

## LED DOT MATRIX

BL-M11X571

### Features:

- 30.42mm (1.1") Φ3.0 dot matrix LED display.
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C. Boards or sockets.
- I.C. Compatible.
- ROHS Compliance.



### Super Bright

Electrical-optical characteristics: (Ta=25° C) (Test Condition: IF=20mA)

Part No		Chip			VF Unit:V		Iv
Row Cathode	Column Anode	Row Anode	Column Cathode	Emitted Color	Material	λ <sub>p</sub> (nm)	TYP.(mcd)
BL-M11A571S-XX		BL-M11B571S-XX		Hi Red	GaAlAs/GaAs,SH	660	100
BL-M11A571D-XX		BL-M11B571D-XX		Super Red	GaAlAs/GaAs,DH	660	110
BL-M11A571UR-XX		BL-M11B571UR-XX		Ultra Red	GaAlAs/GaAs,DDH	660	120
BL-M11A571E-XX		BL-M11B571E-XX		Red	GaAsP/GaP	635	90
BL-M11A571Y-XX		BL-M11B571Y-XX		Yellow	GaAsP/GaP	585	90
BL-M11A571G-XX		BL-M11B571G-XX		Green	GaP/GaP	570	95

### Ultra Bright

Electrical-optical characteristics: (Ta=25° C) (Test Condition: IF=20mA)

Part No		Chip			VF Unit:V		Iv
Row Cathode	Column Anode	Row Anode	Column Cathode	Emitted Color	Material	λ <sub>p</sub> (nm)	TYP.(mcd)
BL-M11A571UHR-XX		BL-M11B571UHR-XX		Ultra Red	AlGaInP	645	120
BL-M11A571UE-XX		BL-M11B571UE-XX		Ultra Red	AlGaInP	630	100
BL-M11A571YO-XX		BL-M11B571YO-XX		Ultra Amber	AlGaInP	619	100
BL-M11A571UY-XX		BL-M11B571UY-XX		Ultra Yellow	AlGaInP	590	100
BL-M11A571UG-XX		BL-M11B571UG-XX		Ultra Green	AlGaInP	574	130
BL-M11A571PG-XX		BL-M11B571PG-XX		Ultra Pure Green	InGaN	525	150
BL-M11A571B-XX		BL-M11B571B-XX		Ultra Blue	InGaN	470	70
BL-M11A571W-XX		BL-M11B571W-XX		Ultra White	InGaN	/	100

-XX: Surface / Lens color:

Number	0	1	2	3	4	5
Ref Surface Color	White	Black	Gray	Red	Green	
Epoxy Color	Water clear	White diffused	Red Diffused	Green Diffused	Yellow Diffused	

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**Absolute maximum ratings (Ta=25°C)**

Parameter	S	D	UR	E	Y	G	Unit
Forward Current $I_F$	25	25	25	25	25	30	mA
Power Dissipation $P_d$	60	60	60	60	60	65	mW
Reverse Voltage $V_R$	5	5	5	5	5	5	V
Peak Forward Current $I_{PF}$ (Duty 1/10 @1KHZ)	150	150	150	150	150	150	mA
Operation Temperature $T_{OPR}$	-40 to +80						°C
Storage Temperature $T_{STG}$	-40 to +85						°C
Lead Soldering Temperature $T_{SOL}$	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)						°C

**■ Absolute maximum ratings (Ta=25°C)**

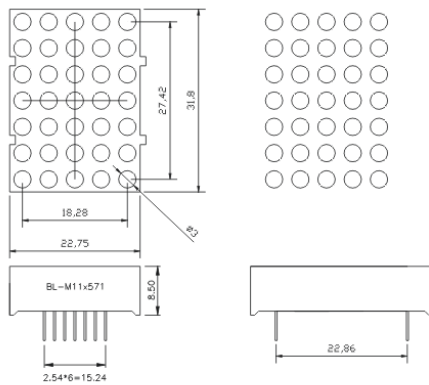
Parameter	UHR	UE	YO	UY	UG	PG	B	W	Unit
Forward Current $I_F$	30	30	30	30	30	30	30	30	mA
Power Dissipation $P_d$	75	65	65	65	75	110	120	120	mW
Reverse Voltage $V_R$	5	5	5	5	5	5	5	5	V
Peak Forward Current $I_{PF}$ (Duty 1/10 @1KHZ)	150	150	150	150	150	150	100	100	mA
Operation Temperature $T_{OPR}$	-40 to +80								°C
Storage Temperature $T_{STG}$	-40 to +85								°C
Lead Soldering Temperature $T_{SOL}$	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)								°C

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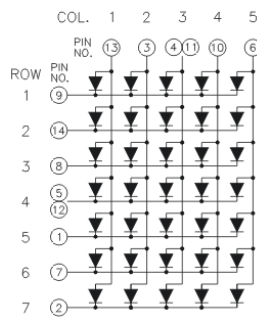
BL-M11X571

## ■ Package configuration & Internal circuit diagram

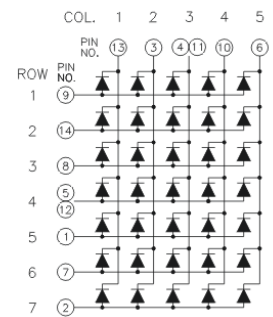
BL-M11X571 Series



BL-M11A571



BL-M11B571



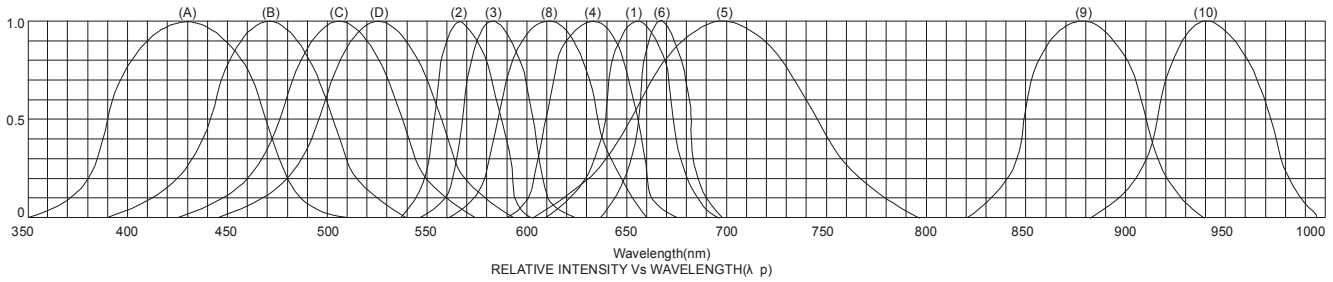
### Notes:

1. All dimensions are in millimeters (inches)
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Specifications are subject to change without notice.

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## Typical electrical-optical characteristics curves:



- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) - GaN/SiC 430nm/Blue
- (B) - InGaN/SiC 470nm/Blue
- (C) - InGaN/SiC 505nm/Ultra Green
- (D) - InGaN/SiC 525nm/Ultra Green



FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



AMBIENT TEMPERATURE Ta(°C)  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta(°C)



NOTE: 25°C free air temperature unless otherwise specified

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## ■ Packing and weighting

