

LED DOT MATRIX

BL-M46X581

Features:

- 121.50mm (4.6") Φ10.0 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 _p (nm)	TYP.(mcd)
BL-M46A581S-XX		BL-M46B581S-XX		Hi Red	GaAlAs/GaAs,SH	660	155
BL-M46A581D-XX		BL-M46B581D-XX		Super Red	GaAlAs/GaAs,DH	660	180
BL-M46A581UR-XX		BL-M46B581UR-XX		Ultra Red	GaAlAs/GaAs,DDH	660	230
BL-M46A581E-XX		BL-M46B581E-XX		Red	GaAsP/GaP	635	120
BL-M46A581Y-XX		BL-M46B581Y-XX		Yellow	GaAsP/GaP	585	120
BL-M46A581G-XX		BL-M46B581G-XX		Green	GaP/GaP	570	140

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 _p (nm)	TYP.(mcd)
BL-M46A581UHR-X		BL-M46B581UHR-X		Ultra Red	AlGaInP	645	230
	X		X				
BL-M46A581UE-XX		BL-M46B581UE-XX		Ultra Red	AlGaInP	630	170
BL-M46A581YO-XX		BL-M46B581YO-XX		Ultra Amber	AlGaInP	619	170
BL-M46A581UY-XX		BL-M46B581UY-XX		Ultra Yellow	AlGaInP	590	170
BL-M46A581UG-XX		BL-M46B581UG-XX		Ultra Green	AlGaInP	574	200
BL-M46A581PG-XX		BL-M46B581PG-XX		Ultra Pure Green	InGaN	525	250
BL-M46A581B-XX		BL-M46B581B-XX		Ultra Blue	InGaN	470	120
BL-M46A581W-XX		BL-M46B581W-XX		Ultra White	InGaN	/	200

--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	

LED DOT MATRIX
BL-M46X581
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)

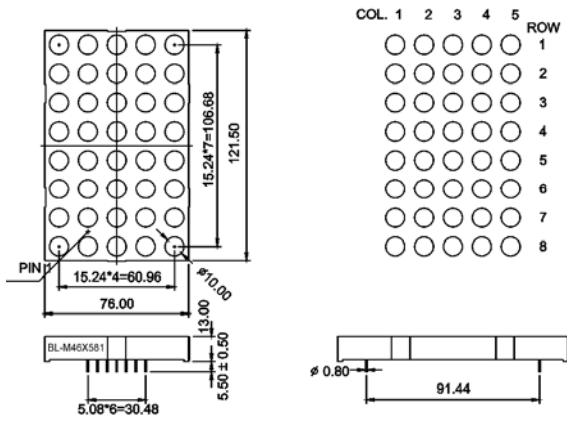
Parameter	UHR	UE	YO	UY	UG	PG	B	W	Unit
Forward Current I_F	30	30	30	30	30	30	30	30	mA
Power Dissipation P_d	75	65	65	65	75	110	120	120	mW
Reverse Voltage V_R	5	5	5	5	5	5	5	5	V
Peak Forward Current I_{PF} (Duty 1/10 @1KHZ)	150	150	150	150	150	150	100	100	mA
Operation Temperature T_{OPR}	-40 to +80								°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

LED DOT MATRIX

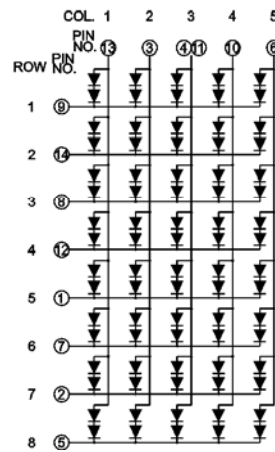
BL-M46X581

■ Package configuration & Internal circuit diagram

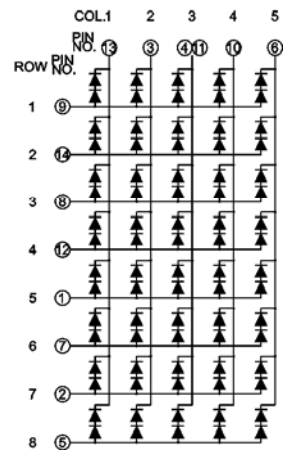
BL-M46X581 Series



BL-M46A581



BL-M46B581



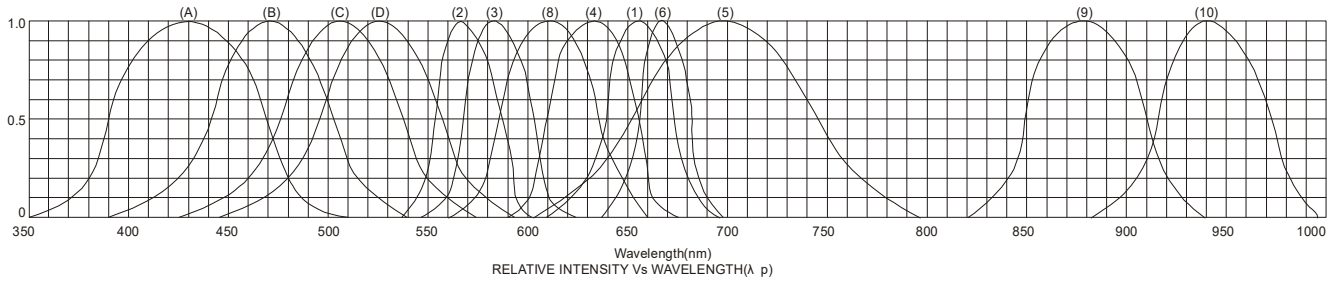
Notes:

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.

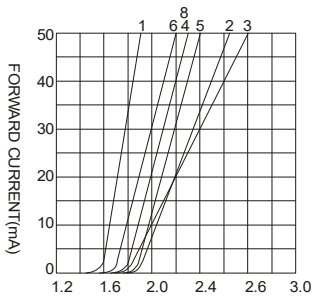
LED DOT MATRIX

BL-M46X581

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



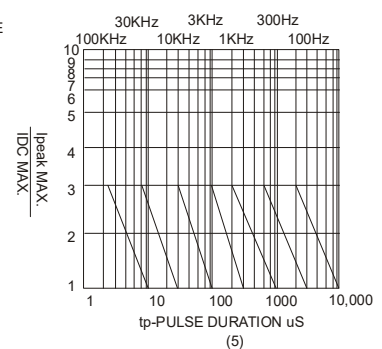
FORWARD CURRENT (mA)
RELATIVE LUMINOUS
INTENSITY VS. FORWARD
CURRENT



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



AMBIENT TEMPERATURE Ta(°C)



NOTE: 25°C free air temperature unless otherwise specified

LED DOT MATRIX

BL-M46X581

■ Packing and weighting

