

## LED DOT MATRIX

BL-M19X881XXX

### Features:

- Ø 46.80mm (1.9") 1/4.8 dot matrix LED display, RGB COLOR
- Ø Low current operation.
- Ø Excellent character appearance.
- Ø Easy mounting on P.C. Boards or sockets.
- Ø I.C. Compatible.
- Ø ROHS Compliance.



### 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	Max	TYP.(mcd )
BL-M19A881RGB- XX	BL-M19B881RGB- XX	Super Red	GaAlAs/GaAs,DH	660	1.85	2.20	270
		Green	GaP/GaP	570	2.20	2.50	240
		Ultra Blue	InGaN	470	2.70	4.20	150
BL-M19A881DUGU B-XX	BL-M19B881DUGU 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)

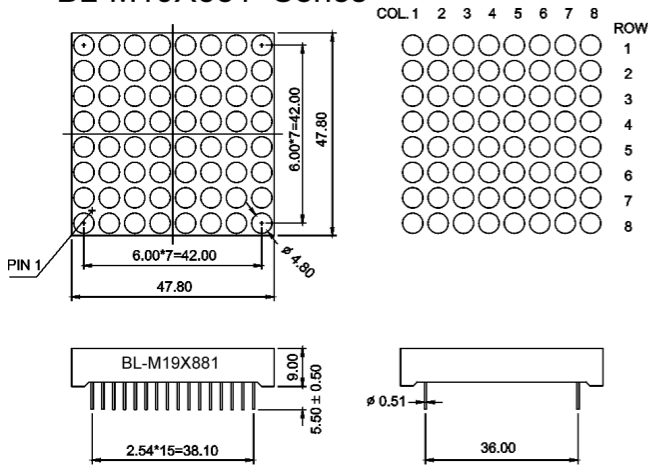
Parameter	S	G	B		D	UG	UB	Unit
Forward Current I <sub>F</sub>	25	30	30		25	30	30	mA
Power Dissipation P <sub>d</sub>	60	65	120		60	75	120	mW
Reverse Voltage V <sub>R</sub>	5	5	5		5	5	5	V
Peak Forward Current I <sub>PF</sub> (Duty 1/10 @1KHZ)	150	150	100		150	150	100	mA
Operation Temperature T <sub>OPR</sub>	-40 to +80							°C
Storage Temperature T <sub>STG</sub>	-40 to +85							°C
Lead Soldering Temperature T <sub>SOL</sub>	Max.260±5°C for 3 sec Max. (1.6mm from the base of the epoxy bulb)							°C

# LED DOT MATRIX

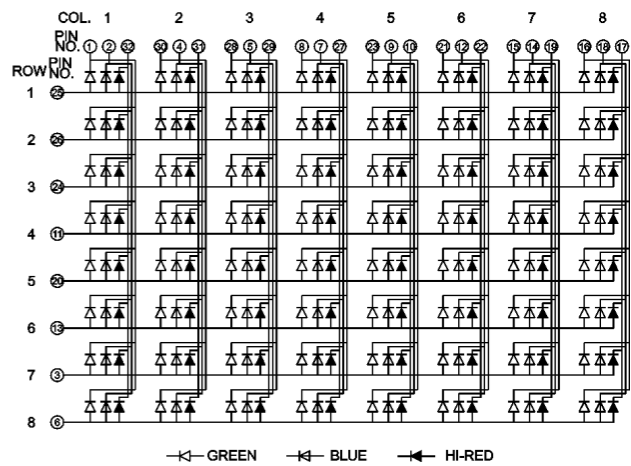
BL-M19X881XXX

## Package configuration & Internal circuit diagram

### BL-M19X881 Series



### BL-M19B881XXX (BL-M19A881XXX 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.

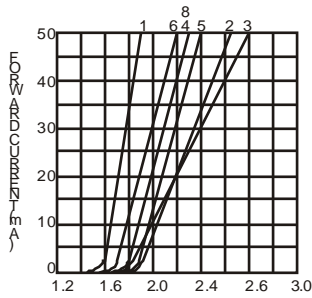
# LED DOT MATRIX

**BL-M19X881 XXX**

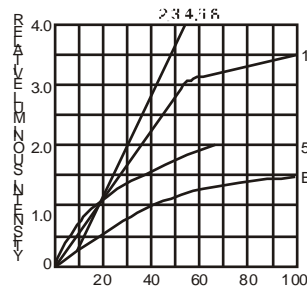
## Typical electrical-optical characteristics curves:



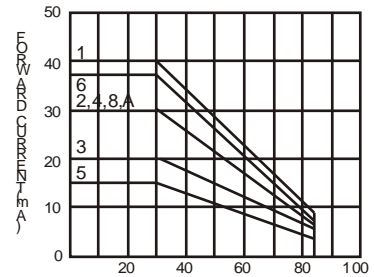
- (1) - GaAsP/GaAs 655nm/Red
- (2) - GaP 570nm/Yellow Green
- (3) - GaAsP/GaP 585nm/Yellow
- (4) - GaAsP/GaP 635nm/Orange & Hi-Eff Red
- (5) - GaP 700nm/Bright Red
- (6) - GaAlAs/GaAs 660nm/Super Red
- (8) - GaAsP/GaP 610nm/Super Red
- (9) - GaAlAs 880nm
- (10) - GaAs/GaAs & GaAlAs/GaAs 940nm
- (A) -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



FORWARD VOLTAGE (Vf)  
FORWARD CURRENT VS.  
FORWARD VOLTAGE



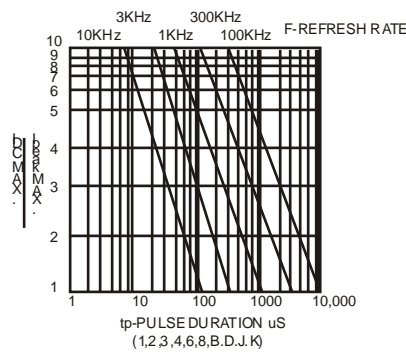
FORWARD CURRENT (mA)  
RELATIVE LUMINOUS  
INTENSITY VS. FORWARD  
CURRENT



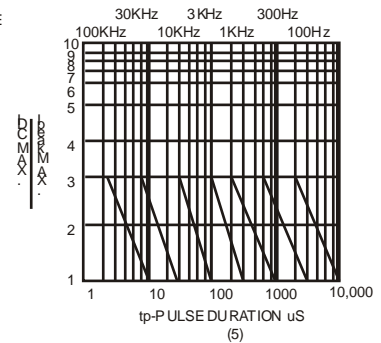
AMBIENT TEMPERATURE Ta ( °C )  
FORWARD CURRENT VS. AMBIENT  
TEMPERATURE



AMBIENT TEMPERATURE Ta ( °C )



tp-PULSE DURATION  $\mu$ S  
(1,2,3,4,6,8,B,D,J,K)



(5)

NOTE:25 free air temperature unless otherwise specified

**LED DOT MATRIX**

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**Packing and weighting**

