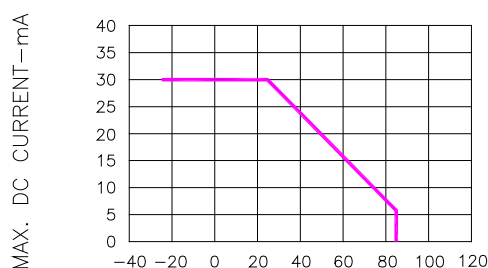


Fig.6 MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE



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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°C.