

LED DOT MATRIX

BL-M23E881XXX

Features:

- 60.20mm (2.3") Φ 5.0 dot matrix LED display, RGB COLOR
- Low current operation.
- Excellent character appearance.
- Easy mounting on P.C. Boards or sockets.
- I.C. Compatible.
- ROHS Compliance.



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

Part No		Chip			VF Unit:V		Iv TYP.(mcd)
Row Cathode Column Anode	Row Anode Column Cathode	Emitted Color	Material	λ_p (nm)	Typ	Max	
BL-M23E881RGB- XX	BL-M23F881RGB- XX	Super Red	GaAlAs/GaAs,DH	660	1.85	2.20	280
		Green	GaP/GaP	570	2.20	2.50	250
		Ultra Blue	InGaN	470	2.70	4.20	150
BL-M23E881DUGU B-XX	BL-M23F881DUGU B-XX	Ultra Red	GaAlAs/GaAs,DDH	660	1.85	2.20	310
		Ultra Green	AlGaInP	574	2.20	2.50	380
		Ultra Blue	InGaN	470	2.70	4.20	270

--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	

■ Absolute maximum ratings (Ta=25°C)

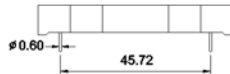
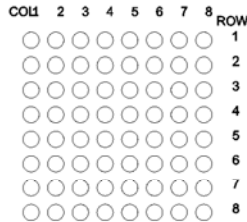
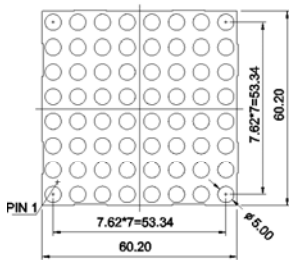
Parameter	S	G	B		D	UG	UB	Unit
Forward Current I_F	25	30	30		25	30	30	mA
Power Dissipation P_d	60	65	120		60	75	120	mW
Reverse Voltage V_R	5	5	5		5	5	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	150	150	100		150	150	100	mA
Operation Temperature T_{OPR}	-40 to +80							°C
Storage Temperature T_{STG}	-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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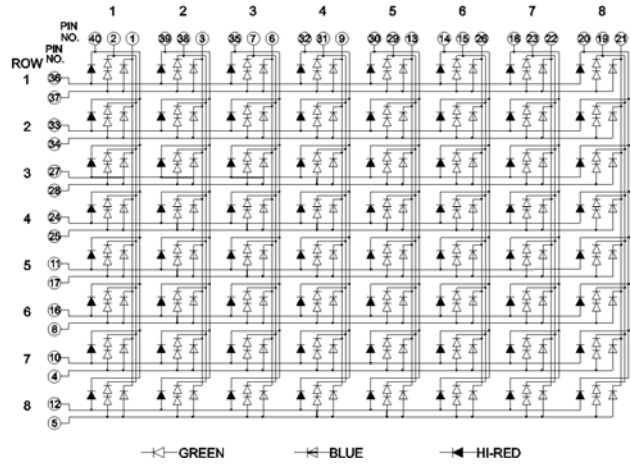
BL-M23E881XXX

■ Package configuration & Internal circuit diagram

BL-M23X881 Series



BL-M23F881 (BL-M23E881 C.C.)



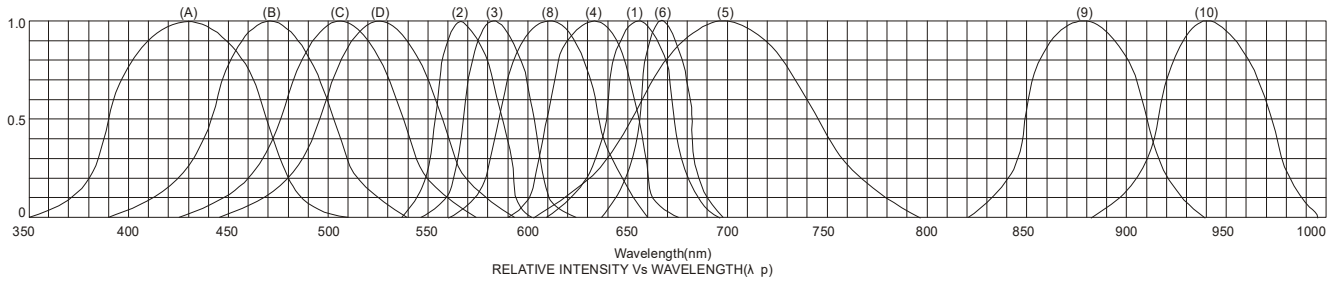
Notes:

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.

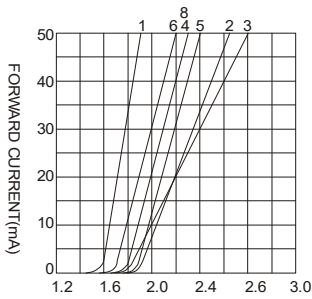
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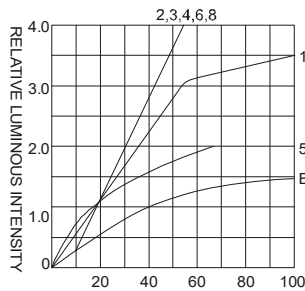
Typical electrical-optical characteristics curves:



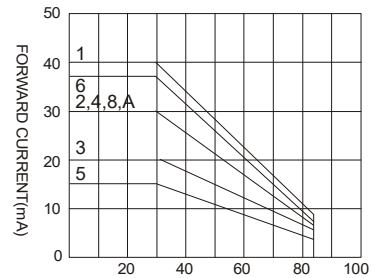
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



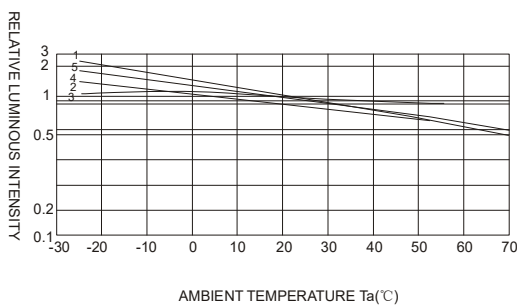
FORWARD VOLTAGE (Vf)
FORWARD CURRENT VS.
FORWARD VOLTAGE



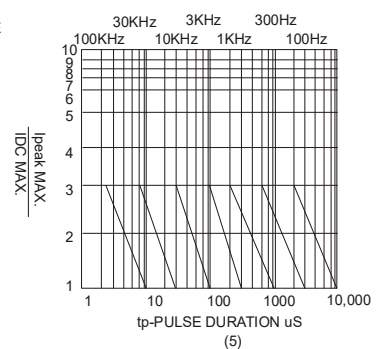
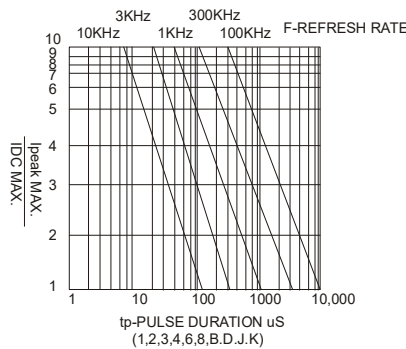
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



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**

